

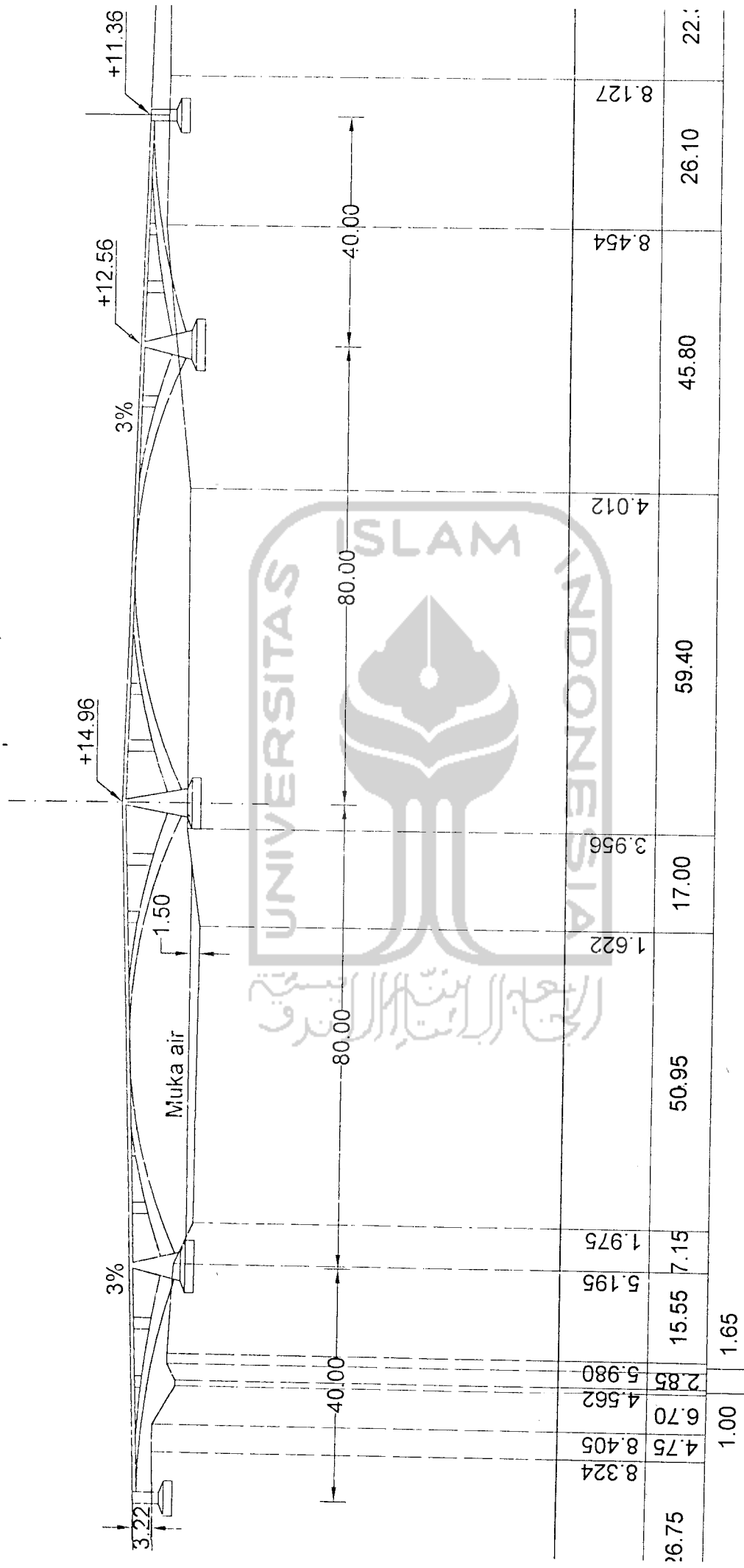


LAMPIRAN

SURAT-SURAT TUGAS AKHIR

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





POTONGAN MEMANJANG JEMBATAN

KATA PENGANTAR

Untuk mendapatkan data-data fisik dan teknik batuan / tanah pada rencana lokasi Jembatan Kretek II, maka telah dilakukan pemboran bermesin (*rotary drilling machine*). Penyelidikan ini didasarkan atas metode antara lain :

- Tone Boring Corporation & Co
- ASTM D.2113-70
- ASSHO T.225-68
- BS 4219

disertai dengan uji penetrasi (SPT) dan uji laboratorium mekanika tanah. Sedangkan perhitungan untuk daya dukung tanahnya digunakan acuan dari buku "*Foundation Analysis*".

Selama pelaksanaan penyelidikan mengalami hambatan karena terjadinya bencana alam berupa gempa bumi tektonik berkekuatan 5,9 SR, yang bersumber di pantai selatan. Oleh karena lokasi penyelidikan berada pada daerah rawan gempa (dengan koefisien zona $[z] = 0,8 - 1,2$) maka laporan ini dilengkapi dengan koefisien gempa untuk desain. Perhitungannya didasarkan pada peta kegempaan yang dikeluarkan oleh Badan Penelitian dan Pengembangan Departemen Pekerjaan Umum tahun 1996.

Semoga laporan ini dapat dipergunakan sebagai acuan perencana, pengawas dan pelaksana, agar dapat menghasilkan konstruksi jembatan yang kokoh dan tahan gempa.

Jakarta,

PT. Ganes Engineering Consultant

RINGKASAN

Pekerjaan penyelidikan tanah Jembatan Kretek II meliputi :

1. pemboran bermesin di 5 titik bor pada rencana tumpuan dan pilar jembatan dengan total kedalaman 180 meter.
2. uji penetrasi (SPT) sebanyak 101 kali
3. uji fisik di laboratorium mekanika tanah sebanyak 5 sampel. Masing-masing titik bor diwakili 1 sampel sepanjang 1,00 meter

Hasil pemboran inti berupa material endapan sungai (pasir, kerikil, kerakal) dan material hasil vulkanisme berupa pasir dan lempung hitam.

Dari hasil uji penetrasi maka diketahui lapisan pasir yang sangat padat ($N > 50$ pukulan) yaitu pada kedalaman :

- titik bor DH-1 mulai kedalaman 36,00 meter
- titik bor DH-2 mulai kedalaman 32,00 meter
- titik bor DH-3 mulai kedalaman 28,50 meter
- titik bor DH-4 mulai kedalaman 33,00 meter
- titik bor DH-5 mulai kedalaman 33,00 meter

Daya dukung tanahnya berkisar antara 14,3 – 16,3 kg/cm². Koefisien gempa untuk desain sebesar 0,223 gal.

Hasil uji laboratorium mekanika tanah adalah sbb :

- NWC : 5,97 – 26,48 %
- Porositas : 0,434 – 0,579 %
- Butiran : 0,94 – 8,62
- γ_n : 1,4 – 1,96 gr/cm³
- γ_d : 1,189 – 1,55 gr/cm³

Harga C (*cohesi*) pasir berkisar 0,02 - 0,08. Sedangkan harga ϕ (sudut geser dalam) berkisar 42° – 45° dari N (hasil uji SPT).

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BAB I. PENDAHULUAN

I.1. Latar Belakang

Pesatnya pertumbuhan masyarakat membutuhkan tersedianya sarana jalan dan jembatan yang memadai guna mempermudah arus transportasi barang dan manusia. Selama ini kita mengenal jalur pantura, yaitu jalur jalan yang menghubungkan kota-kota di sepanjang pesisir utara pulau Jawa. Sebagai alternatif transportasi, maka dipandang perlu untuk membangun jalan di sepanjang pesisir selatan pulau Jawa, yang disebut jalur pantai selatan. Jalur ini banyak melewati sungai-sungai, baik besar maupun kecil. Salah satu sungai yang dilewati adalah Kali Opak di daerah Kretek, Bantul. Oleh karena itu pembangunan Jembatan Kretek II (yang berada di hilir Jembatan Kretek sekarang) menjadi mutlak diperlukan sebagai sarana penghubung pada ruas jalur yang baru tersebut.

I.2. Maksud dan Tujuan

Penyelidikan geoteknik ini bertujuan untuk menyelidiki dan menentukan jenis, sifat, tebal dan kemampuan daya dukung lapisan tanah di bawah permukaan, yang diperlukan dalam perencanaan konstruksi, sehingga bangunan yang dihasilkan akan kokoh, stabil dan optimal.

Ruang lingkup penyelidikannya sendiri mencakup : pemboran inti, *Standard Penetration Test (SPT)*, *sampling* batuan, uji laboratorium dan penyusunan laporan.

I.3. Lokasi dan Kesempaian Daerah

Jembatan Kretek II terletak di Kecamatan Kretek, Kabupaten Bantul, DIY, kurang lebih 20 kilometer sebelah selatan kota Yogyakarta (ke arah pantai Parangtritis). Untuk mencapainya dapat menggunakan kendaraan roda empat atau lebih sampai ke areal penambangan pasir rakyat, di dataran banjir kali Opak yang cukup lebar.

I.4. Jenis Pekerjaan

Pekerjaan penyelidikan geoteknik di Jembatan Kali Kretek II dapat diuraikan sbb :

1. Pemboran inti di 5 (lima) titik bor, yaitu DH-1, DH-2, DH-3, DH-4 dan DH-5, dengan total kedalaman 180 meter :

- DH-1 sedalam 40 meter, pada rencana tumpuan (abutment) kiri jembatan
 - DH-2 sedalam 35 meter, pada rencana pilar kiri jembatan
 - DH-3 sedalam 35 meter, pada rencana pilar tengah jembatan
 - DH-4 sedalam 35 meter, pada rencana pilar kanan jembatan
 - DH-5 sedalam 35 meter, pada rencana tumpuan (abutment) kanan jembatan
2. SPT sebanyak total 101 kali :
- Di titik DH-1 dilakukan sebanyak 22 kali
 - Di titik DH-2 dilakukan sebanyak 20 kali
 - Di titik DH-3 dilakukan sebanyak 20 kali
 - Di titik DH-4 dilakukan sebanyak 20 kali
 - Di titik DH-5 dilakukan sebanyak 19 kali

Test Laboratorium



BAB II. GEOLOGI

II.1. Fisiografi Regional

Secara fisiografi, Pulau Jawa dapat dibagi menjadi 7 (tujuh) zona, sebagaimana diuraikan oleh van Bemmelen (1949), meliputi :

1. Gunungapi Kuarter
2. Dataran Aluvial Jawa Utara
3. Antiklinorium Rembang – Madura
4. Antiklinorium Bogor – Serayu Utara – Kendeng
5. Kubah dan Punggungan pada Zona Depresi Tengah
6. Zona Depresi Tengah Jawa dan Zona Randublatung
7. Pegunungan Selatan

Daerah penelitian (Jembatan Kali Kretek II) terletak di zona fisiografi yang ke-6 yaitu Zona Depresi Tengah Jawa, lebih spesifik lagi terletak pada morfologi dataran banjir kali Opak.

II.2. Stratigrafi Regional

Secara regional, stratigrafi daerah Yogyakarta dan sekitarnya tersusun oleh (dari tua ke muda) :

1. Batuan Sedimen dan Batuan Vulkanik yang berselang-seling, berumur Eosen sampai Pliosen
2. Batuan Terobosan, berumur Miosen
3. Endapan Gunung Merapi Masakini, berumur Kuarter
4. Batuan Vulkanik, berumur Kuarter
5. Endapan Permukaan

Dari hasil korelasi dengan Peta Geologi Lembar Yogyakarta (Wartono R, dkk), diketahui bahwa stratigrafi daerah penelitian termasuk dalam formasi Endapan Gunungapi Merapi Masakini dan Endapan Permukaan.

Formasi Endapan Gunungapi Merapi Masakini terwakili oleh satuan endapan vulkanik merapi muda yang mengandung tuf, abu, breksi, aglomerat dan leleran lava.

Sedangkan Formasi Endapan Permukaan terwakili oleh satuan aluvium, yang tersusun atas kerakal, pasir, lanau dan lempung sepanjang sungai yang besar dan dataran pantai.

II.3. Kondisi Geologi Daerah Penelitian

Daerah penelitian sebagian besar tersusun atas lapisan aluvial berupa material pasir, kerikil, dan kerakal. Pada umumnya berwarna abu-abu muda sampai tua, dengan ketebalan belasan meter. Material-material ini adalah hasil pengendapan oleh medium aliran air Kali Opak. Oleh karena itu banyak dijumpai struktur silang siur, yang mencirikan hasil pengendapan oleh air. Endapan aluvial ini dapat disebut juga dengan istilah endapan sungai (*river deposits*). Di atas lapisan ini terdapat lapisan soil hasil pelapukan berukuran lempung berwarna coklat, dan mengandung material-material organik dengan ketebalan beberapa meter. Sedangkan paling bawah dijumpai lapisan pasir hasil vulkanisme Gunung Merapi berukuran pasir halus sampai kasar, berwarna abu-abu tua kehitaman, dengan ketebalan sampai berpuluh-puluh meter. Setempat dijumpai lapisan lempung hitam yang sangat padat. Jadi dapat disimpulkan stratigrafi daerah penelitian dari tua ke muda adalah sbb :

1. Material hasil vulkanisme : pasir dan lempung hitam
2. Aluvial hasil pengendapan aliran air : pasir, kerikil, kerakal
3. Soil penutup : lempung coklat

Morfologi daerah penelitian adalah berupa dataran banjir kali Opak, dengan penampang lembah sungai berbentuk "U" yang mengindikasikan bahwa erosi horisontal lebih kuat dibanding erosi vertikal. Dataran banjir kali Opak ini cukup lebar, lebih lebar dibandingkan dengan tubuh sungainya sendiri, dan banyak dijumpai gosong pasir di kanan-kiri sungai. Oleh penduduk dataran banjir ini dimanfaatkan sebagai sumber bahan galian pasir untuk bahan bangunan.

Struktur geologi mayor adalah Sesar Opak, sebagai sesar utama yang membentang dari Kretek sampai ke Prambanan. Aliran sungai Opak ini (yang berarah timurlaut – baratdaya) diyakini sebagai bidang sesar/patahan berjenis sesar turun, dengan blok sebelah barat relatif turun dari blok timur. Salah satu indikasi adanya sesar ini adalah kenampakan "triangular facet" pada perbukitan di sebelah timur/tenggara Kali Opak. Jadi rencana Jembatan Kretek II tepat berada pada zona sesar/patahan mayor.

BAB III. GEOLOGI TEKNIK

III.1. Umum

Rencana jembatan Kretek II sebagai sarana pendukung jalur selatan, akan membentang di atas kali Opak sepanjang ± 240 meter. Jembatan akan ditopang oleh 3 pilar dengan jarak sekitar 80 meter dilengkapi dengan 2 tumpuan. Untuk mendukung perencanaan pondasinya maka dilakukan penelitian untuk menentukan kedalaman dan tipe pondasi yang cocok dengan kondisi batuan.

Macam-macam penelitian yang dilakukan antara lain :

- pengamatan permukaan
- pengeboran inti / *coring*
- Standard Penetration Test / SPT
- Uji laboratorium Mekanika Tanah, meliputi uji fisik
- analisa daya dukung tanah
- koefisien kegempaan
- sumber cadangan bahan bangunan

III.2. Pengamatan Permukaan

Wilayah seluas $0,25 \text{ km}^2$ di sekitar rencana jembatan telah diperiksa kondisi batuan permukaannya. Hasilnya berupa peta geologi skala 1 : 2000

III.3. Pemboran Inti

Lima titik bor yang akan memberikan data pada rencana pondasi telah ditentukan posisi dan kedalamannya untuk keperluan perencanaan. Mesin bor putar (*rotary drilling machine*) digunakan dalam penelitian ini dan dilengkapi dengan pemasangan *casing* sedalam 20 – 30 meter. Cara kerja / metodenya adalah sbb : pada bagian atas dekat permukaan tanah sampai kedalaman 7,50 m dilakukan bor *casing* dengan diameter 4 inchi, menggunakan cairan bentonit. Dari dasar casing dilakukan SPT, kemudian *sampling* dilakukan sedalam 1,50 m. Tahap selanjutnya pasang *casing* lagi, lalu dari dasar *casing* dilakukan SPT, dan seterusnya.

Melalui 5 (lima) titik bor di lokasi rencana as Jembatan Kali Kretek II, maka diketahui jenis, sifat dan variasi batuan pada masing-masing titik bor. Urutan selengkapnya adalah sbb :

Tabel 1. Hasil pemboran inti di titik bor DH-1

| Kedalaman (m) | Deskripsi |
|---------------|--|
| 0,00 – 7,50 | <u>Lempung pasiran</u> , berwarna kecoklatan, berukuran butir lempung – pasir halus. Di bagian atas terdapat bahan-bahan organik seperti akar tanaman. |
| 7,50 – 20,00 | <u>Pasir</u> , berwarna abu-abu muda, berukuran butir pasir halus – kasar, mengandung sedikit kerikil. |
| 20,00 – 40,00 | <u>Pasir vulkanik</u> , berwarna abu-abu tua kehitaman, berukuran butir pasir sedang – sangat kasar |

Tabel 2. Hasil pemboran inti di titik bor DH-2

| Kedalaman (m) | Deskripsi |
|---------------|--|
| 0,00 – 9,00 | <u>Pasir kerikilan</u> , berwarna abu-abu, berukuran pasir halus – kasar, mengandung kerikil berdiameter max 4 mm. |
| 9,00 – 21,50 | <u>Pasir vulkanik</u> , berwarna abu-abu muda – tua, berbutir pasir sedang – kasar |
| 21,50 – 35,00 | <u>Pasir vulkanik</u> , berwarna abu-abu tua, berukuran butir pasir kasar – sangat kasar |

Tabel 3. Hasil pemboran inti di titik bor DH-3

| Kedalaman (m) | Deskripsi |
|---------------|--|
| 0,00 – 15,50 | <u>Pasir kerikilan</u> , berwarna abu-abu kecoklatan, berukuran butir pasir sedang, mengandung kerikil |
| 15,50 – 25,50 | <u>Pasir vulkanik</u> , berwarna abu-abu tua, berbutir pasir sedang-kasar |
| 25,50 – 35,00 | <u>Pasir vulkanik</u> , berwarna abu-abu tua kehitaman, berbutir sangat kasar dengan permukaan runcing-runcing |

Tabel 4. Hasil pemboran inti di titik bor DH-4

| Kedalaman (m) | Deskripsi |
|---------------|--|
| 0,00 – 18,00 | <u>Pasir halus</u> , berwarna abu-abu kecoklatan, berukuran pasir halus, mengandung kerikil $\pm 10\%$. Di bagian atas terdapat bahan-bahan organik seperti akar tanaman. |
| 18,00 – 25,00 | <u>Lempung pasiran</u> , berwarna abu-abu kecoklatan, berbutir lempung – pasir halus |
| 25,00 – 32,50 | <u>Pasir lempungan</u> , berwarna abu-abu kecoklatan, berukuran butir lempung – pasir kasar |
| 32,50 – 35,00 | <u>Lempung hitam</u> , sangat padat |

Tabel 5. Hasil pemboran inti di titik bor DH-5

| Kedalaman (m) | Deskripsi |
|---------------|--|
| 0,00 – 19,50 | <u>Lempung pasiran</u> , berwarna abu-abu kecoklatan, berukuran lempung – pasir halus, mengandung kerikil-berangkal. Di bagian atas terdapat bahan-bahan organik seperti akar tanaman. |
| 19,50 – 32,00 | <u>Pasir</u> , berwarna abu-abu muda – tua, berukuran butir pasir sedang – kasar |
| 32,00 – 35,00 | <u>Lempung hitam</u> , sangat padat |

III.4. Standard Penetration Test (SPT)

Percobaan penetrasi dilakukan dengan interval 1,5 meter, dengan memukul *split spoon sampler* berukuran diameter luar 2 inch dan diameter dalam $1 \frac{3}{8}$ inch, dengan beban seberat 140 lbs (= 63,50 kg) dan ketinggian jatuh 75 cm. banyaknya pukulan (N) yang diperlukan untuk memasukkan *split spoon sampler* sedalam 30 cm dicatat setelah ekstra pukulan 15 cm yang pertama. Prosedur pelaksanaan mengacu ASTM D.1586-67 dan ASSHO T 206-70.

Hasil selengkapnya tersaji dalam tabel berikut.

Tabel 6. Hasil SPI

| Titik Bor | Kedalaman | Jumlah Pukulan | | | Nilai N | Densitas |
|-----------|---------------|----------------|----|-----|---------|--------------|
| | | I | II | III | | |
| DH-1 | 7,50 - 7,95 | 6 | 8 | 8 | 16 | Sedang |
| | 9,00 - 9,45 | 7 | 9 | 7 | 16 | Sedang |
| | 10,50 - 10,95 | 3 | 8 | 9 | 17 | Sedang |
| | 12,00 - 12,45 | 5 | 11 | 15 | 26 | Sedang |
| | 13,50 - 13,95 | 10 | 18 | 27 | 45 | Padat |
| | 15,00 - 15,45 | 11 | 14 | 21 | 35 | Padat |
| | 16,50 - 16,95 | 9 | 12 | 15 | 27 | Sedang |
| | 18,00 - 18,45 | 9 | 11 | 19 | 30 | Padat |
| | 19,50 - 19,95 | 8 | 11 | 13 | 24 | Sedang |
| | 21,00 - 21,45 | 11 | 16 | 19 | 35 | Padat |
| | 22,50 - 22,95 | 17 | 15 | 16 | 31 | Padat |
| | 24,00 - 24,45 | 15 | 19 | 19 | 38 | Padat |
| | 25,50 - 25,95 | 14 | 20 | 20 | 40 | Padat |
| | 27,00 - 27,45 | 21 | 22 | 23 | 45 | Padat |
| | 28,50 - 28,95 | 19 | 23 | 23 | 46 | Padat |
| | 30,00 - 30,45 | 18 | 16 | 25 | 41 | Padat |
| | 31,50 - 31,95 | 15 | 18 | 27 | 45 | Padat |
| | 33,00 - 33,45 | 17 | 22 | 26 | 48 | Padat |
| | 34,50 - 34,95 | 18 | 24 | 23 | 47 | Padat |
| | 36,00 - 36,45 | 21 | 23 | 27 | 50 | Sangat Padat |
| | 37,50 - 37,95 | 19 | 25 | 26 | 51 | Sangat Padat |
| | 39,00 - 39,45 | 22 | 26 | 27 | 53 | Sangat Padat |
| DH-2 | 6,00 - 6,45 | 3 | 6 | 7 | 13 | Sedang |
| | 7,50 - 7,95 | 3 | 7 | 8 | 15 | Sedang |
| | 9,00 - 9,45 | 4 | 7 | 7 | 14 | Sedang |
| | 10,50 - 10,95 | 5 | 8 | 9 | 17 | Sedang |
| | 12,00 - 12,45 | 7 | 11 | 15 | 26 | Sedang |
| | 13,50 - 13,95 | 9 | 18 | 21 | 39 | Padat |
| | 15,00 - 15,45 | 11 | 14 | 21 | 35 | Padat |
| | 16,50 - 16,95 | 10 | 12 | 13 | 25 | Sedang |
| | 18,00 - 18,45 | 6 | 15 | 20 | 35 | Padat |
| | 19,50 - 19,95 | 11 | 12 | 18 | 30 | Padat |
| | 21,00 - 21,45 | 17 | 15 | 16 | 31 | Padat |
| | 22,50 - 22,95 | 18 | 20 | 21 | 41 | Padat |
| | 24,00 - 24,45 | 15 | 23 | 24 | 47 | Padat |
| | 25,50 - 25,95 | 19 | 25 | 25 | 50 | Sangat Padat |
| | 27,00 - 27,45 | 20 | 24 | 28 | 52 | Sangat Padat |
| | 28,50 - 28,95 | 18 | 16 | 16 | 32 | Padat |
| | 30,00 - 30,45 | 17 | 20 | 23 | 43 | Padat |
| | 31,50 - 31,95 | 15 | 23 | 27 | 50 | Sangat Padat |
| | 33,00 - 33,45 | 19 | 25 | 25 | 50 | Sangat Padat |
| | 34,50 - 34,95 | 20 | 24 | 28 | 52 | Sangat Padat |
| DH-3 | 6,00 - 6,45 | 3 | 3 | 6 | 9 | Lunak |
| | 7,50 - 7,95 | 2 | 6 | 8 | 14 | Sedang |
| | 9,00 - 9,45 | 4 | 7 | 4 | 11 | Sedang |
| | 10,50 - 10,95 | 3 | 6 | 6 | 12 | Sedang |
| | 12,00 - 12,45 | 5 | 7 | 9 | 16 | Sedang |
| | 13,50 - 13,95 | 5 | 9 | 10 | 19 | Sedang |
| | 15,00 - 15,45 | 6 | 10 | 14 | 24 | Sedang |

| | | | | | | |
|-------------|---------------|----|----|----|----|--------------|
| | 16,50 – 16,95 | 10 | 12 | 14 | 26 | Sedang |
| | 18,00 – 18,45 | 9 | 12 | 18 | 30 | Padat |
| | 19,50 – 19,95 | 11 | 15 | 18 | 33 | Padat |
| | 21,00 – 21,45 | 13 | 18 | 21 | 39 | Padat |
| | 22,50 – 22,95 | 15 | 20 | 21 | 41 | Padat |
| | 24,00 – 24,45 | 15 | 24 | 25 | 49 | Padat |
| | 25,50 – 25,95 | 11 | 22 | 26 | 48 | Padat |
| | 27,00 – 27,45 | 14 | 20 | 28 | 48 | Padat |
| | 28,50 – 28,95 | 17 | 23 | 27 | 50 | Sangat Padat |
| | 30,00 – 30,45 | 16 | 24 | 29 | 53 | Sangat Padat |
| | 31,50 – 31,95 | 13 | 23 | 28 | 51 | Sangat Padat |
| | 33,00 – 33,45 | 15 | 25 | 27 | 52 | Sangat Padat |
| | 34,50 – 34,95 | 16 | 26 | 28 | 54 | Sangat Padat |
| DH-4 | 6,00 – 6,45 | 7 | 11 | 12 | 23 | Sedang |
| | 7,50 – 7,95 | 8 | 6 | 5 | 11 | Sedang |
| | 9,00 – 9,45 | 9 | 4 | 3 | 7 | Lunak |
| | 10,50 – 10,95 | 7 | 5 | 7 | 12 | Sedang |
| | 12,00 – 12,45 | 6 | 6 | 8 | 14 | Sedang |
| | 13,50 – 13,95 | 5 | 7 | 8 | 15 | Sedang |
| | 15,00 – 15,45 | 7 | 8 | 9 | 17 | Sedang |
| | 16,50 – 16,95 | 8 | 10 | 9 | 19 | Sedang |
| | 18,00 – 18,45 | 6 | 9 | 11 | 20 | Sedang |
| | 19,50 – 19,95 | 5 | 6 | 18 | 23 | Sedang |
| | 21,00 – 21,45 | 7 | 8 | 15 | 23 | Sedang |
| | 22,50 – 22,95 | 6 | 9 | 11 | 20 | Sedang |
| | 24,00 – 24,45 | 9 | 9 | 10 | 19 | Sedang |
| | 25,50 – 25,95 | 11 | 14 | 16 | 30 | Padat |
| | 27,00 – 27,45 | 15 | 16 | 17 | 33 | Padat |
| | 28,50 – 28,95 | 13 | 15 | 23 | 38 | Padat |
| | 30,00 – 30,45 | 8 | 19 | 21 | 40 | Padat |
| | 31,50 – 31,95 | 16 | 21 | 28 | 49 | Padat |
| | 33,00 – 33,45 | 11 | 17 | 35 | 52 | Sangat Padat |
| | 34,50 – 34,95 | 15 | 23 | 31 | 54 | Sangat Padat |
| DH-5 | 7,50 – 7,95 | 3 | 4 | 4 | 8 | Lunak |
| | 9,00 – 9,45 | 9 | 10 | 15 | 25 | Sedang |
| | 10,50 – 10,95 | 5 | 8 | 11 | 19 | Sedang |
| | 12,00 – 12,45 | 5 | 6 | 5 | 11 | Sedang |
| | 13,50 – 13,95 | 8 | 9 | 7 | 16 | Sedang |
| | 15,00 – 15,45 | 6 | 6 | 8 | 14 | Sedang |
| | 16,50 – 16,95 | 7 | 7 | 13 | 20 | Sedang |
| | 18,00 – 18,45 | 8 | 11 | 23 | 34 | Padat |
| | 19,50 – 19,95 | 9 | 10 | 14 | 24 | Sedang |
| | 21,00 – 21,45 | 8 | 11 | 16 | 27 | Sedang |
| | 22,50 – 22,95 | 8 | 12 | 17 | 29 | Sedang |
| | 24,00 – 24,45 | 11 | 13 | 14 | 27 | Sedang |
| | 25,50 – 25,95 | 10 | 12 | 13 | 25 | Sedang |
| | 27,00 – 27,45 | 9 | 11 | 11 | 22 | Sedang |
| | 28,50 – 28,95 | 5 | 7 | 15 | 22 | Sedang |
| | 30,00 – 30,45 | 8 | 14 | 15 | 29 | Sedang |
| | 31,50 – 31,95 | 10 | 18 | 20 | 38 | Padat |
| | 33,00 – 33,45 | 17 | 19 | 32 | 51 | Sangat Padat |
| | 34,50 – 34,95 | 20 | 25 | 28 | 53 | Sangat Padat |

III.5. Analisa Daya Dukung Tanah

Untuk perhitungan daya dukung tanah memakai gabungan dari hasil pemboran dengan tabel-tabel yang relevan, seperti di bawah ini :

Tabel 7. Nilai empiris untuk D_r , ϕ , dan *Unit Weight*

| Description | Very Loose (sangat urai) | Loose (urai) | Medium (sedang) | Dense (padat) | Very Dense (sangat padat) |
|---|-----------------------------|-----------------------|--------------------|------------------------|------------------------------|
| Relative Density (D_r) | 0 | 15 | 35 | 0,65 | 0,85 |
| Standard Penetration (N) | - | - | 10 | 30 | 50 |
| Approx. angle of Material friction ϕ | 25° - 30° | 27° - 32° | 30° - 35° | 35° - 40° | 38° - 43° |
| Approx. range moist unit weight (γ)p of (kN/m ³) | 70 - 100 (11-16) | 90 - 115 (14 - 18) | - | 110 - 140 (17 - 22) | 130 - 150 (20 - 23) |

Diambil dari USBR dalam Gibbs and Holtz (1957) dengan modifikasi

Selain tabel tersebut, dipakai pula nilai-nilai *bearing capacity factor* sebagaimana tercantum dalam tabel berikut :

Tabel 8. *Bearing Capacity Factors*

| ϕ (.....°) | N_c | N_q | N_y |
|-----------------|-------|-------|-------|
| 40.0 | 95.7 | 81.3 | 100.4 |
| 40.5 | 103.4 | 90.5 | 120.1 |
| 41.0 | 111.0 | 99.7 | 139.8 |
| 41.5 | 118.7 | 108.9 | 159.5 |
| 42.0 | 126.3 | 118.1 | 179.2 |
| 42.5 | 134.0 | 127.3 | 199.0 |
| 43.0 | 141.7 | 136.5 | 218.7 |
| 43.5 | 149.3 | 145.7 | 238.4 |
| 44.0 | 157.0 | 154.9 | 258.1 |
| 44.5 | 164.6 | 164.1 | 277.8 |
| 45.0 | 172.3 | 173.3 | 297.5 |

2.2.

Maka dengan menggunakan tabel-tabel diatas beserta panduan dalam buku "Foundation Analysis", dapat dilakukan perhitungan daya dukung tanah di rencana Jembatan Kretek II sbb :

$$N_c = 149,3 \quad N_q = 145,7 \quad N_y = 238,4$$

$$\begin{aligned} q_{ult} &= (0,03 \times 149,3) + (1,60 \times 145,7) + \frac{1}{2} (1,60 \times 1 \times 238,4) \\ &= 4,5 + 233,12 + 190,72 \\ &= 428,34 \text{ ton/m}^2 \end{aligned}$$

$$\begin{aligned} q_{izin} &= 428,34 / 3 \\ &= 142,78 \text{ ton/m}^2 \\ &= \mathbf{14,28 \text{ kg/cm}^2} \end{aligned}$$

c. Pilar tengah (DH-3)

c.1. Kedalaman 25,00 – 30,00 meter \rightarrow N rata-rata = $(48+48+50+53) / 4 = 50$

$$N = 50; D_r = 0,85; \varphi = 43^\circ$$

$$\varphi = \frac{25 + (25 \times 0,85) + 43}{2} = 44,6^\circ$$

C diambil 0,02 dan $q = 1,50$:

$$N_c = 164,6 \quad N_q = 164,1 \quad N_y = 277,8$$

$$\begin{aligned} q_{ult} &= (0,02 \times 164,6) + (1,50 \times 164,1) + \frac{1}{2} (1,50 \times 1 \times 277,8) \\ &= 3,3 + 246,15 + 208,35 \\ &= 457,8 \text{ ton/m}^2 \end{aligned}$$

$$\begin{aligned} q_{izin} &= 457,8 / 3 \\ &= 152,6 \text{ ton/m}^2 \\ &= \mathbf{15,26 \text{ kg/cm}^2} \end{aligned}$$

c.2. Kedalaman 30,00 – 35,00 meter \rightarrow N rata-rata = $(53+51+52+54) / 4 = 52,5$

$$N = 52,5; D_r = 0,87; \varphi = 43^\circ$$

$$\varphi = \frac{25 + (25 \times 0,87) + 43}{2} = 44,87^\circ$$

C diambil 0,03 dan $q = 1,50$:

$$N_c = 172,3 \quad N_q = 173,3 \quad N_y = 297,5$$

$$\begin{aligned} q_{ult} &= (0,03 \times 172,3) + (1,50 \times 173,3) + \frac{1}{2} (1,50 \times 1 \times 297,5) \\ &= 5,2 + 259,95 + 223,12 \\ &= 488,27 \text{ ton/m}^2 \end{aligned}$$

$$\begin{aligned} q_{izin} &= 488,27 / 3 \\ &= 162,75 \text{ ton/m}^2 \\ &= 16,28 \text{ kg/cm}^2 \end{aligned}$$

d. Pilar kanan (DH-4)

Kedalaman 32,00 – 35,00 meter \rightarrow N rata-rata = $(49+52+54) / 3 = 52$

$$N = 52; D_r = 0,86; \varphi = 43^\circ$$

$$\varphi = \frac{25 + (25 \times 0,86) + 43}{2} = 44,75^\circ$$

C diambil 0,03 dan $q = 1,50$:

$$N_c = 168,45 \quad N_q = 168,7 \quad N_y = 287,65$$

$$\begin{aligned} q_{ult} &= (0,03 \times 168,45) + (1,50 \times 168,7) + \frac{1}{2} (1,50 \times 1 \times 287,65) \\ &= 5 + 253,05 + 215,74 \\ &= 473,79 \text{ ton/m}^2 \end{aligned}$$

$$\begin{aligned} q_{izin} &= 473,79 / 3 \\ &= 157,93 \text{ ton/m}^2 \\ &= 15,79 \text{ kg/cm}^2 \end{aligned}$$

e. Tumpuan kanan (DH-5)

Kedalaman 33,00 – 35,00 meter \rightarrow N rata-rata = $(51+53) / 2 = 52$

$$N = 52; D_r = 0,86; \varphi = 43^\circ$$

$$\varphi = \frac{25 + (25 \times 0,86) + 43}{2} = 44,75^\circ$$

C diambil 0,03 dan $q = 1,55$:

$$N_c = 168,45 \quad N_q = 168,7 \quad N_y = 287,65$$

$$\begin{aligned} q_{ult} &= (0,03 \times 168,45) + (1,55 \times 168,7) + \frac{1}{2} (1,55 \times 1 \times 287,65) \\ &= 5 + 261,1 + 222,93 \\ &= 489,03 \text{ ton/m}^2 \end{aligned}$$

$$\begin{aligned} q_{izin} &= 489,03 / 3 \\ &= 163,01 \text{ ton/m}^2 \\ &= 16,30 \text{ kg/cm}^2 \end{aligned}$$

Dari perhitungan di atas dapat dibuat tabel sbb :

Tabel 9. Hasil analisa perhitungan daya dukung tanah

| Titik Bor | Posisi | Kedalaman (m) | $q_{izin} \text{ (kg/cm}^2\text{)}$ |
|-----------|---------------|---------------|-------------------------------------|
| DH-1 | Tumpuan kiri | 30,00 – 35,00 | 12,26 |
| | | 35,00 – 40,00 | 14,37 |
| DH-2 | Pilar kiri | 25,00 – 30,00 | 11,16 |
| | | 30,00 – 35,00 | 14,28 |
| DH-3 | Pilar tengah | 25,00 – 30,00 | 15,26 |
| | | 30,00 – 35,00 | 16,28 |
| DH-4 | Pilar kanan | 33,00 – 35,00 | 15,79 |
| DH-5 | Tumpuan kanan | 33,00 – 35,00 | 16,30 |

III.6. Koefisien Kegempaan

Gempa terjadi karena blok batuan yang satu menekan blok batuan yang lain, lalu timbul tegangan. Jika batas kelentukan / elastisitas batuan dilampaui maka terjadilah patahan. Getaran akibat patahan inilah yang disebut gempa.

Gempa tektonik yang melanda Yogyakarta dan sekitarnya pada 27 Mei 2006 yll terjadi karena gerakan blok sesar (patahan) yang dipicu oleh penunjaman lempeng tektonik di laut selatan, berpusat di 37 km selatan kota Yogya pada kedalaman 33 km.

Getaran gempa akibat patahan ini merambat ke segala arah, termasuk mengenai zona Sesar Opak (yang memanjang dari Kretek sampai Prambanan), dan terus merambat ke zona Sesar Jiwo. Zona-zona sesar itu masih bersifat labil karena blok batuannya pernah patah di masa lampau, sehingga dampak bencana pasti akan lebih besar di kanan kiri zona-zona sesar tersebut (misalnya daerah Kretek, Bambang Lipuro, Jetis, Imogiri, Piyungan, Berbah, Kalasan, Prambanan).

Berdasarkan teori tektonik lempeng, seluruh pantai selatan Jawa, dari Ujung Kulon sampai Banyuwangi termasuk Yogyakarta, adalah pertemuan lempeng Indo-Australia dengan lempeng Eurasia. Ini berarti seluruh pantai selatan Jawa adalah daerah rawan gempa. Oleh karena itu, agar bangunan-bangunan yang berada di daerah ini relatif tahan gempa (termasuk Jembatan Kretek II), maka perlu dihitung Koefisien Gempa untuk Desain Konstruksi. Harga koefisien ini mengandung banyak parameter seperti : periode ulang gempa, zona gempa dasar, percepatan gempa dasar dan faktor koreksi jenis tanah.

Rumus yang digunakan (berdasarkan Badan Penelitian dan Pengembangan PU, Puslitbang Pengairan, untuk perencanaan bangunan tahan gempa) adalah sbb :

$$ad = z \cdot ac \cdot w$$

dan

$$K = ad/g$$

- dimana :
- ad = percepatan gempa untuk desain (gal)
 - z = koefisien zone
 - ac = percepatan gempa dasar
 - w = faktor koreksi jenis tanah setempat
 - K = koefisien gempa
 - g = gravitasi $\rightarrow 980 \text{ cm/det}^2$

Pulau Jawa, sebagian Sumatra bagian tengah, Bali, Lombok dan Sumbawa mempunyai angka koefisien zona (z) antara 0,8 - 1,2. Sedangkan periode ulang gempa (T) 50 tahun, dengan percepatan gempa dasar (ac) sebesar 151,72 gal, dan faktor koreksi jenis tanah aluvial (Ts) > 0,75 menghasilkan faktor koreksi (w) sebesar 1,20.

Dari angka-angka tersebut dapat dihitung koefisien gempa (K) untuk desain Jembatan Kretek II sbb :

$$\begin{aligned} ad &= z \cdot ac \cdot w \\ &= 1,2 \times 151,72 \times 1,20 \end{aligned}$$



Foto 1. Lokasi titik bor DH-1 (tumpuan kiri)



Foto 2. Lokasi titik bor DH-2 (pilar kiri)

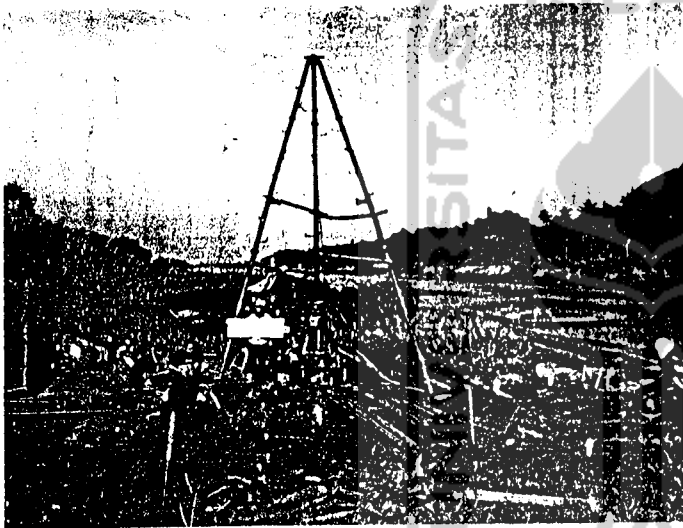


Foto 3. Lokasi titik bor DH-3 (pilar tengah)



Foto 4. Lokasi titik bor DH-4 (pilar kanan)



Foto 5. Lokasi titik bor DH-5 (tumpuan kanan)

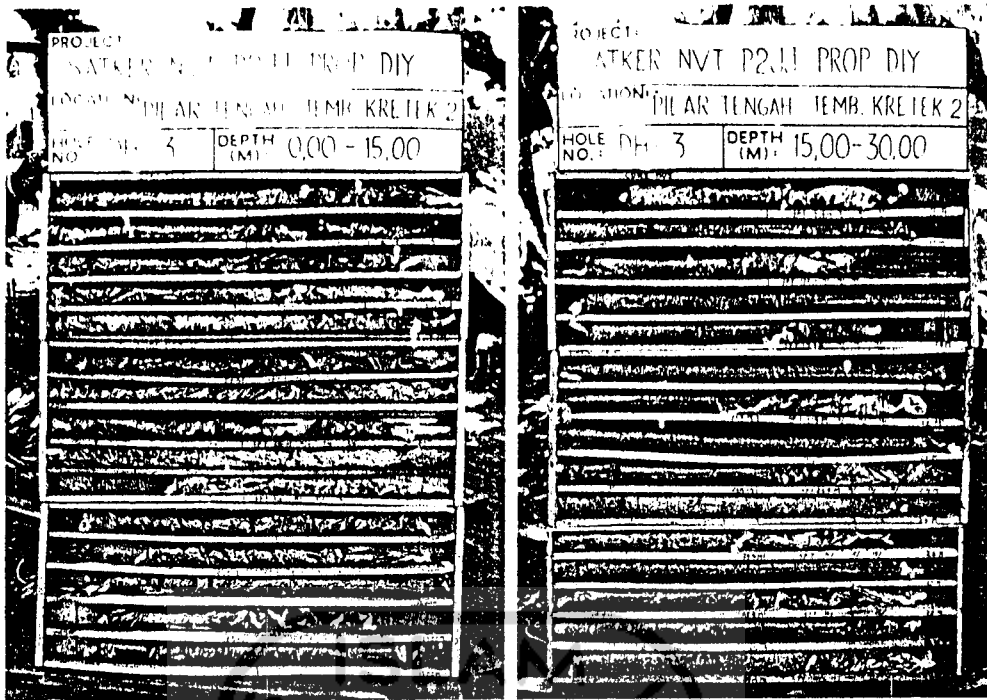


Foto 6. Contoh hasil pengeboran di titik bor DH-3 kedalaman 0,00 – 30,00 m

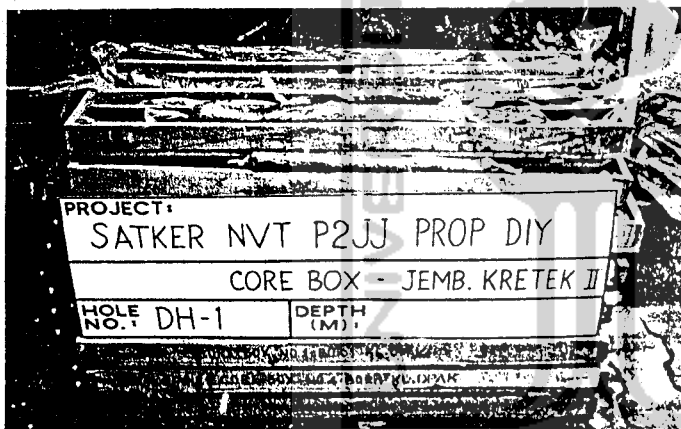


Foto 7. Core box hasil pengeboran di DH-1

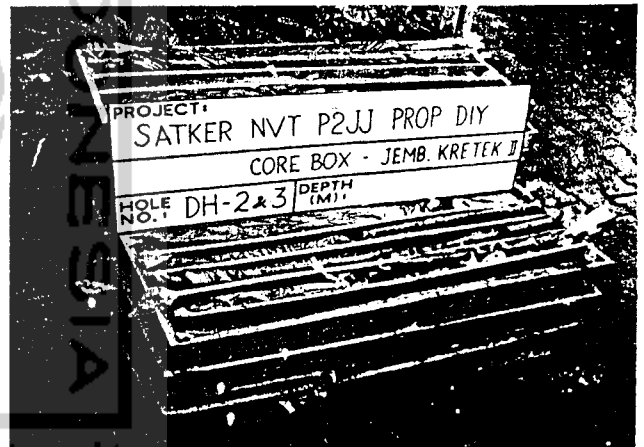


Foto 8. Core box hasil pengeboran di DH-2 & 3



Foto 9. Core box hasil pengeboran di DH-4 & 5

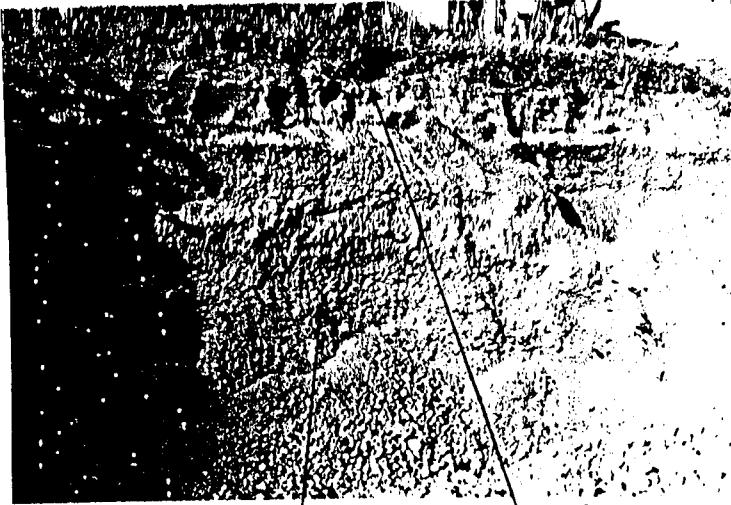


Foto 10. Kenampakan satuan lempung pasir di atas satuan aluvial (pasir, kerikil, kerakal)

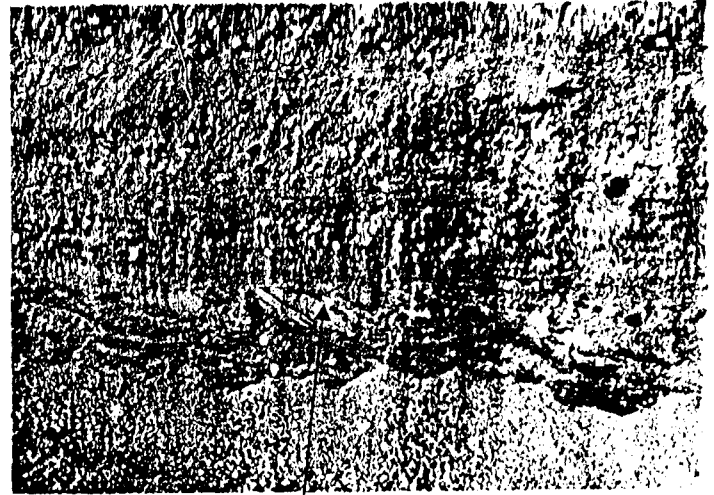


Foto 11. Struktur silang siur pada satuan aluvial penciri proses pengendapan dgn media air



Foto 12. Sumber material tanah urug di daerah Pucung, Wukirsari, Imogiri



Foto 13. Sumber material tanah urug di daerah Pucung, Wukirsari, Imogiri



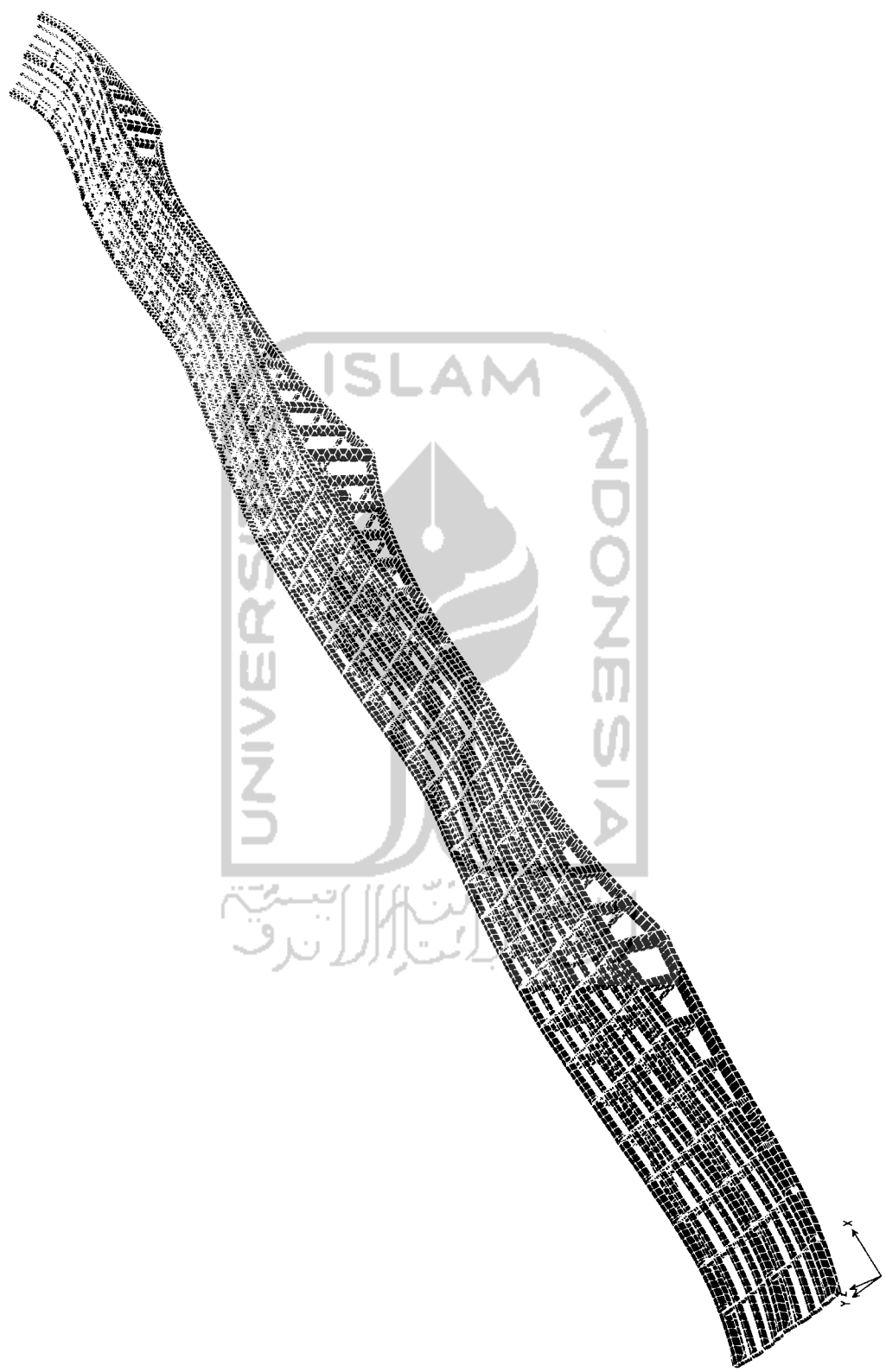
Foto 14. Sumber material tanah urug di daerah Siluk, Imogiri

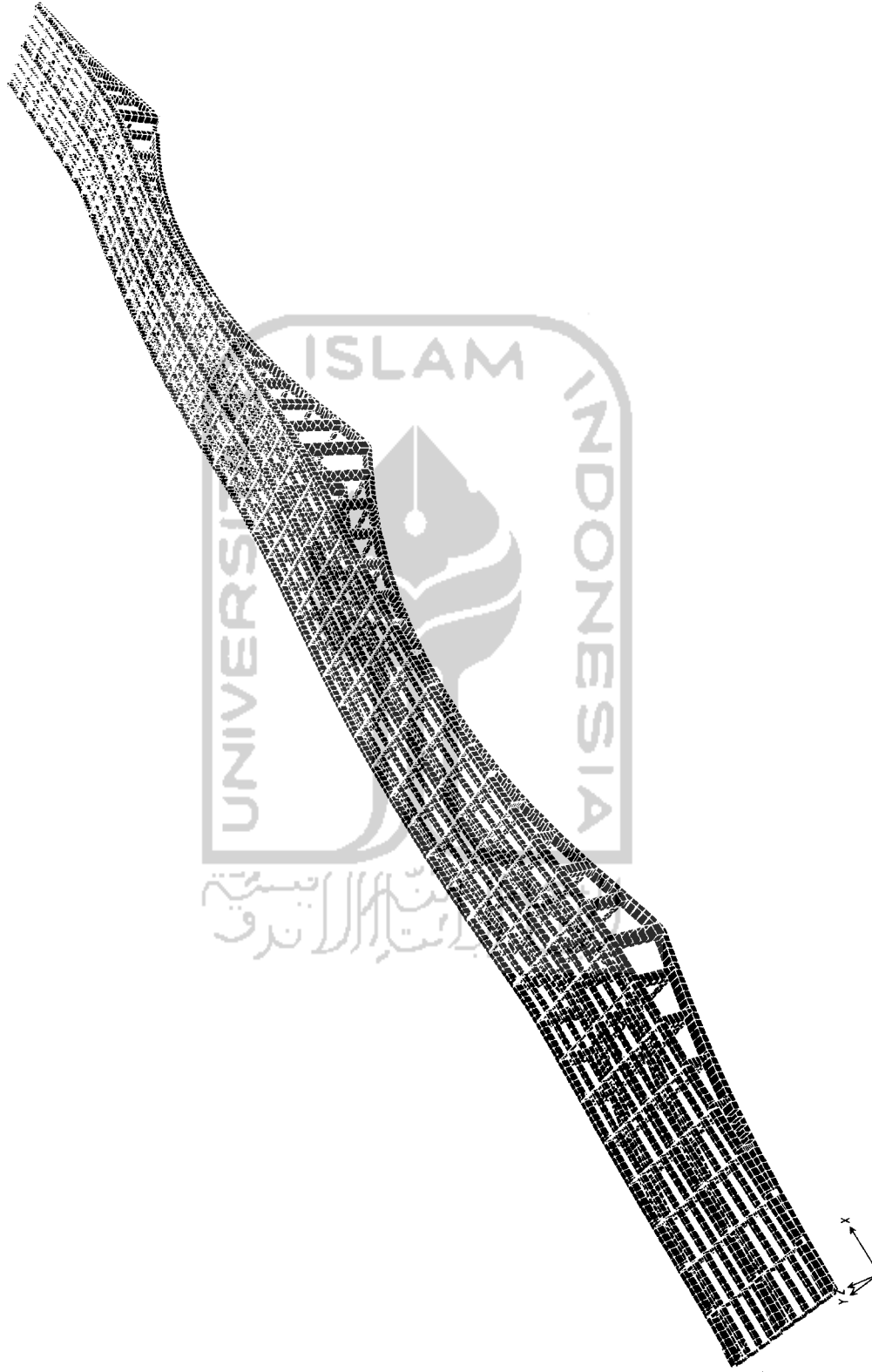


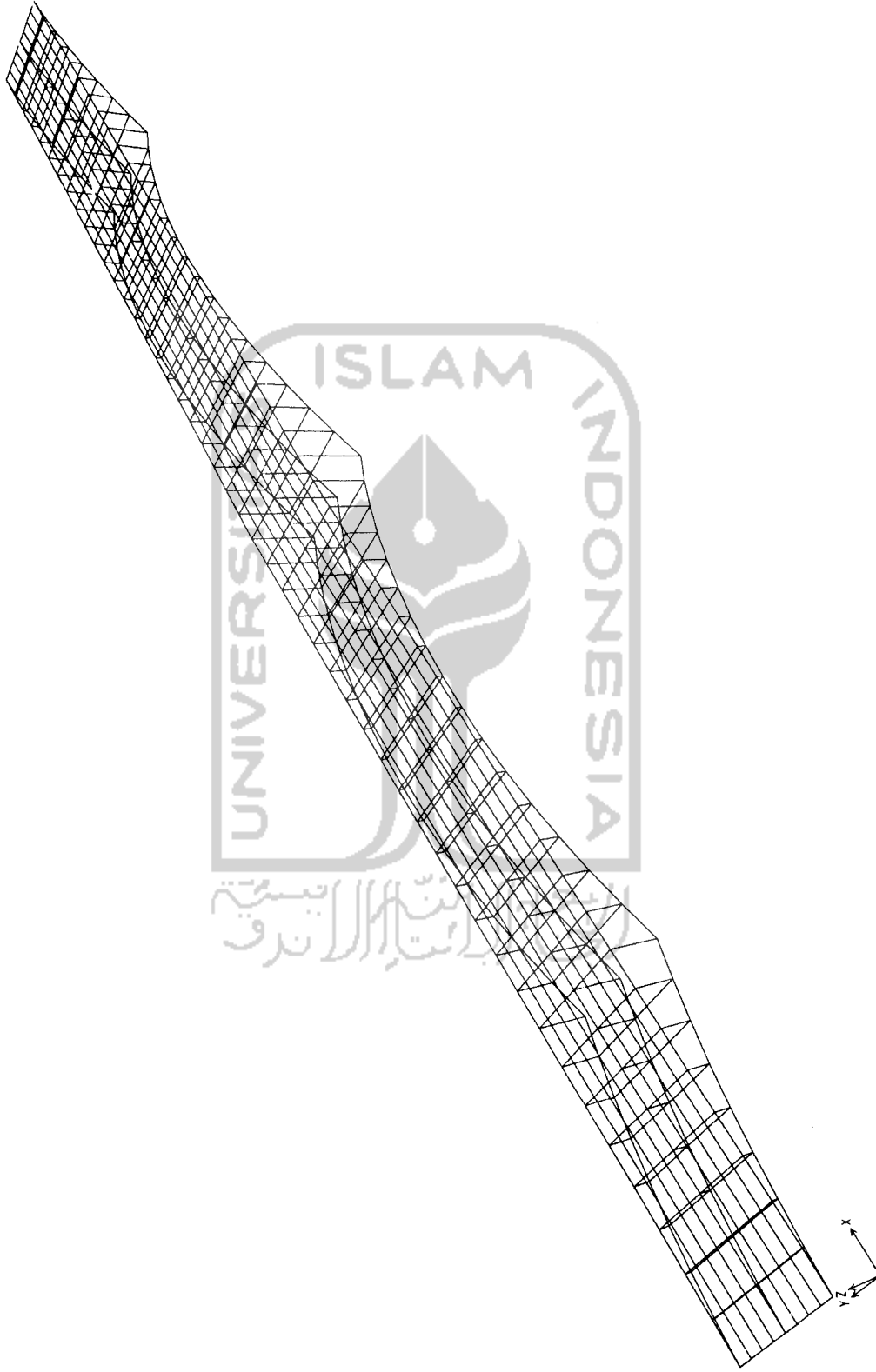
Foto 15. Sumber material pasir urug di daerah Grogol, Parangtritis

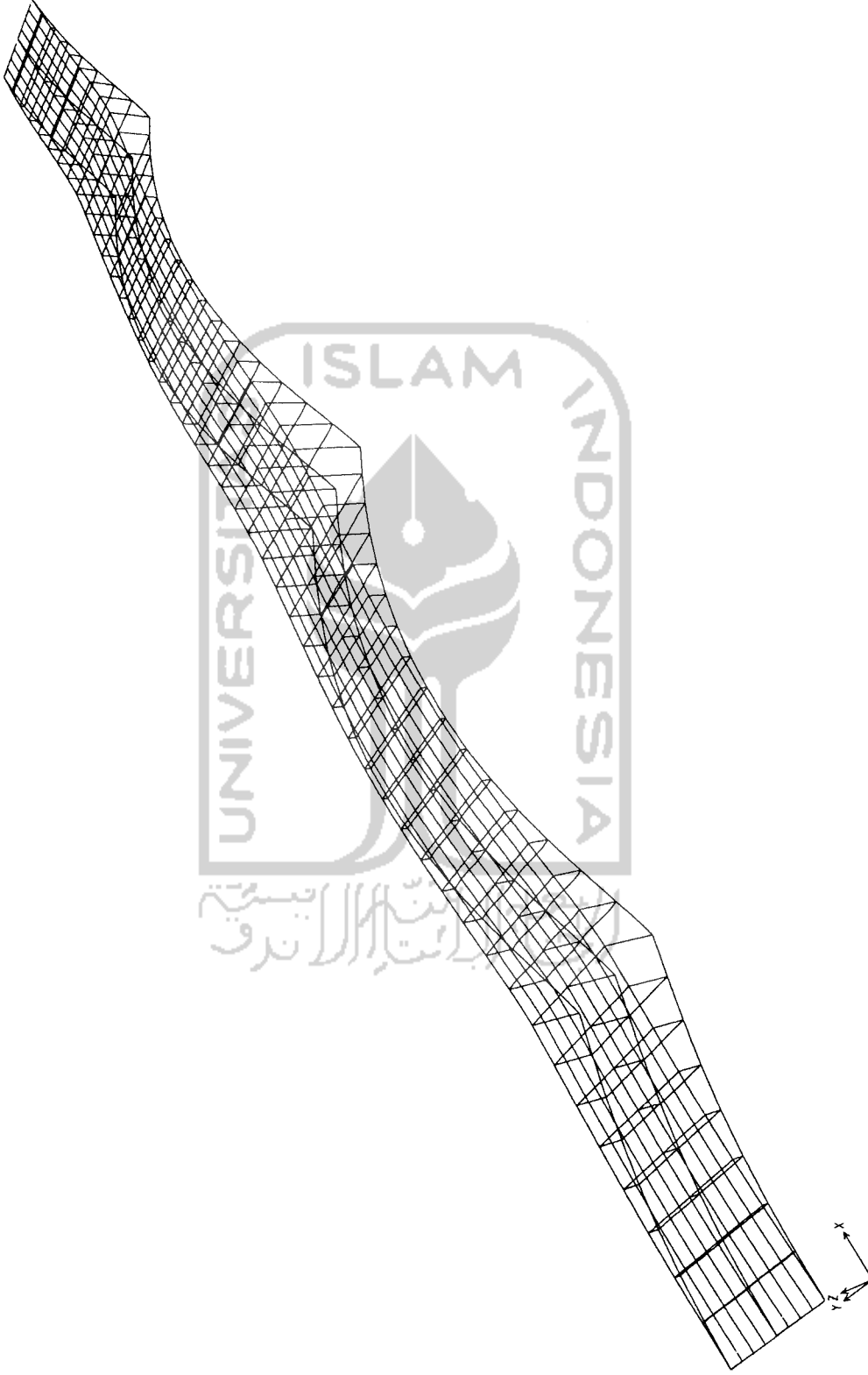


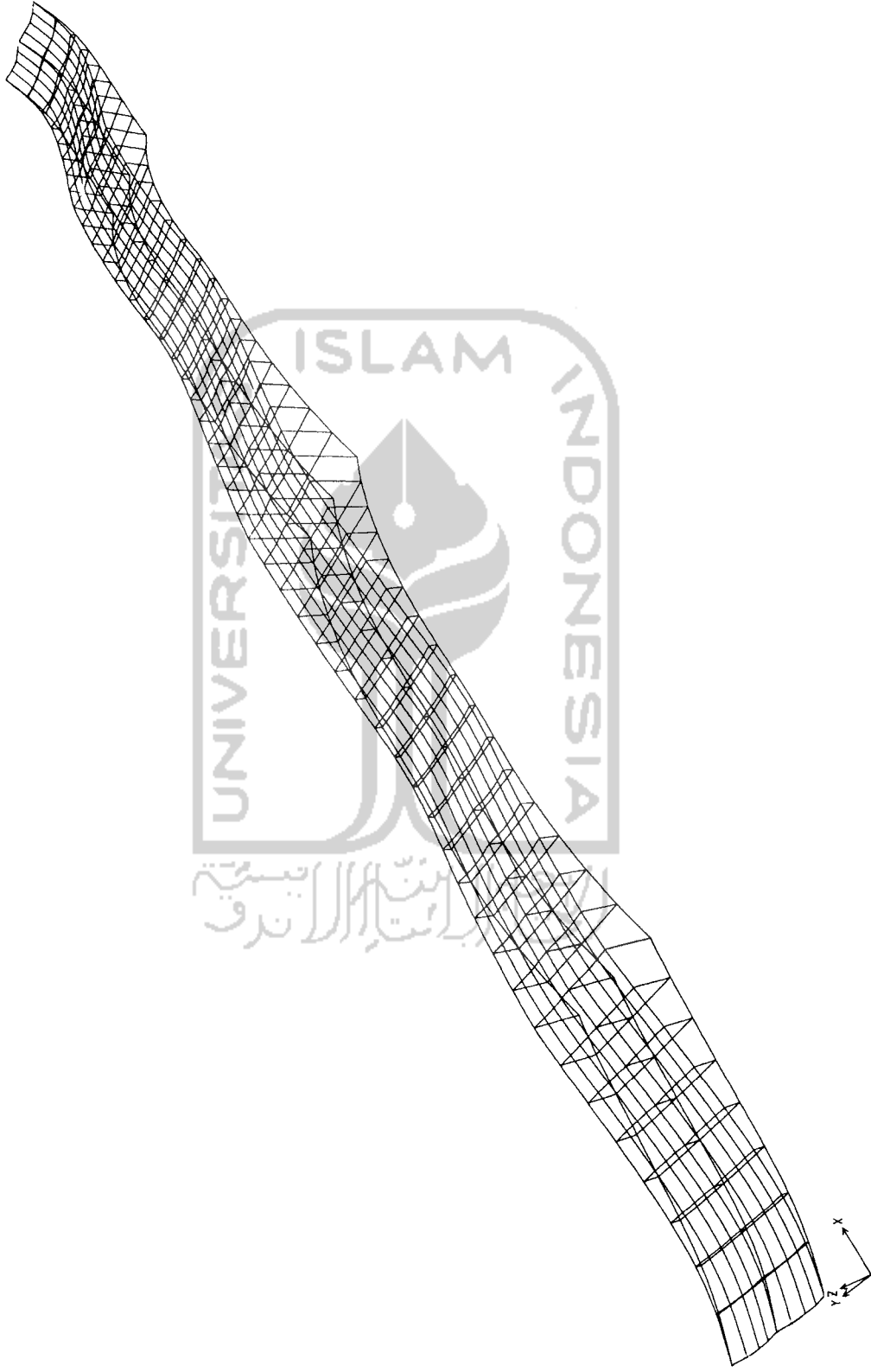


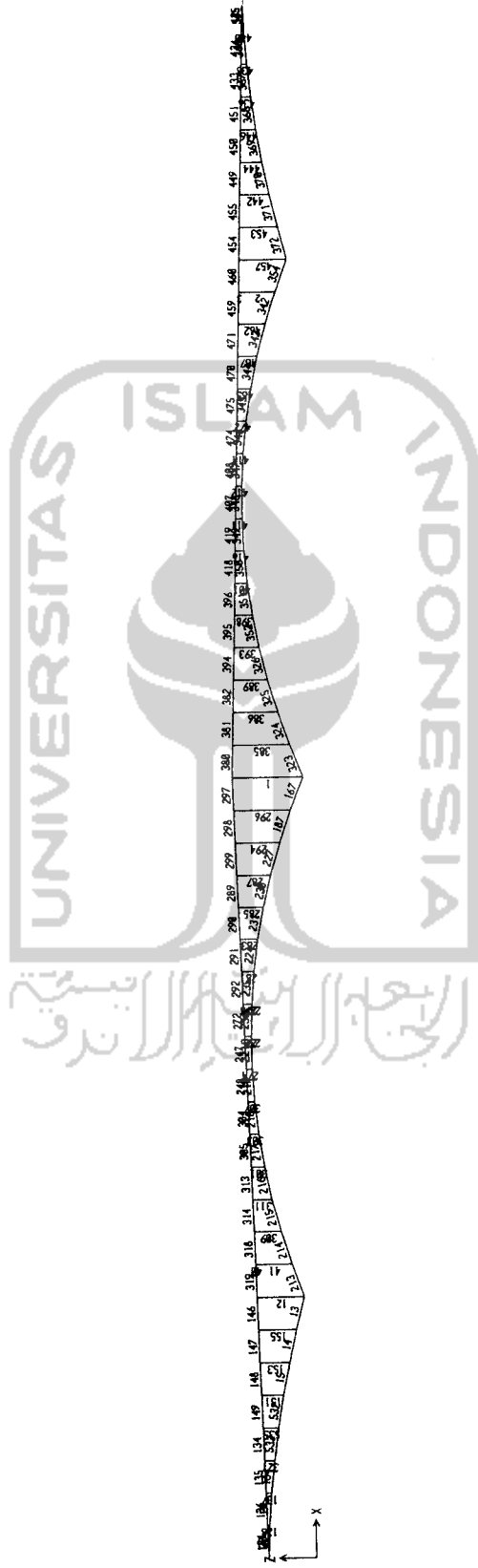


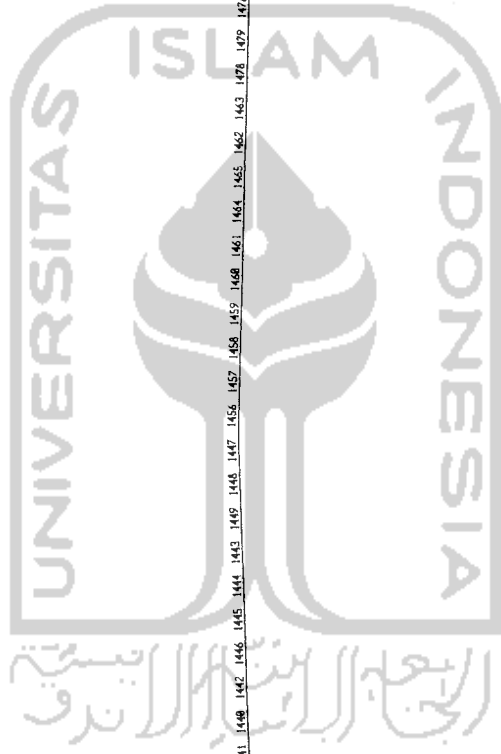




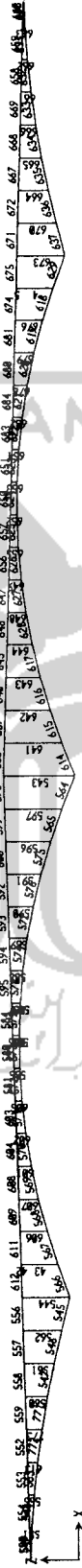
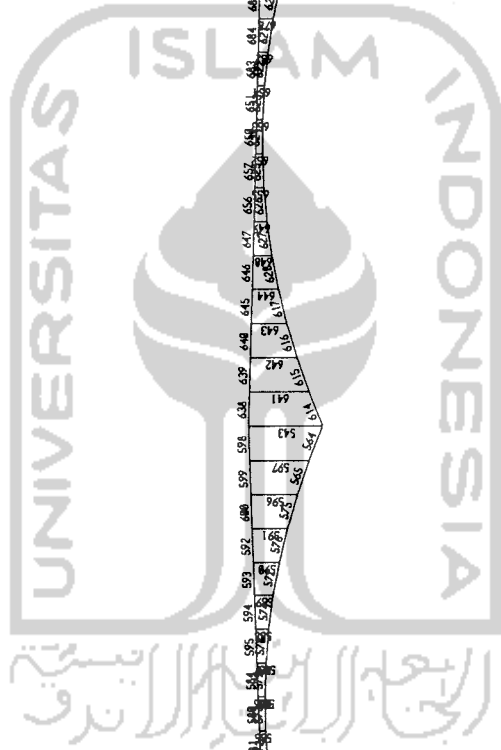


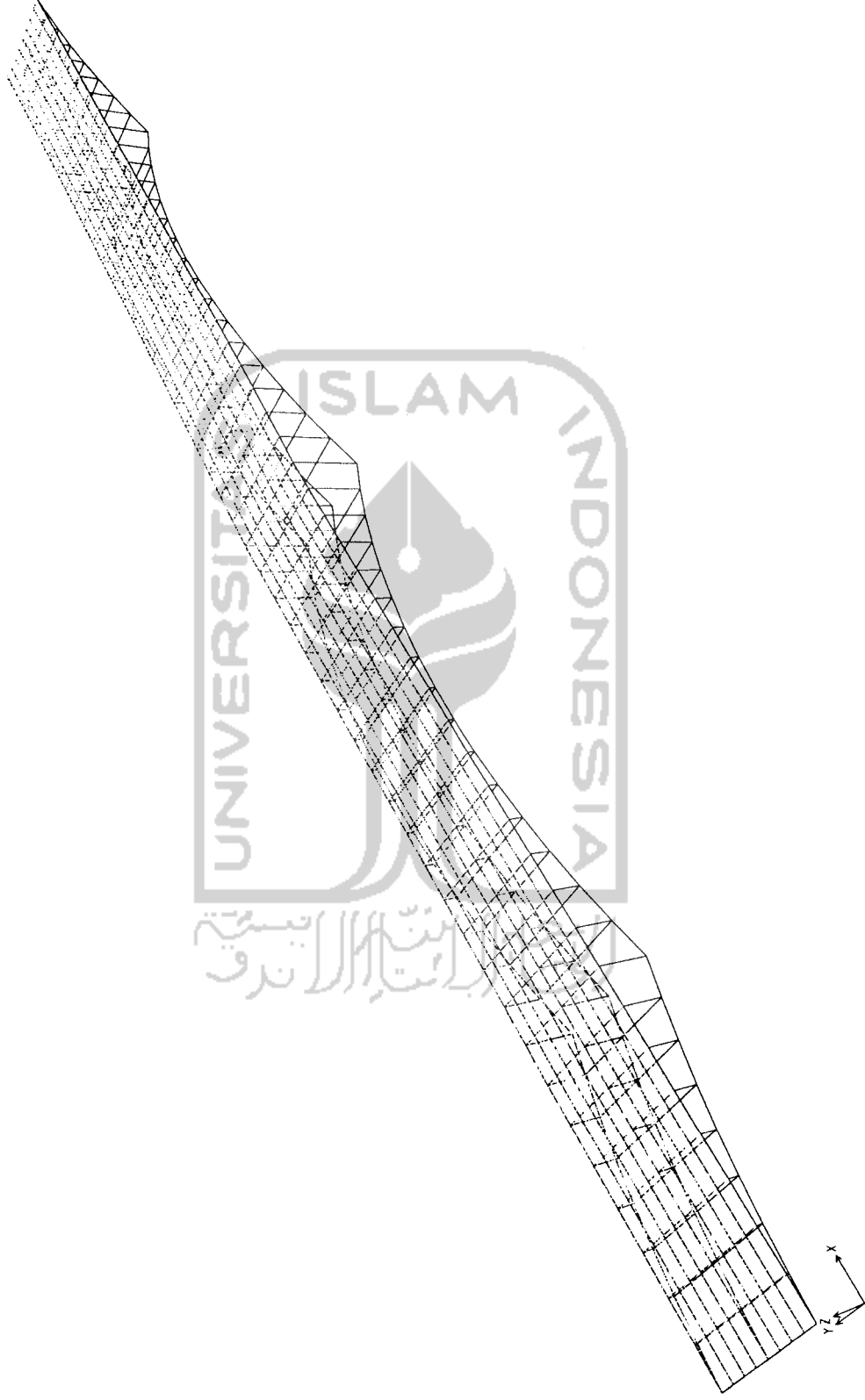


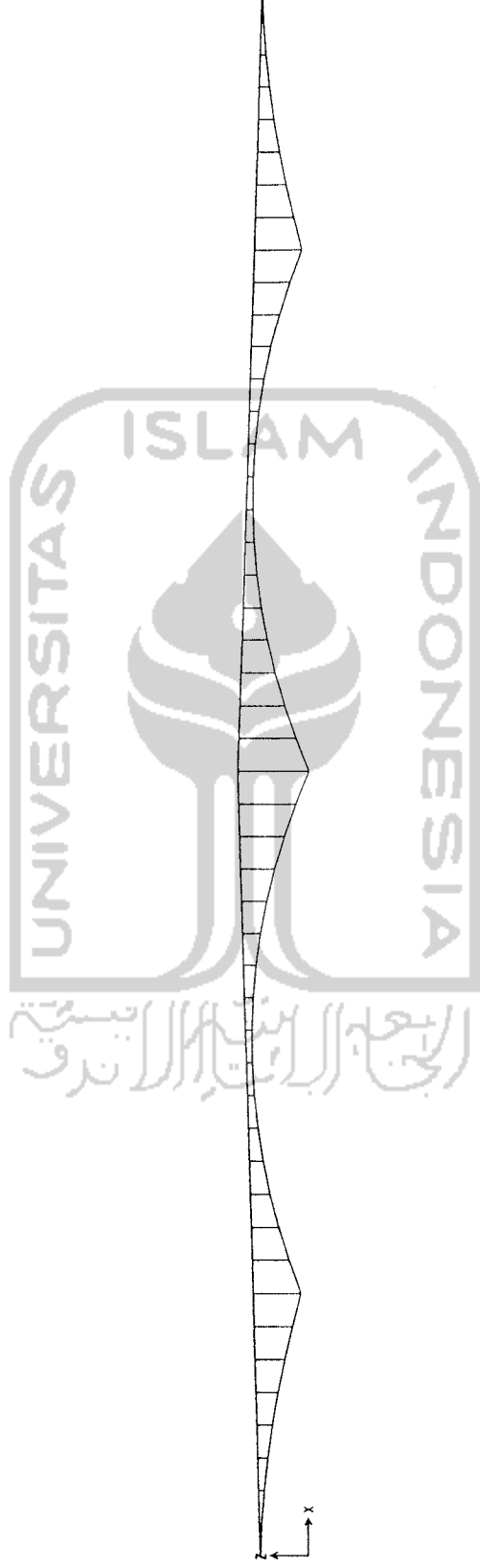




2 1432 1435 1434 1433 1439 1438 1437 1436 1435 1434 1433 1432 1451 1452 1453 1454 1455 1456 1457 1458 1459 1460 1461 1462 1463 1464 1465 1466 1467 1468 1469 1470 1471 1472 1473 1474 1475 1476 1477 1478 1479 1480 1481 1482 1483 1484 1485 1486 1487 1488 1489 1490 1491 1492 1493 1494 1495 1496 1497 1498 1499 1500

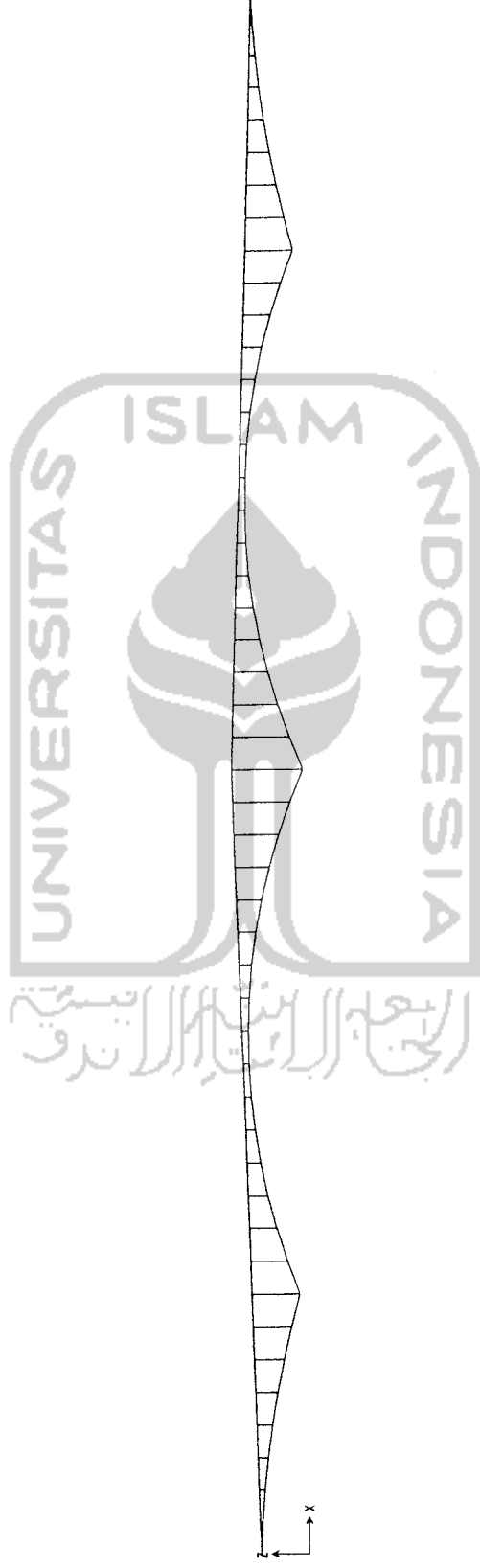


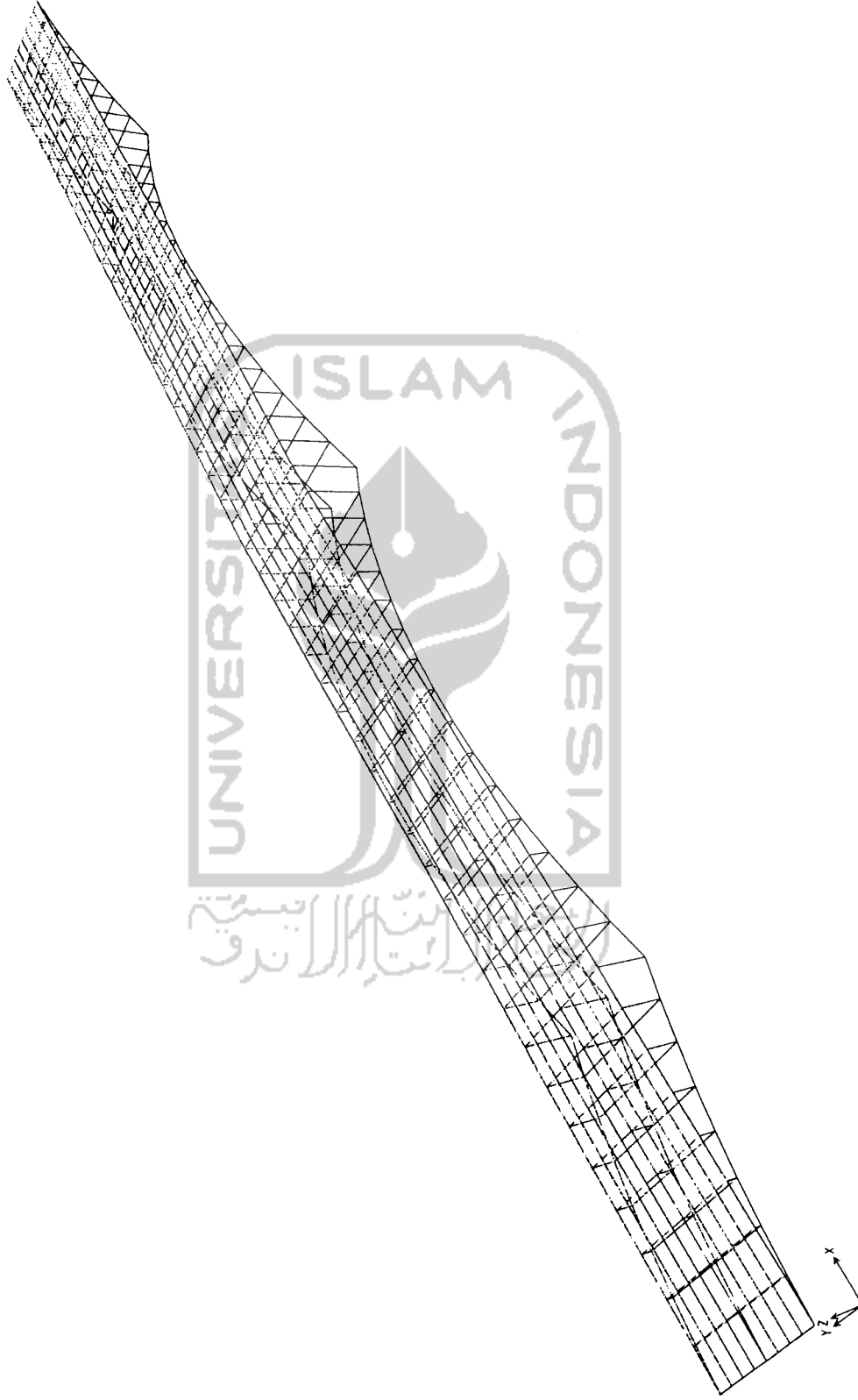


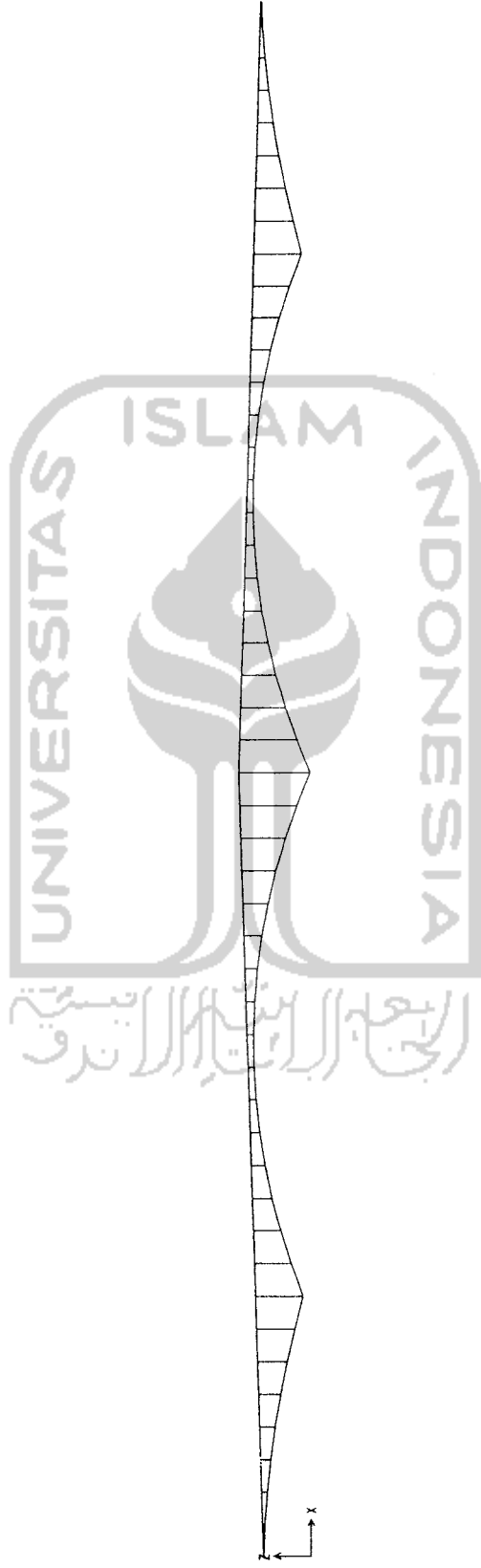








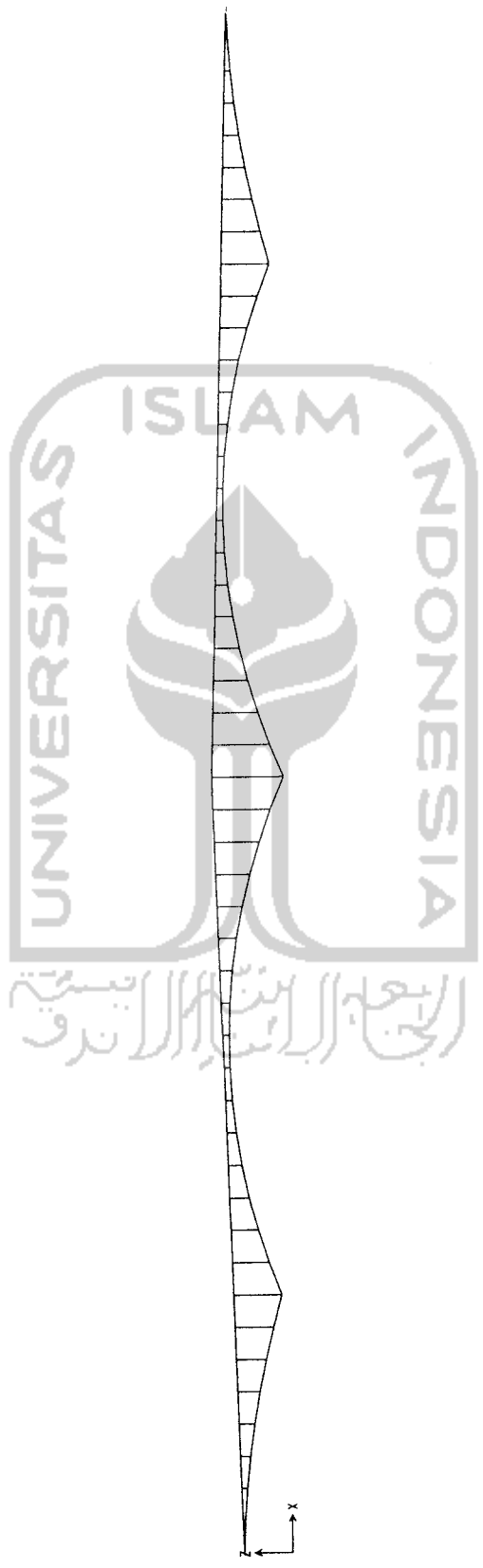


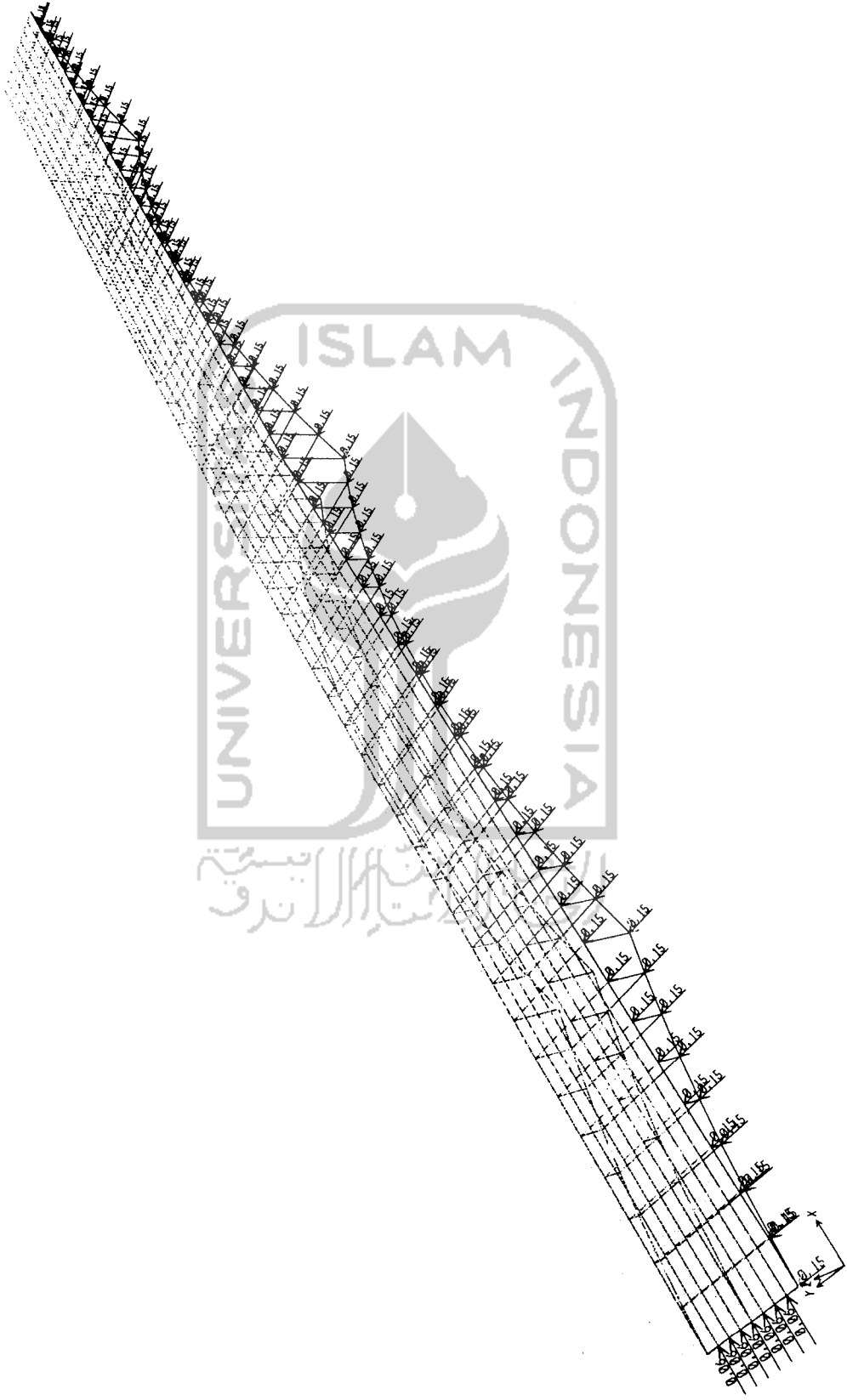


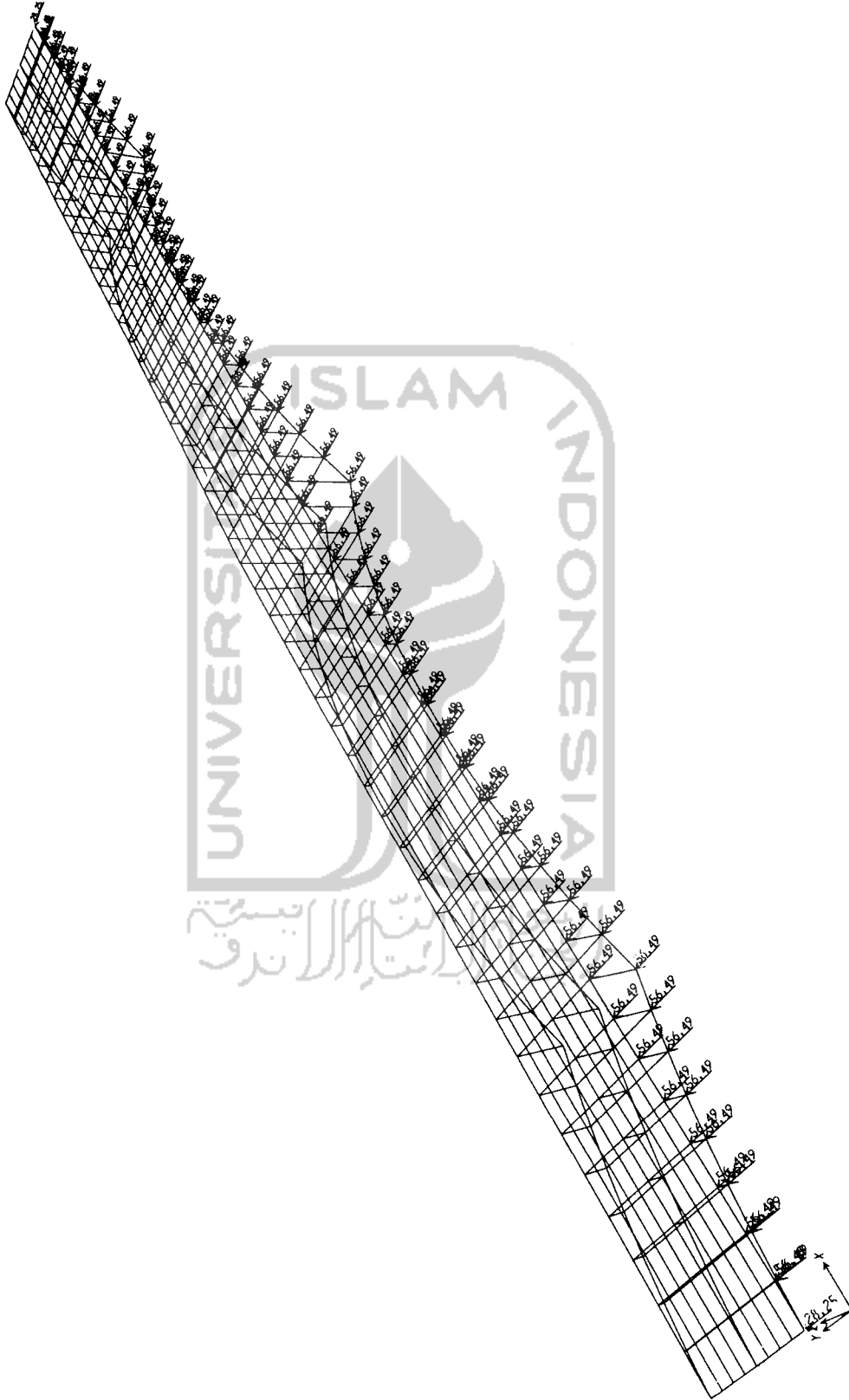


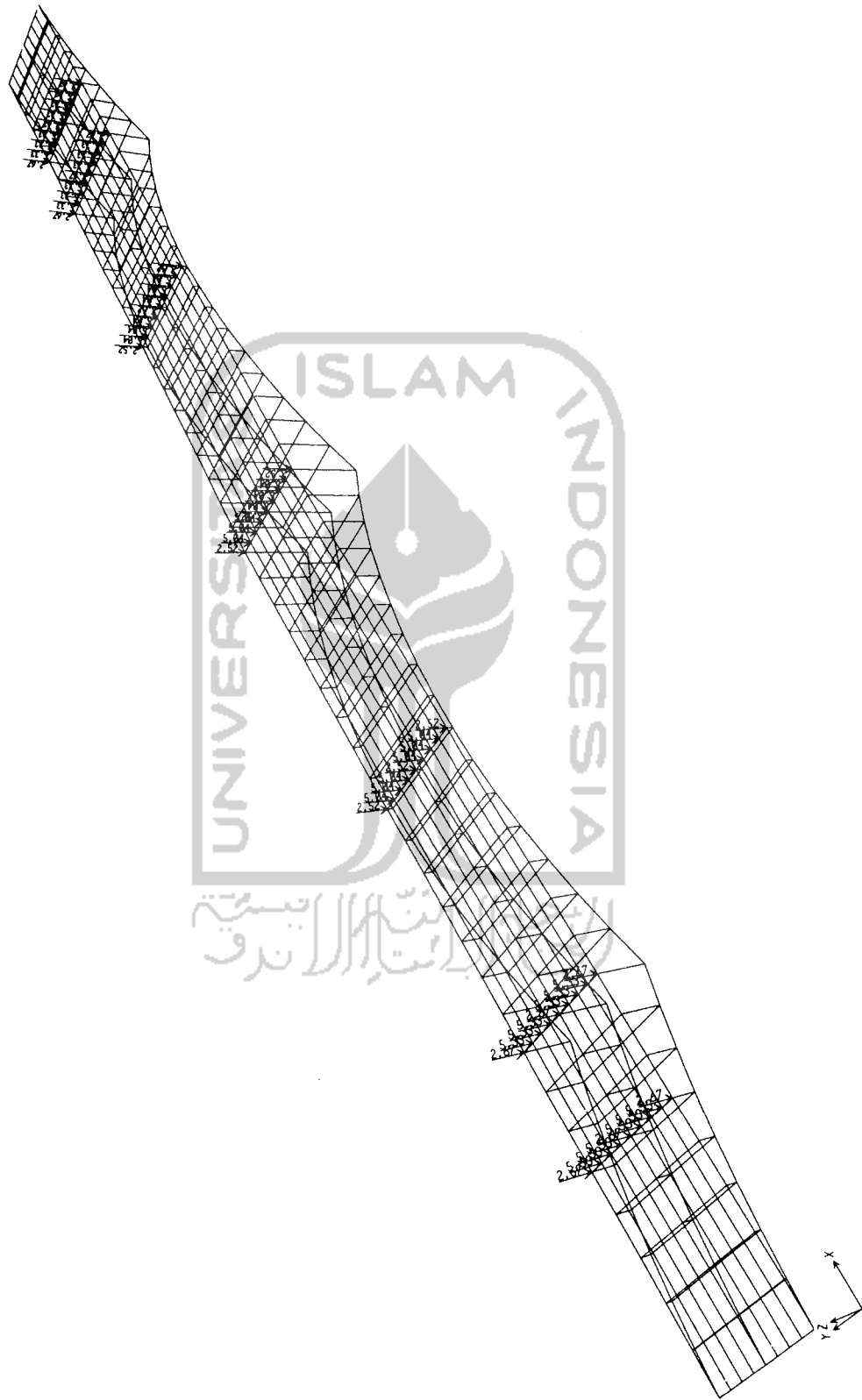


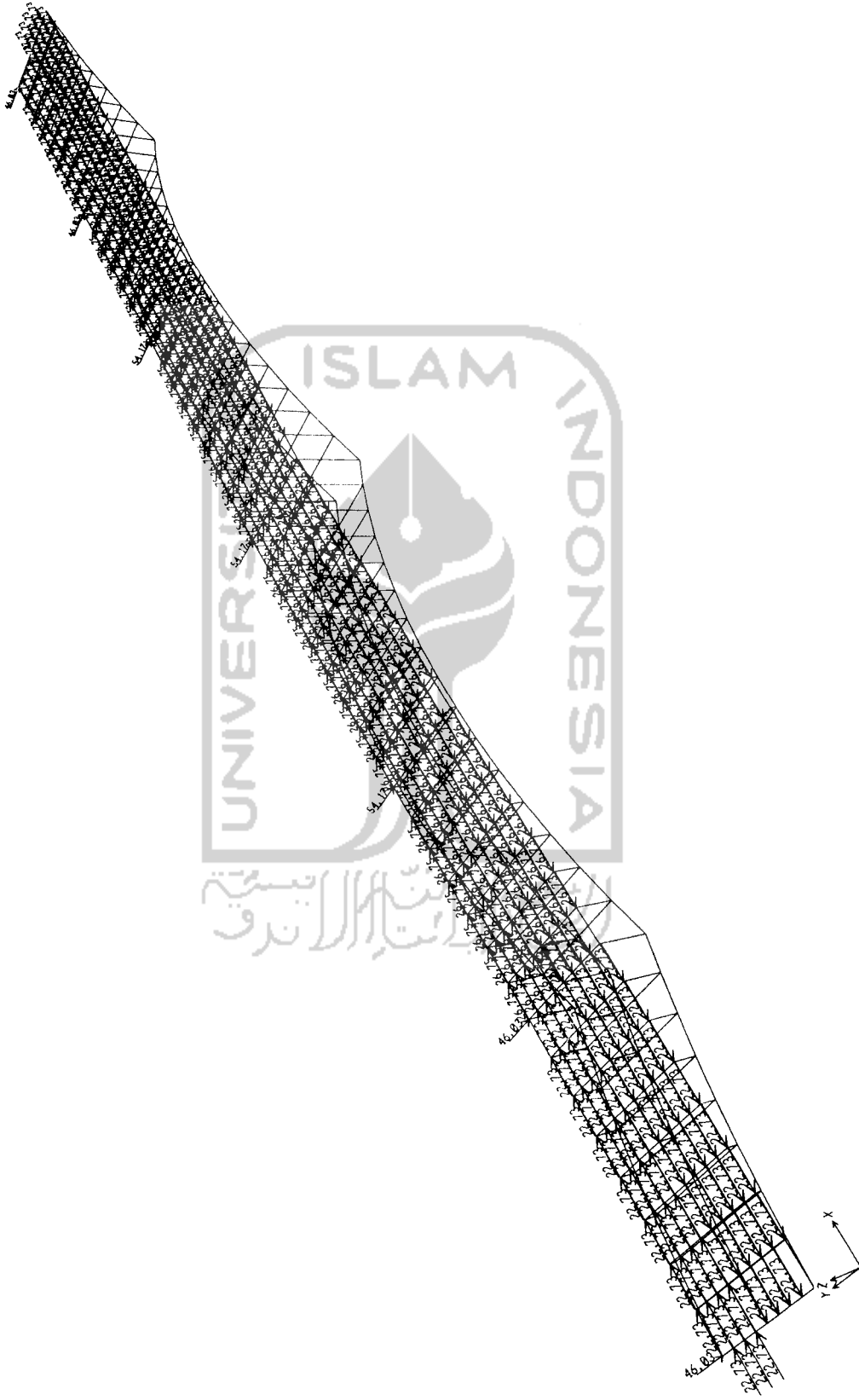
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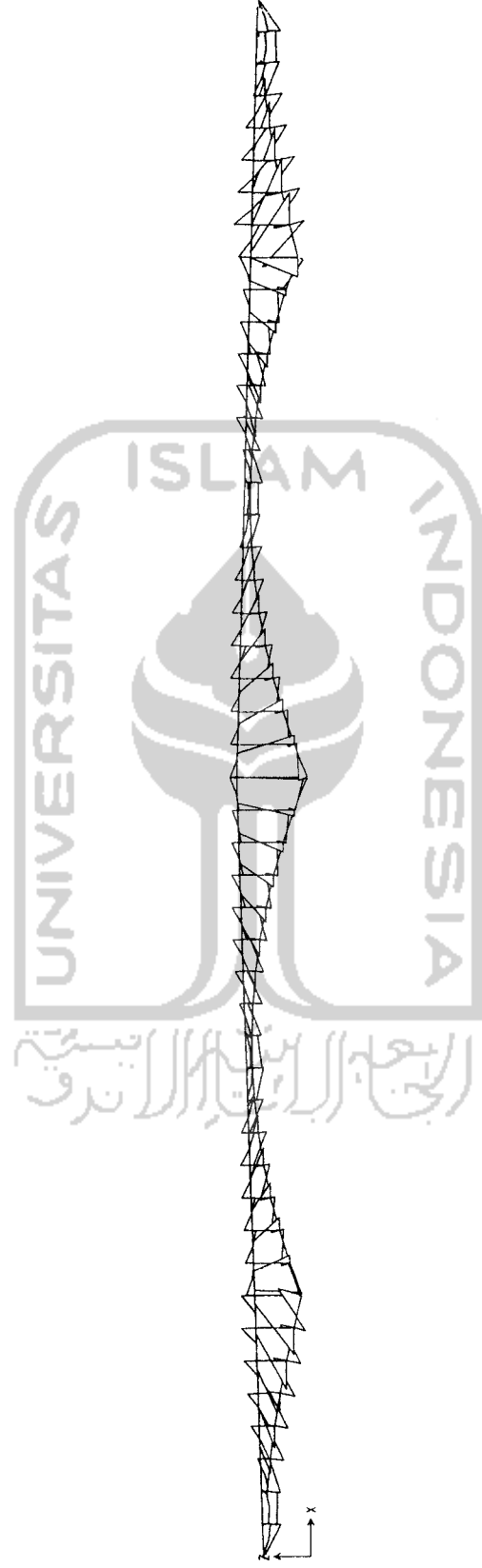


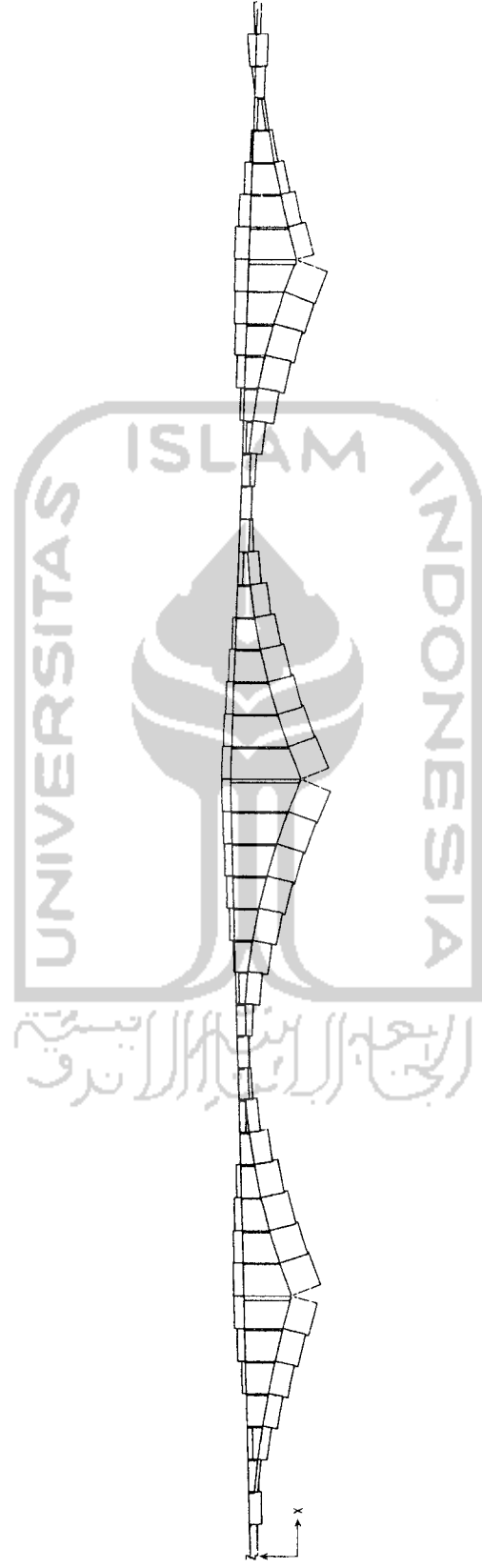


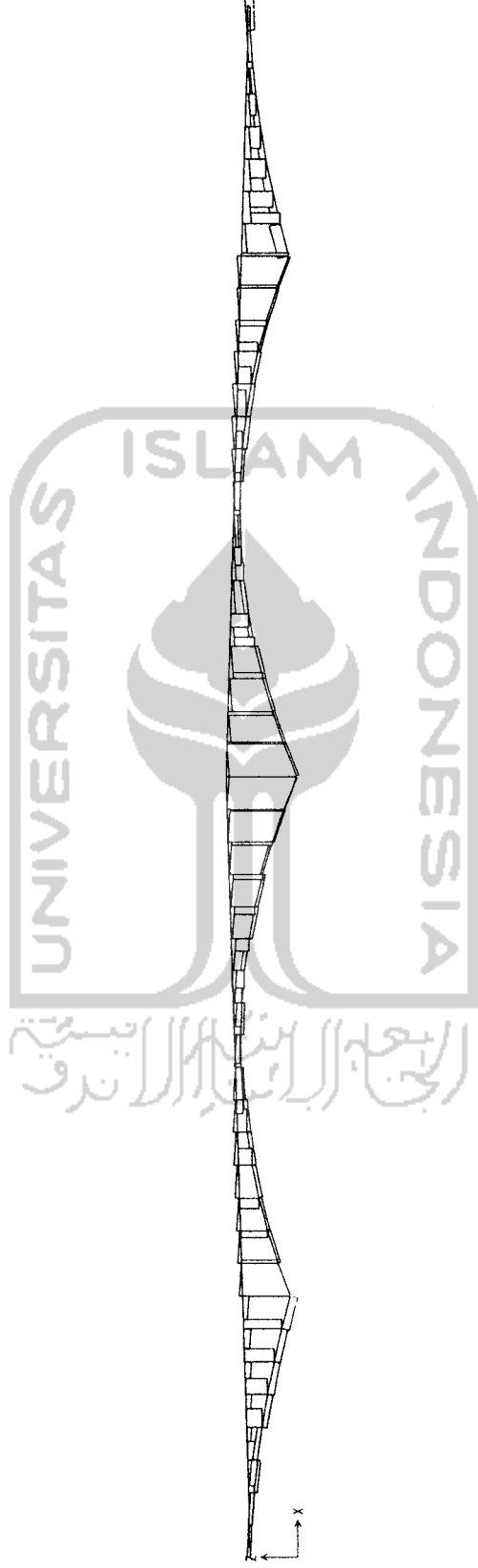


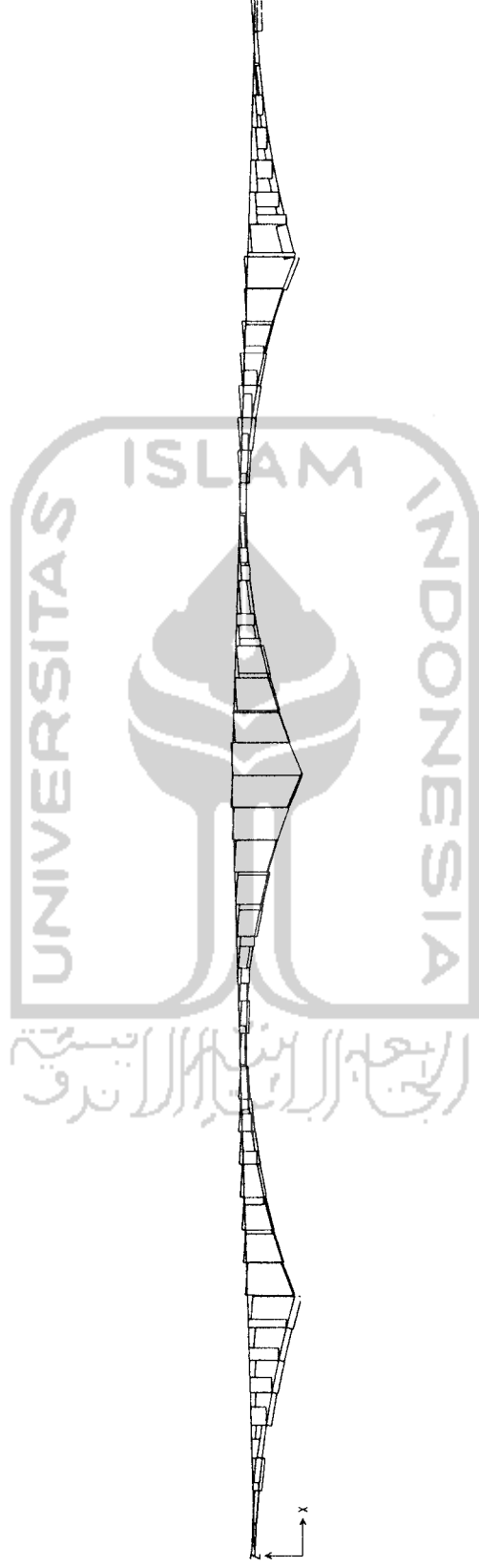












LAMPIRAN

OUTPUT SAP :

MOMEN BALOK INDUK TEPI

MOMEN BALOK INDUK TENGAH

MOMEN BALOK ANAK

MOMEN BALOK LINTANG

MOMEN BALOK LENGKUNG TEPI

MOMEN BALOK LENGKUNG TENGAH

MOMEN KOLOM TEPI

MOMEN KOLOM TENGAH

TABEL MOMEN BALOK INDUK TEPI

| FRAME | STA | MD | | ML | | | ML TOT | | ME | | COMB1 | | COMB 2 | | COMB 3 | |
|-------|--------|----------|------------|-------------|---------------|----------|-----------|--------------|-------------------|-------------------|------------------------|------------------------|--------|--|--------|--|
| | | 0 | 1 | ML merata | ML Koef kejut | ML TOT | ME X | ME Y | 1,3MD + 2 (MQ-MP) | 1,3MD + 2 (MQ-MP) | 1,3MD + 2 (MQ-MP)+1MEX | 1,3MD + 2 (MQ-MP)+1MEY | | | | |
| 124 | 0 | 535,2117 | 303,64624 | 2,04495327 | 305,6912 | -14,5217 | -0,758731 | 1307,157637 | 1292,635959 | 1306,398906 | | | | | | |
| 124 | 2,5011 | 345,9231 | 153,777902 | 1,137777597 | 154,9157 | -7,68432 | -0,36132 | 759,5314171 | 751,8470956 | 759,1700976 | | | | | | |
| 124 | 5,0023 | -19,8012 | 3,90956423 | 0,230601924 | 4,140166 | -0,84696 | 0,036092 | -17,46124523 | -18,30820971 | -17,42515308 | | | | | | |
| 134 | 0 | -535,522 | -210,84322 | 6,495138255 | -204,348 | -1,73566 | 0,341503 | -1104,874443 | -1106,610101 | -1104,532941 | | | | | | |
| 134 | 2,5011 | 91,47183 | 47,547837 | 3,88382443 | 51,43166 | -1,90042 | 0,155984 | 221,7767036 | 219,8762843 | 221,9326873 | | | | | | |
| 134 | 5,0023 | 542,0297 | 305,938889 | 1,272510606 | 307,2114 | -2,06518 | -0,029535 | 1319,061408 | 1316,996228 | 1319,031873 | | | | | | |
| 135 | 0 | -232,885 | -51,965772 | 6,253565885 | -45,7122 | -6,61749 | 0,545839 | -394,1747135 | -400,7922084 | -393,6288744 | | | | | | |
| 135 | 2,5011 | 215,0822 | 110,661396 | 3,268994577 | 113,9304 | -5,22294 | 0,328166 | 507,4676914 | 502,2447477 | 507,7958573 | | | | | | |
| 135 | 5,0023 | 486,6136 | 273,288563 | 0,284423268 | 273,573 | -3,82839 | 0,110493 | 1179,743654 | 1175,915262 | 1179,854147 | | | | | | |
| 136 | 0 | 254,4975 | 189,329846 | 5,389639429 | 194,7195 | -14,373 | 1,066898 | 720,2856869 | 705,9126635 | 721,3525846 | | | | | | |
| 136 | 2,5011 | 424,4235 | 211,09368 | 2,894512862 | 213,9882 | -9,74008 | 0,231819 | 979,7268904 | 969,9868087 | 979,9887093 | | | | | | |
| 136 | 5,0023 | 417,9137 | 232,857514 | 0,399396296 | 233,2569 | -5,10714 | -0,60326 | 1009,801652 | 1004,694512 | 1009,198392 | | | | | | |
| 146 | 0 | -559,366 | -397,15515 | -57,2942477 | -454,449 | -3,91381 | 1,645545 | -1636,075092 | -1639,9889 | -1634,429547 | | | | | | |
| 146 | 2,5011 | -45,2303 | -47,829302 | -3,40277155 | -51,2321 | 0,418471 | 0,608213 | -161,2635662 | -160,8450955 | -160,6553532 | | | | | | |
| 146 | 5,0023 | 292,47 | 301,496545 | 50,48870463 | 351,9852 | 4,750749 | -0,429119 | 1084,181518 | 1088,932267 | 1083,752399 | | | | | | |
| 147 | 0 | -357,317 | -400,24609 | -82,044536 | -482,291 | 2,191096 | -0,253168 | -1429,093332 | -1426,902236 | -1429,3465 | | | | | | |
| 147 | 2,5011 | 26,76579 | 4,80106111 | 2,024616792 | 6,825678 | 1,26574 | -0,061351 | 48,44687944 | 49,71261916 | 48,38552816 | | | | | | |
| 147 | 5,0023 | 234,4128 | 409,848209 | 86,09376963 | 495,942 | 0,340383 | 0,130465 | 1296,620649 | 1296,961032 | 1296,751114 | | | | | | |
| 148 | 0 | -221,381 | -343,50538 | -77,8216528 | -421,327 | 0,995086 | 0,307544 | -1130,449645 | -1129,454559 | -1130,142101 | | | | | | |
| 148 | 2,5011 | -27,2413 | 18,4750967 | 12,8154731 | 31,29057 | 0,416198 | 0,063096 | 27,16741134 | 27,58360952 | 27,23950783 | | | | | | |
| 148 | 5,0023 | -9,53718 | 380,455577 | 103,452599 | 483,9082 | -0,16269 | -0,181351 | 955,4180251 | 955,2553354 | 955,2366742 | | | | | | |
| 149 | 0 | -724,622 | -293,13916 | -1,90594691 | -295,045 | 0,360996 | 0,347869 | -1532,098676 | -1531,73768 | -1531,750807 | | | | | | |
| 149 | 2,5011 | 6,61756 | 23,9800744 | 10,04421589 | 34,02429 | -0,28791 | 0,078924 | 76,6514083 | 76,36349621 | 76,73033243 | | | | | | |
| 149 | 5,0023 | 561,4213 | 341,099313 | 21,99437869 | 363,0937 | -0,93682 | -0,190021 | 1456,035051 | 1455,098231 | 1455,84503 | | | | | | |
| 247 | 0 | 142,9608 | 79,8195563 | 6,371488173 | 86,19104 | 0,154802 | 8,815171 | 358,2311123 | 358,3859144 | 367,0462834 | | | | | | |
| 247 | 2,5011 | 301,7247 | 106,006447 | 45,13214689 | 151,1386 | -1,67616 | 3,186675 | 694,5193358 | 692,8431749 | 697,7060112 | | | | | | |
| 247 | 5,0022 | 284,0531 | 132,193337 | 83,89280561 | 216,0861 | -3,50712 | -2,44182 | 801,4413749 | 797,9342512 | 798,9995547 | | | | | | |
| 248 | 0 | 358,9445 | 172,758552 | 92,3519651 | 265,1105 | -3,78165 | 4,336695 | 996,8488415 | 993,0671907 | 1001,185536 | | | | | | |
| 248 | 2,5011 | 271,1984 | 90,7013567 | 42,09320447 | 132,7946 | -1,84442 | -0,200064 | 618,1469989 | 616,3025839 | 617,9469349 | | | | | | |
| 248 | 5,0022 | 7,01674 | 8,64416137 | -8,16555616 | 0,478605 | 0,092821 | -4,736823 | 10,07897208 | 10,17179288 | 5,342149121 | | | | | | |
| 272 | 0 | -275,824 | -89,119539 | -50,2357076 | -139,355 | 6,154891 | 1,196565 | -637,2813172 | -631,1264265 | -636,0847519 | | | | | | |
| 272 | 2,5011 | 127,3661 | 36,9482679 | 1,883564548 | 38,83183 | 1,088625 | 3,790237 | 243,2395309 | 244,3281557 | 247,0297683 | | | | | | |
| 272 | 5,0022 | 354,1203 | 163,016075 | 54,00283669 | 217,0189 | -3,97764 | 6,383909 | 894,3941948 | 890,4165537 | 900,7781042 | | | | | | |

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|-----|--------|----------|------------|-------------|----------|----------|-----------|--------------|--------------|--------------|
| 289 | 0 | -500,513 | -186,26412 | 4,590810838 | -181,673 | 6,611317 | 0,435144 | -1014,01366 | -1007,402343 | -1013,578515 |
| 289 | 2,5011 | -14,3904 | -14,977157 | -8,37798683 | -23,3551 | 1,273253 | -0,775588 | -65,41775087 | -64,14449835 | -66,19333891 |
| 289 | 5,0022 | 295,2969 | 156,309807 | -21,3467845 | 134,963 | 4,06481 | -1,986321 | 653,8119737 | 649,7471615 | 651,8256532 |
| 290 | 0 | -556,598 | -205,8308 | -9,1689812 | -215 | 7,656641 | -1,489202 | -1153,576617 | -1145,919975 | -1155,065818 |
| 290 | 2,5011 | -16,1427 | -17,230309 | -8,67553352 | -25,9058 | 1,675413 | -0,913104 | -72,79723109 | -71,12181859 | -73,71033538 |
| 290 | 5,0022 | 347,8768 | 171,370181 | -8,18208584 | 163,1881 | 4,30582 | -0,337007 | 778,6159701 | 774,3101539 | 778,2789633 |
| 291 | 0 | -568,583 | -209,13722 | -25,9098982 | -235,047 | 8,428592 | -5,37794 | -1209,252226 | -1200,823635 | -1214,630167 |
| 291 | 2,5011 | -5,84735 | -14,235249 | -8,84566118 | -23,0809 | 1,961857 | -0,673522 | -53,76337489 | -51,80151795 | -54,43689668 |
| 291 | 5,0022 | 380,4528 | 180,666719 | 8,218575878 | 188,8853 | 4,50488 | 4,030897 | 872,3592923 | 867,8544146 | 876,3901889 |
| 292 | 0 | -488,448 | -176,10964 | -42,2480569 | -218,358 | 8,162668 | -8,512387 | -1071,697213 | -1063,534544 | -1080,2096 |
| 292 | 2,5011 | 43,19181 | 4,34639725 | -6,0179525 | -1,67156 | 1,783562 | 1,186681 | 52,80624369 | 54,58980564 | 53,99292488 |
| 292 | 5,0022 | 398,3957 | 184,80243 | 30,21215188 | 215,0146 | 4,59554 | 10,88575 | 947,9435159 | 943,3479715 | 958,8292652 |
| 297 | 0 | -317,612 | -171,79279 | 27,14577593 | -144,647 | 19,99837 | 1,8877 | -702,1898351 | -682,1914603 | -700,3021355 |
| 297 | 2,5011 | -72,9067 | -50,774859 | 2,653970255 | -48,1209 | 5,449759 | -0,077642 | -191,0204485 | -185,5706897 | -191,0980904 |
| 297 | 5,0022 | -4,63671 | 70,2430743 | -21,8378354 | 48,40524 | -9,09886 | -2,042983 | 90,78275373 | 81,68389661 | 88,73977052 |
| 298 | 0 | -327,081 | -131,60385 | 26,52225856 | -105,082 | 2,172559 | 1,317478 | -635,3688011 | -633,1962426 | -634,0513227 |
| 298 | 2,5011 | -21,2056 | -12,864128 | -6,31296953 | -19,1771 | -0,32125 | -0,523241 | -65,92144187 | -66,24269597 | -66,44468298 |
| 298 | 5,0022 | 108,2346 | 105,875596 | -39,1481976 | 66,7274 | -2,81507 | -2,363961 | 274,159733 | 271,3446663 | 271,7957724 |
| 299 | 0 | -431,031 | -163,84554 | 15,28108006 | -148,564 | 6,072968 | 1,135275 | -857,4694937 | -851,3965261 | -856,3342191 |
| 299 | 2,5011 | -16,0731 | -13,340713 | -8,40453456 | -21,7452 | 1,069878 | -0,633082 | -64,38548766 | -63,31560993 | -65,01856922 |
| 299 | 5,0022 | 222,4495 | 137,164117 | -32,0901492 | 105,074 | -3,93321 | -2,401438 | 499,3323341 | 495,399122 | 496,9308964 |
| 304 | 0 | 370,5695 | 173,128375 | -5,6756035 | -8,37623 | 4,32576 | 0,022938 | 880,0584668 | 875,7327053 | 880,0814048 |
| 304 | 2,5011 | -2,7137 | -20,514362 | -10,2413063 | -30,7557 | 0,495327 | -1,743229 | 49,58211838 | 50,07744567 | 47,83888941 |
| 304 | 5,0022 | -552,432 | -214,1571 | -48,7842033 | -262,941 | -4,88494 | -1,235438 | -1244,044729 | -1237,77278 | -1245,003484 |
| 305 | 0 | 326,4533 | 157,727174 | 3,296408438 | 161,0236 | 6,271949 | -0,958755 | 746,4364879 | 741,7610046 | 744,694079 |
| 305 | 2,5011 | -35,123 | -30,581479 | -11,8726336 | -42,4541 | 0,696067 | -0,735921 | -130,5681264 | -129,8720591 | -131,3040476 |
| 305 | 5,0022 | -573,135 | -218,89013 | -27,0416757 | -245,932 | 6,067618 | 0,270567 | -1236,938925 | -1230,871307 | -1236,668358 |
| 313 | 0 | 260,1084 | 138,739757 | -16,305064 | 122,4347 | -4,50098 | -1,475708 | 583,0103223 | 578,5093401 | 581,5346141 |
| 314 | 2,5011 | -34,6404 | -30,009619 | -11,0812323 | -41,0909 | 0,458974 | -0,531991 | -127,2141957 | -126,7552216 | -127,7461868 |
| 314 | 5,0022 | -505,825 | -198,75899 | -5,85740047 | -204,616 | 5,41893 | 0,411726 | -1066,804898 | -1061,385968 | -1066,393172 |
| 318 | 0 | 263,0019 | 103,827541 | -25,5246292 | 78,30291 | -4,04184 | -1,252362 | 498,5083294 | 494,4664863 | 497,2559674 |
| 318 | 2,5011 | -36,2419 | -24,394473 | -8,56162297 | -32,9561 | -0,21513 | -0,607912 | -113,0266948 | -113,2418296 | -113,6346068 |
| 318 | 5,0022 | -511,921 | -152,61649 | 8,401383291 | -144,215 | 3,611573 | 0,036538 | -953,9279033 | -950,3163298 | -953,8913653 |
| 319 | 0 | -27,8685 | 88,6667389 | -28,0006748 | 60,66606 | -7,0467 | -6,342825 | 85,10310445 | 78,05640543 | 78,76027934 |
| 319 | 2,5011 | -101,55 | -76,72075 | -10,8882451 | -87,609 | 1,375828 | -0,48822 | -307,2326168 | -305,8567888 | -307,720837 |
| 319 | 5,0022 | -351,666 | -242,10824 | 6,224184543 | -235,884 | 9,798355 | 5,366385 | -928,9345223 | -919,1361674 | -923,5681377 |
| 380 | 0 | -305,842 | -164,64358 | 27,97730859 | -136,666 | 16,68741 | -0,421712 | -670,9269494 | -654,2395381 | -671,3486616 |

| | | | | | | | | | | |
|-----|--------|----------|------------|-------------|----------|----------|-----------|--------------|--------------|--------------|
| 380 | 2,5011 | -59,0955 | -40,626513 | 3,845003951 | -36,7815 | 0,671309 | 0,106837 | -150,3871995 | -149,7158905 | -150,2803621 |
| 380 | 5,0022 | 11,21528 | 83,390552 | -20,2873007 | 63,10325 | -15,3448 | 0,635387 | 140,7863662 | 125,4415727 | 141,4217531 |
| 381 | 0 | -396,59 | -185,45089 | 20,17830535 | -165,273 | 27,78569 | -0,432776 | -846,1118424 | -818,3261569 | -846,5446189 |
| 381 | 2,5011 | -17,4671 | -10,034663 | -5,98062133 | -16,0153 | -1,65052 | 0,008862 | -54,73780304 | -56,38832416 | -54,72914074 |
| 381 | 5,0022 | 185,22 | 165,381564 | -32,139548 | 133,242 | -31,0867 | 0,450101 | 507,270052 | 476,1833243 | 507,7201531 |
| 382 | 0 | -470,401 | -195,15447 | 11,58433198 | -183,57 | 21,04672 | -0,285715 | -978,6614122 | -957,6146907 | -978,9471274 |
| 382 | 2,5011 | -1,49292 | -2,397422 | -7,11681625 | -9,51424 | -4,11311 | -0,006863 | -20,96927024 | -25,0823765 | -20,97613313 |
| 382 | 5,0022 | 290,9795 | 190,359627 | -25,8179645 | 164,5417 | -29,2729 | 0,271989 | 707,3566874 | 678,0837534 | 707,6286769 |
| 394 | 0 | -531,684 | -211,54707 | 1,605627069 | -209,941 | 18,71074 | -0,251219 | -1111,071937 | -1092,361194 | -1111,323156 |
| 394 | 2,5011 | 0,950675 | -3,5968393 | -7,03775341 | -10,6346 | -4,12481 | -0,027829 | -20,03330742 | -24,15811526 | -20,06113652 |
| 394 | 5,0022 | 357,1497 | 204,353388 | -15,6811339 | 188,6723 | -26,9604 | 0,195561 | 841,6391377 | 814,6787789 | 841,8346987 |
| 395 | 0 | -570,202 | -218,43027 | -10,6549532 | -229,085 | 13,70275 | -0,278039 | -1199,433664 | -1185,730912 | -1199,711703 |
| 395 | 2,5011 | 2,384558 | -3,6176432 | -7,07242084 | -10,6901 | -4,78479 | -0,046553 | -18,28020242 | -23,06499122 | -18,32675504 |
| 395 | 5,0022 | 398,5361 | 211,194986 | -3,48988852 | 207,7051 | -23,2723 | 0,184933 | 933,5070749 | 910,2347449 | 933,6920083 |
| 396 | 0 | -556,771 | -203,10382 | -25,1950282 | -228,299 | 5,550703 | -0,277997 | -1180,399788 | -1174,849085 | -1180,677784 |
| 396 | 2,5011 | 17,98651 | 3,34575485 | -6,77814796 | -3,43239 | -6,39796 | -0,057909 | 16,51767511 | 10,11971258 | 16,459766 |
| 396 | 5,0022 | 416,3083 | 209,795328 | 11,63873232 | 221,4341 | -18,3466 | 0,162178 | 984,0689538 | 965,722326 | 984,2311322 |
| 407 | 0 | 202,6526 | 137,306317 | 13,09500442 | 150,4013 | -27,1665 | -0,096215 | 564,2510606 | 537,0845949 | 564,1548457 |
| 407 | 2,5011 | 311,5336 | 112,974913 | 45,92507819 | 158,9 | -4,98198 | 0,046692 | 722,793631 | 717,8116459 | 722,8403228 |
| 407 | 5,0022 | 243,979 | 88,6435097 | 78,75515197 | 167,3987 | 17,2025 | 0,189598 | 651,9700172 | 669,1725147 | 652,1596156 |
| 408 | 0 | 410,6118 | 205,313729 | 96,12399364 | 301,4377 | -19,0536 | 0,019385 | 1136,670825 | 1117,617245 | 1136,69021 |
| 408 | 2,5011 | 249,4504 | 71,1294524 | 39,77208914 | 110,9015 | 7,48515 | 0,096935 | 546,0885591 | 553,5737094 | 546,1854938 |
| 408 | 5,0022 | -88,1466 | -63,054824 | -16,5798154 | -79,6346 | 34,02388 | 0,174485 | -273,8598911 | -239,8360102 | -273,6854066 |
| 418 | 0 | -445,1 | -144,79782 | -38,605332 | -183,403 | -7,20756 | -0,260959 | -945,436381 | -952,6439409 | -945,6973398 |
| 418 | 2,5011 | 73,86662 | 27,1225634 | -3,32983487 | 23,79273 | -8,96722 | -0,058244 | 143,6120642 | 134,6448483 | 143,5538205 |
| 418 | 5,0022 | 416,3978 | 199,042947 | 31,94566228 | 230,9886 | -10,7269 | 0,144471 | 1003,294325 | 992,5674533 | 1003,438797 |
| 419 | 0 | -188,52 | -24,589605 | -42,6017295 | -67,1913 | -24,1197 | -0,243501 | -379,4588028 | -403,5785114 | -379,7023037 |
| 419 | 2,5011 | 164,8023 | 67,1292474 | 5,445799529 | 72,57505 | -13,1404 | -0,054731 | 359,3930368 | 346,2526493 | 359,3383055 |
| 419 | 5,0022 | 341,6891 | 158,848099 | 53,49332857 | 212,3414 | -2,16107 | 0,134038 | 868,8786921 | 866,7176257 | 869,0127304 |
| 433 | 0 | -171,156 | -22,99444 | 9,654396276 | -13,34 | -20,2821 | 0,028039 | -249,1829116 | -269,465006 | -249,1548722 |
| 433 | 2,5011 | 306,827 | 170,65046 | 10,29021458 | 180,9407 | -33,2976 | -0,006979 | 760,7564282 | 727,4588719 | 760,7494495 |
| 433 | 5,0023 | 608,3743 | 364,295361 | 10,92603289 | 375,2214 | -46,313 | -0,041997 | 1541,329326 | 1495,016308 | 1541,287329 |
| 434 | 0 | 424,7632 | 292,823528 | 17,51296204 | 310,3365 | -62,9315 | -0,019837 | 1172,865086 | 1109,933561 | 1172,845249 |
| 434 | 2,5011 | 568,2432 | 304,047209 | 13,76323692 | 317,8104 | -53,1262 | -0,024811 | 1374,337097 | 1321,210899 | 1374,312287 |
| 434 | 5,0023 | 535,2876 | 315,27089 | 10,0135118 | 325,2844 | -43,3209 | -0,029784 | 1346,442667 | 1303,121795 | 1346,412882 |
| 435 | 0 | 728,7521 | 426,710195 | 16,41112634 | 443,1213 | -71,6843 | -0,04009 | 1833,620383 | 1761,936054 | 1833,580293 |
| 435 | 2,5011 | 441,7934 | 214,770032 | 8,264174141 | 223,0342 | -36,0753 | -0,020957 | 1020,399894 | 984,3246198 | 1020,378937 |
| 435 | 5,0023 | -21,6009 | 2,8298693 | 0,117221943 | 2,947091 | -0,46622 | -0,001824 | -22,18703743 | -22,65325608 | -22,18886175 |
| 449 | 0 | -300,284 | -412,33161 | -85,9412064 | -498,273 | 33,82919 | 0,076112 | -1386,914334 | -1353,085147 | -1386,838222 |
| 449 | 2,5011 | -7,28348 | 35,4634124 | 14,79742841 | 50,26084 | -7,47107 | 0,031744 | 91,05316029 | 83,58209161 | 91,08490467 |

| | | | | | | | | | | |
|-----|--------|----------|------------|-------------|----------|----------|-----------|--------------|--------------|--------------|
| 449 | 5,0023 | 109,2809 | 483,258436 | 115,5360632 | 598,7945 | -48,7713 | -0,012623 | 1339,654213 | 1290,882888 | 1339,641589 |
| 450 | 0 | -789,79 | -350,64511 | -8,67868766 | -359,324 | 27,67812 | 0,114377 | -1745,374349 | -1717,696228 | -1745,259972 |
| 450 | 2,5011 | 36,87361 | 46,5049384 | 12,67712124 | 59,18206 | -10,794 | 0,013361 | 166,2998116 | 155,5057895 | 166,3131727 |
| 450 | 5,0023 | 687,1013 | 443,654986 | 34,03293013 | 477,6879 | -49,2662 | -0,087655 | 1848,60753 | 1799,341364 | 1848,519875 |
| 451 | 0 | -551,909 | -234,79402 | 3,669847694 | -231,124 | 9,681355 | 0,068304 | -1179,729606 | -1170,048252 | -1179,661303 |
| 451 | 2,5011 | 143,0016 | 82,6418055 | 7,990149271 | 90,63195 | -18,311 | 0,003995 | 367,1659472 | 348,8549887 | 367,1699423 |
| 451 | 5,0023 | 661,4761 | 400,077628 | 12,31045085 | 412,3881 | -46,3033 | -0,060314 | 1684,695059 | 1638,391787 | 1684,634745 |
| 454 | 0 | -484,423 | -371,92474 | -54,379872 | -426,305 | -15,2656 | 0,638439 | -1482,359077 | -1497,624678 | -1481,722838 |
| 454 | 2,5011 | -21,2436 | -31,033444 | -1,44740911 | -32,4809 | -7,31003 | 0,369301 | -92,5784063 | -99,88843812 | -92,20910485 |
| 454 | 5,0023 | 265,5 | 309,857854 | 51,48505381 | 361,3429 | 0,645538 | 0,102164 | 1067,835822 | 1068,48136 | 1067,937986 |
| 455 | 0 | -486,696 | -509,06226 | -94,821703 | -603,884 | 53,51826 | -0,343129 | -1840,47265 | -1786,954392 | -1840,81578 |
| 455 | 2,5011 | 22,67004 | 5,7218553 | 2,124777281 | 7,846633 | 0,907339 | -0,021662 | 45,16431883 | 46,07168789 | 45,14265655 |
| 455 | 5,0023 | 355,6003 | 520,505974 | 99,07125755 | 619,5772 | -51,7036 | 0,299805 | 1701,434846 | 1649,731266 | 1701,734651 |
| 459 | 0 | 200,3973 | 52,0428874 | -31,7394061 | 20,30348 | 21,55178 | 0,883984 | 301,1234983 | 322,6752769 | 302,0074822 |
| 459 | 2,5011 | -43,706 | -29,202351 | -9,12705646 | -38,3294 | 2,046034 | -0,275922 | -133,4765858 | -131,4305521 | -133,7525073 |
| 459 | 5,0022 | -464,245 | -110,44759 | 13,48529318 | -96,9623 | -17,4597 | -1,435827 | -797,4428541 | -814,9025655 | -798,878681 |
| 460 | 0 | 33,03431 | 125,163609 | -23,9044634 | 101,2591 | -22,7056 | -4,920008 | 245,4628999 | 222,7573137 | 240,5428918 |
| 460 | 2,5011 | -144,435 | -106,84859 | -14,3872079 | -121,236 | 15,21505 | -0,316791 | -430,2368961 | -415,0218427 | -430,5536872 |
| 460 | 5,0022 | -498,34 | -338,86079 | -4,86995242 | -343,731 | 53,13569 | 4,286426 | -1335,302876 | -1282,167183 | -1331,016451 |
| 470 | 0 | 296,238 | 128,847984 | -0,20775504 | 128,6402 | 9,950194 | 0,332277 | 642,3898288 | 652,340023 | 642,7221061 |
| 470 | 2,5011 | -69,8674 | -54,672966 | -14,691066 | -69,364 | 11,96982 | 0,03723 | -229,5556508 | -217,5858273 | -229,518421 |
| 470 | 5,0022 | -612,408 | -238,19392 | -29,174377 | -267,368 | 13,98945 | -0,257818 | -1330,867315 | -1316,877862 | -1331,125132 |
| 471 | 0 | 219,2277 | 102,026872 | -20,7416862 | 81,28519 | 13,98922 | 0,668899 | 447,5663757 | 461,5555927 | 448,2350747 |
| 471 | 2,5011 | -63,1926 | -49,624383 | -13,3744318 | -62,9988 | 9,620859 | 0,009237 | -208,1480709 | -198,5272119 | -208,1388334 |
| 471 | 5,0022 | -522,049 | -201,27584 | -6,00717734 | -207,283 | 5,252501 | -0,650224 | -1093,228702 | -1087,976201 | -1093,878926 |
| 474 | 0 | 347,6703 | 157,707853 | 53,53728414 | 211,2451 | -2,24576 | 0,114562 | 874,4616277 | 872,2158696 | 874,5761893 |
| 474 | 2,5011 | -6,77229 | -45,064094 | -10,6461232 | -55,7102 | 20,46164 | 0,092303 | -120,224414 | -99,76277117 | -120,1321115 |
| 474 | 5,0022 | -537,65 | -247,83604 | -74,8295305 | -322,666 | 43,16904 | 0,070044 | -1344,27664 | -1301,107596 | -1344,206597 |
| 475 | 0 | 357,9118 | 157,41744 | 26,38162294 | 183,7991 | 3,187958 | 0,215736 | 832,8834634 | 836,0714211 | 833,0991996 |
| 475 | 2,5011 | -46,8157 | -51,761365 | -13,9024147 | -65,6638 | 15,36737 | 0,05108 | -192,1879253 | -176,8205597 | -192,1368454 |
| 475 | 5,0022 | -627,979 | -260,94017 | -54,1864523 | -315,127 | 27,54677 | -0,113576 | -1446,625498 | -1419,078725 | -1446,739075 |

TABEL MOMEN BALOK INDUK TENGAH

| FRAME | STA | ML | | ML TOT | ME | | COMB1 | | COMB2 | | COMB3 | |
|-------|-------|----------|-----------|-------------|---------------|----------|----------|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | MD | ML merata | | ML.Koef kejut | ME X | ME Y | 1,3MD + 2 (MLQ+MLP) | 1,3MD + 2 (MLQ+MLP)+1MEY | 1,3MD + 2 (MLQ+MLP)+1MEY | 1,3MD + 2 (MLQ+MLP)+1MEY | 1,3MD + 2 (MLQ+MLP)+1MEY |
| 550 | 0 | 730,1409 | 402,08774 | -0,70053629 | 401,387 | -18,7974 | 1,22423 | 1751,957595 | 1733,160177 | 1,3MD + 2 (MLQ+MLP)+1MEY | 1753,181826 | |
| 550 | 2,501 | 444,4654 | 201,02387 | -0,24497683 | 200,779 | -9,99058 | 0,61783 | 979,3627544 | 969,3721745 | | 979,9805833 | |
| 550 | 5,002 | -24,7616 | -0,040004 | 0,210582632 | 0,17058 | -1,18374 | 0,01143 | -31,84894505 | -33,03268682 | | -31,83751856 | |
| 552 | 0 | -646,289 | -263,2379 | 14,87804657 | -248,36 | -9,13702 | -0,14353 | -1336,894877 | -1346,031895 | | -1337,038404 | |
| 552 | 2,501 | 103,5148 | 48,331305 | 3,572453916 | 51,9038 | -2,51732 | -0,04918 | 238,3767273 | 235,8594088 | | 238,3275473 | |
| 552 | 5,002 | 669,7667 | 359,90049 | -7,73313874 | 362,167 | 4,10238 | 0,04517 | 1575,031472 | 1579,133854 | | 1575,07664 | |
| 553 | 0 | -299,68 | -91,66434 | 7,350118625 | -84,314 | -14,7547 | -0,19096 | -558,2119772 | -572,9666637 | | -558,4029333 | |
| 553 | 2,501 | 258,4338 | 125,83377 | 1,535654829 | 127,369 | -6,95367 | 0,05718 | 590,7027327 | 583,7490604 | | 590,7599151 | |
| 553 | 5,002 | 632,9957 | 343,33188 | -4,27880897 | 339,053 | 0,84734 | 0,30532 | 1501,000584 | 1501,847926 | | 1501,305905 | |
| 554 | 0 | 316,1399 | 210,16751 | 2,647227546 | 212,815 | -22,8143 | 0,09814 | 836,6113456 | 813,7970803 | | 836,7094899 | |
| 554 | 2,501 | 536,8045 | 262,55994 | 0,459599766 | 263,02 | -12,3697 | 0,51618 | 1223,884978 | 1211,515296 | | 1224,401157 | |
| 554 | 5,002 | 573,9177 | 314,95237 | -1,72802801 | 313,224 | -1,9251 | 0,93421 | 1372,541751 | 1370,616653 | | 1373,475966 | |
| 556 | 0 | -750,776 | -436,8945 | -78,7322322 | -515,63 | -11,3235 | -5,2844 | -2007,261778 | -2018,585252 | | -2012,546175 | |
| 556 | 2,501 | -68,5359 | -53,82189 | -4,50426394 | -58,326 | -0,2276 | -0,9132 | -205,7489519 | -205,9765496 | | -206,6621501 | |
| 556 | 5,002 | 430,1524 | 329,25072 | 69,72370432 | 398,974 | 10,8683 | 3,458 | 1357,147015 | 1368,015294 | | 1360,605016 | |
| 557 | 0 | -518,653 | -432,7026 | -110,758372 | -543,46 | -2,36861 | 0,4509 | -1761,170622 | -1763,53923 | | -1760,719726 | |
| 557 | 2,501 | 32,85729 | 3,7441251 | 2,679742729 | 6,42387 | 1,82912 | 0,22767 | 55,56221217 | 57,39132927 | | 55,78987736 | |
| 557 | 5,002 | 400,816 | 440,19081 | 116,1178574 | 556,309 | 6,02684 | 0,00443 | 1633,678187 | 1639,705029 | | 1633,682622 | |
| 558 | 0 | -359,789 | -378,5334 | -108,624423 | -487,16 | -5,24658 | 0,19948 | -1442,041846 | -1447,28843 | | -1441,842369 | |
| 558 | 2,501 | -17,624 | 16,796556 | 18,88334796 | 35,6799 | 0,6845 | -0,09956 | 48,44859281 | 49,13308969 | | 48,34903176 | |
| 558 | 5,002 | 140,99 | 412,12649 | 146,3911189 | 558,518 | 6,61558 | -0,3986 | 1300,322173 | 1306,93775 | | 1299,923573 | |
| 559 | 0 | -830,264 | -336,6791 | 6,503988499 | -330,18 | -6,44152 | -0,13289 | -1739,69366 | -1746,135179 | | -1739,826545 | |
| 559 | 2,501 | 12,35197 | 21,670581 | 14,30310906 | 35,9737 | -0,25314 | -0,08997 | 88,00494071 | 87,75179572 | | 87,91497433 | |
| 559 | 5,002 | 671,4167 | 380,02027 | 22,10222962 | 402,122 | 5,93523 | -0,04705 | 1677,086682 | 1683,021911 | | 1677,039635 | |
| 580 | 0 | 155,0471 | 84,751396 | 1,327039774 | 86,0784 | -0,85265 | -11,0187 | 373,7181104 | 372,8654605 | | 362,6994448 | |
| 580 | 2,501 | 342,3428 | 116,28943 | 60,57501865 | 176,864 | -2,04122 | -5,71052 | 798,7745827 | 796,7333616 | | 793,0640627 | |
| 580 | 5,002 | 346,0873 | 147,82747 | 119,8229975 | 267,65 | -3,22979 | -0,40237 | 981,984672 | 981,984672 | | 984,8120898 | |
| 581 | 0 | 437,622 | 189,70984 | 129,7461059 | 319,456 | -5,36419 | -8,09624 | 1207,820455 | 1202,456262 | | 1199,724215 | |
| 581 | 2,501 | 309,8554 | 101,10304 | 57,33656113 | 158,44 | -1,94949 | -0,99366 | 719,6912428 | 717,7417529 | | 718,6975784 | |
| 581 | 5,002 | -1,46237 | 12,496241 | -15,0729837 | -2,5767 | 1,46521 | 6,10891 | -7,054560241 | -5,589347311 | | -0,945648495 | |
| 584 | 0 | -354,018 | -107,7399 | -72,6220859 | -180,36 | 6,10149 | -0,28096 | -820,9468184 | -814,8453317 | | -821,2277769 | |
| 584 | 2,501 | 129,7992 | 38,083916 | -1,2205008 | 36,8634 | 0,83298 | -5,23585 | 242,4657719 | 243,2987553 | | 237,2299215 | |

| | | | | | | | | | | |
|-----|-------|----------|-----------|-------------|---------|----------|----------|--------------|--------------|--------------|
| 584 | 5,002 | 430,0647 | 183,90777 | 70,18108432 | 254,089 | -4,43552 | -10,1907 | 1067,261771 | 1062,826252 | 1057,071029 |
| 592 | 0 | -593,879 | -198,4774 | 8,35383278 | -190,12 | 8,04968 | -0,6061 | -1152,290286 | -1144,240607 | -1152,896384 |
| 592 | 2,501 | -10,5471 | -16,34318 | -10,0212309 | -26,364 | 1,27439 | 1,51757 | -66,44003856 | -65,16565264 | -64,92246379 |
| 592 | 5,002 | 389,234 | 165,79103 | -28,3962946 | 137,395 | -5,50091 | 3,64125 | 780,7936186 | 775,2927112 | 784,4348655 |
| 593 | 0 | -654,5 | -223,3048 | -6,62106865 | -229,93 | 9,07528 | 3,84675 | -1310,701355 | -1301,626078 | -1306,854605 |
| 593 | 2,501 | -19,7501 | -19,37566 | -10,8806006 | -30,256 | 1,71692 | 1,65784 | -86,1876723 | -84,47075361 | -84,52983009 |
| 593 | 5,002 | 431,4482 | 184,55352 | -15,1401325 | 169,413 | -5,64144 | -0,53107 | 899,7094195 | 894,0679804 | 899,1783542 |
| 594 | 0 | -675,976 | -232,5749 | -27,361937 | -259,94 | 9,70946 | 10,4838 | -1398,642639 | -1388,933183 | -1388,158864 |
| 594 | 2,501 | -13,6277 | -16,77195 | -12,0230759 | -28,795 | 2,01055 | 0,87058 | -75,30601122 | -73,29546493 | -74,43542658 |
| 594 | 5,002 | 465,1697 | 199,03095 | 3,315785141 | 202,347 | -5,68836 | -8,74261 | 1009,414026 | 1003,725662 | 1000,67142 |
| 595 | 0 | -594,655 | -201,4834 | -52,4516635 | -253,94 | 9,02675 | 1,8918 | -1280,922121 | -1271,895371 | -1269,030333 |
| 595 | 2,501 | 37,80203 | 2,9201975 | -9,91440373 | -6,9942 | 1,7518 | -1,79348 | 35,15422184 | 36,90601871 | 33,3607419 |
| 595 | 5,002 | 486,7082 | 207,32379 | 32,62285604 | 239,947 | -5,52316 | -15,4787 | 1112,613974 | 1107,090818 | 1097,135226 |
| 598 | 0 | -571,613 | -186,0512 | 25,72806513 | -160,32 | 22,2242 | -6,56039 | -1063,742639 | -1041,518429 | -1070,303025 |
| 598 | 2,501 | -108,493 | -54,02328 | 3,567086113 | -50,456 | 5,89028 | 0,08797 | -241,9531314 | -236,0628479 | -241,8651655 |
| 598 | 5,002 | 171,0756 | 78,004621 | -18,5938929 | 59,4107 | -10,4436 | 6,73632 | 341,2197857 | 330,7761424 | 347,9561036 |
| 599 | 0 | -468,521 | -140,0697 | 32,47363634 | -107,6 | 3,53322 | -2,84566 | -824,2693078 | -820,7360892 | -827,1149699 |
| 599 | 2,501 | -1,32281 | -13,10849 | -6,91383006 | -20,022 | -0,35813 | 1,23009 | -41,76429 | -42,12241606 | -40,53420231 |
| 599 | 5,002 | 282,3241 | 113,85268 | -46,3012965 | 67,5514 | -4,24947 | 5,30584 | 502,1241371 | 497,8746664 | 507,4299746 |
| 600 | 0 | -532,704 | -173,184 | 19,61139162 | -153,57 | 7,48758 | -2,08471 | -999,6608866 | -992,1733066 | -1001,745596 |
| 600 | 2,501 | -1,45396 | -13,93155 | -9,82282762 | -23,754 | 1,0321 | 1,26491 | -49,39889723 | -48,36679881 | -48,13398928 |
| 600 | 5,002 | 346,2452 | 145,32093 | -39,2570469 | 106,064 | -5,42338 | 4,61453 | 662,2465014 | 656,8231182 | 666,8610268 |
| 603 | 0 | 434,1015 | 184,51659 | 71,32801292 | 255,845 | -6,07098 | -1,20224 | 1076,021223 | 1069,95024 | 1074,818984 |
| 603 | 2,501 | 43,72056 | -2,207367 | -9,60983091 | -11,817 | 1,42268 | 2,43163 | 33,20233202 | 34,62501331 | 35,63395819 |
| 603 | 5,002 | -530,212 | -188,9313 | -90,5476747 | -279,48 | 8,91635 | 6,06549 | -1248,233149 | -1239,316804 | -1242,167658 |
| 604 | 0 | 477,3496 | 198,0625 | 32,19364787 | 230,256 | -7,81399 | 1,44612 | 1081,066813 | 1073,252824 | 1082,512929 |
| 604 | 2,501 | -11,9118 | -21,92916 | -14,4522906 | -36,381 | 1,38458 | 1,5754 | -88,24822232 | -86,8636433 | -86,67282068 |
| 604 | 5,002 | -684,724 | -241,9208 | -61,098229 | -303,02 | 10,5831 | 1,70469 | -1496,179848 | -1485,596701 | -1494,475161 |
| 608 | 0 | 431,1928 | 178,43071 | -0,97220818 | 177,459 | -8,21898 | 2,23412 | 915,4676687 | 907,248684 | 917,7017928 |
| 608 | 2,501 | -44,5208 | -32,988 | -15,5207024 | -48,509 | 1,249 | 1,04098 | -154,8944537 | -153,6454535 | -153,8534782 |
| 608 | 5,002 | -703,786 | -244,4067 | -30,0691966 | -274,48 | 10,717 | -0,15217 | -1463,873167 | -1453,156182 | -1464,02534 |
| 609 | 0 | 368,0835 | 155,00363 | -24,221692 | 130,782 | -8,29651 | 1,83767 | 740,0723874 | 731,7758781 | 741,9100582 |
| 609 | 2,501 | -32,6359 | -32,22051 | -13,6803655 | -45,901 | 0,84894 | 0,84276 | -134,2284316 | -133,379492 | -133,385669 |
| 609 | 5,002 | -616,907 | -219,4447 | -3,13903909 | -222,58 | 9,99439 | -0,15215 | -1247,145841 | -1237,151453 | -1247,297987 |
| 611 | 0 | 497,1242 | 113,62949 | -29,1511423 | 84,4783 | -6,99257 | 3,79517 | 815,2181479 | 808,2255779 | 819,0133137 |
| 611 | 2,501 | -30,7746 | -26,62461 | -9,93425442 | -36,559 | -0,20052 | 1,64862 | -113,1246781 | -113,3252012 | -111,4760589 |
| 611 | 5,002 | -742,225 | -166,8787 | 9,282633443 | -157,6 | 6,59152 | -0,49793 | -1280,084095 | -1273,492571 | -1280,582022 |
| 612 | 0 | 39,92452 | 100,0091 | -33,5814374 | 66,4277 | -11,3609 | 14,0533 | 184,7572036 | 173,3963256 | 198,8105294 |
| 612 | 2,501 | -142,439 | -83,30389 | -13,8083069 | -97,112 | 2,22195 | 0,63101 | -379,3952585 | -377,173305 | -378,7642482 |

| | | | | | | | | | | |
|-----|-------|----------|-----------|-------------|---------|----------|----------|--------------|--------------|--------------|
| 612 | 5,002 | -508,354 | -266,6169 | 5,96482362 | -260,65 | 15,8048 | -12,7913 | -1182,164311 | -1166,359526 | -1194,955616 |
| 638 | 0 | -561,926 | -177,657 | 26,7640982 | -150,89 | 17,9766 | -2,63071 | -1032,289618 | -1014,313055 | -1034,920329 |
| 638 | 2,501 | -97,067 | 43,26371 | 4,844692941 | -38,419 | 0,64959 | -0,41843 | -202,3755183 | -202,3755183 | -203,4435414 |
| 638 | 5,002 | 184,2408 | 91,129592 | -17,0747123 | 74,0549 | -16,6774 | 1,79384 | 387,6228115 | 370,9454275 | 389,4166553 |
| 639 | 0 | -522,965 | -192,256 | 26,34278117 | -165,91 | 28,4275 | 0,96722 | -1011,6815 | -983,2539991 | -1010,714283 |
| 639 | 2,501 | 1,73496 | -10,13115 | -6,56420403 | -16,695 | -1,81013 | 0,21846 | -31,13525154 | -32,94538573 | -30,91679542 |
| 639 | 5,002 | 342,8842 | 171,99369 | -39,4711892 | 132,522 | -32,0478 | -0,53031 | 710,7944067 | 678,7466369 | 710,2641013 |
| 640 | 0 | -563,087 | -202,6518 | 16,17749604 | -186,47 | 21,3534 | 0,72998 | -1104,96123 | -1083,607847 | -1104,231251 |
| 640 | 2,501 | 10,13063 | -2,848858 | -8,51670204 | -11,366 | -4,30939 | -0,05239 | -9,561298204 | -13,87068761 | -9,613687721 |
| 640 | 5,002 | 399,7967 | 196,95405 | -33,2109001 | 163,743 | -29,9722 | -0,83476 | 847,222043 | 817,2498809 | 846,3872848 |
| 645 | 0 | -617,812 | -221,6182 | 5,664838259 | -215,95 | 18,8879 | 0,42356 | -1235,062549 | -1216,174647 | -1234,638989 |
| 645 | 2,501 | 1,472611 | -4,809816 | -8,66443302 | -13,474 | -4,2738 | -0,03485 | -25,0341039 | -29,3079033 | -25,06895203 |
| 645 | 5,002 | 470,9215 | 222,20359 | -10,739109 | 211,464 | -23,514 | -0,34335 | 946,3777501 | 918,9422499 | 945,8844938 |
| 645 | 5,002 | 437,2061 | 211,99859 | -22,9937043 | 189,005 | -27,4355 | -0,49326 | -1347,090018 | -1333,419337 | -1346,725589 |
| 646 | 0 | -665,21 | -233,3789 | -7,77989278 | -241,16 | 13,6707 | 0,36443 | -36,67324921 | -41,59489355 | -36,66270737 |
| 646 | 2,501 | -5,36841 | -5,58766 | -9,25950091 | -14,847 | -4,92164 | 0,01054 | 1035,126929 | 1011,612959 | 1034,783584 |
| 646 | 5,002 | 470,9215 | 222,20359 | -10,739109 | 211,464 | -23,514 | -0,34335 | -1367,691383 | -1362,552199 | -1367,36607 |
| 647 | 0 | -667,689 | -223,5481 | -26,2999442 | -249,85 | 5,13918 | 0,32531 | -11,28487328 | -17,86525513 | -11,26156875 |
| 647 | 2,501 | 5,012763 | 1,0311262 | -9,93185899 | -8,9007 | -6,58038 | 0,0233 | 1106,505046 | 1088,205098 | 1106,226342 |
| 647 | 5,002 | 494,1629 | 225,61038 | 6,436226191 | 232,047 | -18,2999 | -0,2787 | 593,695451 | 564,1642805 | 593,7371254 |
| 650 | 0 | 221,6825 | 144,34107 | 8,41302663 | 152,754 | -29,5312 | 0,04167 | 824,1340511 | 818,6715567 | 824,0295514 |
| 650 | 2,501 | 349,902 | 123,20791 | 61,42281071 | 184,631 | -5,46249 | -0,1045 | 834,5622423 | 834,5622423 | 815,7053868 |
| 650 | 5,002 | 294,5703 | 102,07474 | 114,4325948 | 216,507 | 18,6062 | -0,25067 | 1310,012524 | 1310,012524 | 1332,340764 |
| 651 | 0 | 473,6792 | 224,39297 | 133,9097949 | 358,303 | -22,3759 | -0,04769 | 647,6090063 | 654,8900793 | 647,4440108 |
| 651 | 2,501 | 287,9426 | 81,601825 | 55,0399961 | 136,642 | 7,28107 | -0,165 | -275,7870322 | -238,8489558 | -276,0693327 |
| 651 | 5,002 | -81,3452 | -61,18932 | -23,8298027 | -85,019 | 36,9381 | -0,2823 | -1160,419026 | -1168,835245 | -1160,164761 |
| 656 | 0 | -561,788 | -166,5865 | -48,4609798 | -215,05 | -8,41622 | 0,25427 | 118,9953859 | 109,7546978 | 119,0087878 |
| 656 | 2,501 | 62,74682 | 25,896086 | -7,18382644 | 18,7123 | -9,24069 | 0,0134 | 1159,793207 | 1149,72805 | 1159,565746 |
| 656 | 5,002 | 503,7301 | 218,3787 | 34,09332696 | 252,472 | -10,0652 | -0,22746 | -571,9522794 | -598,2612695 | -571,762607 |
| 657 | 0 | -279,745 | -39,59025 | -64,5515126 | -104,14 | -26,309 | 0,18967 | 356,3651827 | 342,4721775 | 356,3644575 |
| 657 | 2,501 | 164,2504 | 68,941175 | 2,478624624 | 71,4198 | -13,893 | -0,00073 | 1046,066054 | 1044,589034 | 1045,874931 |
| 657 | 5,002 | 424,6949 | 177,4726 | 69,50876185 | 246,981 | -1,47702 | -0,19112 | -450,9517942 | -480,04004 | -451,0916598 |
| 658 | 0 | -268,18 | -62,0246 | 10,86587765 | -51,159 | -29,0882 | -0,13987 | 806,0071353 | 770,1605232 | 805,9357621 |
| 658 | 2,501 | 321,7225 | 185,27798 | 8,605976192 | 193,884 | -35,8466 | -0,07137 | 1824,349206 | 1781,744228 | 1824,346325 |
| 658 | 5,002 | 728,0738 | 432,58056 | 6,346074734 | 438,927 | -42,605 | -0,00288 | 1201,752859 | 1130,186477 | 1201,625024 |
| 659 | 0 | 423,2054 | 311,16945 | 14,62345686 | 325,793 | -71,5664 | -0,12783 | 1547,378259 | 1491,491346 | 1547,296213 |
| 659 | 2,501 | 631,8818 | 351,87133 | 11,09465237 | 362,966 | -55,8869 | -0,08205 | 1654,3868 | 1614,179356 | 1654,350543 |
| 659 | 5,002 | 657,0067 | 392,57322 | 7,565847892 | 400,139 | -40,2074 | -0,03626 | 2170,432678 | 2095,048826 | 2170,338214 |
| 660 | 0 | 853,2714 | 517,50896 | 13,08096929 | 530,59 | -75,3839 | -0,09446 | 1185,623407 | 1147,821568 | 1185,577466 |
| 660 | 2,501 | 505,0673 | 257,97436 | 6,543580462 | 264,518 | -37,8018 | -0,04594 | | | |

| | | | | | | | | | | |
|-----|-------|----------|-----------|-------------|---------|----------|----------|--------------|--------------|--------------|
| 660 | 5,002 | -26,6882 | -1,560249 | 0,006191639 | -1,5541 | -0,21983 | 0,00258 | -37,80272217 | -38,02254882 | -37,80014004 |
| 667 | 0 | -432,17 | -448,3674 | -116,777725 | -565,15 | 27,2262 | 0,31744 | -1692,111372 | -1664,885153 | -1691,793935 |
| 667 | 2,501 | 1,430107 | 34,486292 | 21,00241194 | 55,4887 | -8,0655 | -0,0859 | 112,836546 | 104,7710474 | 112,7506431 |
| 667 | 5,002 | 251,4789 | 517,33998 | 158,7825488 | 676,123 | -43,3572 | -0,48924 | 1679,167605 | 1635,810389 | 1678,678363 |
| 668 | 0 | -891,419 | -395,418 | -0,37384803 | -395,79 | 21,0595 | -0,09686 | -1950,427984 | -1929,368435 | -1950,524846 |
| 668 | 2,501 | 37,40416 | 45,039148 | 17,09412328 | 62,1333 | -11,7233 | -0,08629 | 172,8919492 | 161,1686215 | 172,8056601 |
| 668 | 5,002 | 782,6756 | 485,49629 | 34,56209459 | 520,058 | -44,5062 | -0,07572 | 2057,595024 | 2013,098819 | 2057,519307 |
| 669 | 0 | -671,524 | -287,7209 | 12,03092028 | -275,69 | 2,12556 | -0,163 | -1424,36149 | -1422,235928 | -1424,524489 |
| 669 | 2,501 | 141,6811 | 84,069876 | 7,830193863 | 91,9001 | -19,956 | -0,06355 | 367,9855412 | 348,0295369 | 367,9219901 |
| 669 | 5,002 | 771,335 | 455,86065 | 3,629467445 | 459,49 | -42,0376 | 0,0359 | 1921,715713 | 1879,678143 | 1921,751611 |
| 671 | 0 | -722,563 | -412,4501 | -75,6463087 | -488,1 | -24,7729 | -4,89382 | -1915,511728 | -1940,284625 | -1920,405544 |
| 671 | 2,501 | -49,3172 | -36,32759 | -2,37544109 | -38,703 | -9,14525 | -0,69943 | -141,5183971 | -150,6636476 | -142,2178264 |
| 671 | 5,002 | 440,3673 | 339,7949 | 70,89542651 | 410,69 | 6,4824 | 3,49496 | 1393,858075 | 1400,340471 | 1397,353032 |
| 672 | 0 | -632,199 | -540,7298 | -123,488773 | -664,22 | 49,0797 | 0,62279 | -2150,296288 | -2101,216613 | -2149,673497 |
| 672 | 2,501 | 34,71613 | 5,3033658 | 2,87864812 | 8,18201 | 0,93207 | 0,26197 | 61,49499684 | 62,42706755 | 61,75696927 |
| 672 | 5,002 | 518,0801 | 551,33656 | 129,2460689 | 680,583 | -47,2155 | -0,09885 | 2034,669423 | 1987,453889 | 2034,570576 |
| 674 | 0 | 442,7411 | 59,319702 | -35,3601812 | 23,9595 | 17,0674 | 0,66961 | 623,4824855 | 640,5498623 | 624,1520932 |
| 674 | 2,501 | -36,2127 | -31,74713 | -10,5515154 | -42,299 | 2,32224 | 1,02973 | -131,6738378 | -129,3516022 | -130,6441079 |
| 674 | 5,002 | -698,718 | -122,814 | 14,25715037 | -108,56 | -12,4229 | 1,38985 | -1125,446752 | -1137,869657 | -1124,0569 |
| 675 | 0 | 79,86683 | 135,10011 | -29,2593232 | 105,841 | -30,3675 | 11,2055 | 315,5084539 | 285,1409765 | 326,713993 |
| 675 | 2,501 | -175,514 | -113,7031 | -17,4840228 | -131,19 | 17,5282 | 0,4505 | -490,5418577 | -473,0136446 | -490,0913602 |
| 675 | 5,002 | -614,445 | -362,5064 | -5,70872241 | -368,22 | 65,4239 | -10,3045 | -1535,20876 | -1469,784856 | -1545,513304 |
| 680 | 0 | 403,8789 | 150,43559 | -4,08253487 | 146,353 | 3,31458 | -0,83659 | 817,7487327 | 821,0633085 | 816,9121414 |
| 680 | 2,501 | -70,3713 | -57,27318 | -18,4194388 | -75,693 | 13,1058 | -0,17129 | -242,8679333 | -229,7621501 | -243,0392245 |
| 680 | 5,002 | -728,173 | -264,982 | -32,7563428 | -297,74 | 22,897 | 0,49401 | -1542,10119 | -1519,204199 | -1541,607181 |
| 681 | 0 | 332,7521 | 119,11565 | -28,2888521 | 90,8268 | 6,94825 | -1,40061 | 614,2313254 | 621,1795803 | 612,8307195 |
| 681 | 2,501 | -53,7689 | -52,0485 | -16,0511383 | -68,1 | 10,5643 | -0,00883 | -206,0988812 | -195,5345781 | -206,1077146 |
| 681 | 5,002 | -623,841 | -223,2127 | -3,81342456 | -227,03 | 14,1804 | 1,38294 | -1265,045678 | -1250,865327 | -1263,662739 |
| 683 | 0 | 431,4762 | 183,17523 | 71,2304834 | 254,406 | -6,07131 | -0,15292 | 1069,730459 | 1063,659146 | 1069,57754 |
| 683 | 2,501 | -2,53177 | -45,20997 | -14,7316159 | -59,942 | 22,2365 | -0,19304 | -123,1744752 | -100,9379684 | -123,3675162 |
| 683 | 5,002 | -620,091 | -273,5952 | -100,693715 | -374,29 | 50,5443 | -0,23316 | -1554,696 | -1504,151674 | -1554,929163 |
| 684 | 0 | 464,1178 | 185,3102 | 30,77523565 | 216,085 | -2,85089 | -0,32538 | 1035,524035 | 1032,673149 | 1035,198659 |
| 684 | 2,501 | -45,4499 | -53,35935 | -18,1995246 | -71,559 | 16,659 | -0,16271 | -202,202604 | -185,5436255 | -202,3653094 |
| 684 | 5,002 | -738,569 | -292,0289 | -67,1742848 | -359,2 | 36,1688 | -3,5E-05 | -1678,545834 | -1642,376991 | -1678,545869 |

TABEL MOMEN BALOK ANAK-1

| FRAME | STA | MD | | ML | | ML TOT | ME | | COMB1 | | COMB2 | | COMB3 | |
|-------|-------|-----------|------------|-------------|---------------|----------|----------|----------|---------------------|--------------------------|---------------------|--------------------------|--------------------------|--------------------------|
| | | 0 | 1 | ML merata | ML Koef kejut | | ME X | ME Y | 1,3MD + 2 (MLQ+MLP) | 1,3MD + 2 (MLQ+MLP)+1MEY | 1,3MD + 2 (MLQ+MLP) | 1,3MD + 2 (MLQ+MLP)+1MEY | 1,3MD + 2 (MLQ+MLP)+1MEY | 1,3MD + 2 (MLQ+MLP)+1MEY |
| 1432 | 0 | 100,584 | 69,859534 | 0,001978819 | 69,86151 | 0,070765 | -0,97293 | 0,070765 | 270,4821813 | 269,5092466 | 270,5529459 | | | |
| 1432 | 2,501 | 109,7779 | 34,721227 | -0,00946409 | 34,71176 | 0,031825 | -0,45873 | 0,031825 | 212,1347324 | 211,6760004 | 212,1665576 | | | |
| 1432 | 5,002 | -9,354819 | -0,4170791 | -0,020907 | -0,43799 | 0,055471 | 0,055471 | -0,00711 | -13,03723686 | -12,98176607 | -13,04435102 | | | |
| 1433 | 0 | -43,80628 | 3,6561448 | -4,88239364 | -1,22625 | -0,06573 | -0,08031 | -0,06573 | -59,40065796 | -59,48096739 | -59,46638619 | | | |
| 1433 | 2,501 | 43,52529 | 14,172065 | -2,82890616 | 11,34316 | -0,02976 | -0,14532 | -0,02976 | 79,26919938 | 79,1388013 | 79,23943702 | | | |
| 1433 | 5,002 | 2,530311 | 24,687985 | -0,77541868 | 23,91257 | 0,006204 | -0,21033 | 0,006204 | 51,11453632 | 50,90420726 | 51,12073983 | | | |
| 1434 | 0 | -11,16265 | 18,25341 | -0,40989431 | 17,84352 | -0,02576 | -0,2658 | -0,02576 | 21,17557987 | 20,90978353 | 21,14982052 | | | |
| 1434 | 2,501 | 86,94908 | 35,168309 | -0,10641587 | 35,06189 | -0,01219 | -0,39665 | -0,01219 | 183,1575895 | 182,7609402 | 183,1454012 | | | |
| 1434 | 5,002 | 56,73426 | 52,083208 | 0,197062563 | 52,28027 | 0,001383 | -0,5275 | 0,001383 | 178,3150786 | 177,7875764 | 178,3164616 | | | |
| 1435 | 0 | 54,55174 | 51,226912 | 0,38277552 | 51,60969 | -0,01002 | -0,61217 | -0,01002 | 174,1366408 | 173,5244752 | 174,1266221 | | | |
| 1435 | 2,501 | 138,163 | 58,699591 | 0,162238574 | 58,86183 | 0,026998 | -0,7374 | 0,026998 | 297,3355983 | 296,5981963 | 297,3625958 | | | |
| 1435 | 5,002 | 93,44776 | 66,172271 | -0,05829837 | 66,11397 | 0,064014 | -0,86264 | 0,064014 | 253,7100354 | 252,8473969 | 253,7740491 | | | |
| 1436 | 0 | -196,851 | -40,873284 | 7,22032891 | -33,653 | 0,003018 | 0,003018 | -0,16347 | -323,2121983 | -323,2091805 | -323,3756687 | | | |
| 1436 | 2,501 | -49,91871 | -20,872184 | -1,61712849 | -22,4893 | 0,072381 | 0,072381 | 0,233045 | -109,8729414 | -109,8005606 | -109,6398968 | | | |
| 1436 | 5,002 | 31,31297 | -0,8710839 | -10,4545859 | -11,3257 | 0,141744 | 0,62956 | 0,141744 | -63,3582049 | -63,21646107 | -62,72864532 | | | |
| 1437 | 0 | -49,73261 | -11,848317 | -12,0528045 | -23,9011 | 0,114496 | 0,464402 | 0,114496 | -112,3401405 | -112,3401405 | -111,9902342 | | | |
| 1437 | 2,501 | 25,48536 | -0,3187982 | -8,5021428 | -8,82094 | 0,086211 | 0,157338 | 0,086211 | 15,48908516 | 15,57529599 | 15,64642338 | | | |
| 1437 | 5,002 | -27,62323 | 11,210721 | -4,95148112 | 6,25924 | 0,057926 | -0,14973 | 0,057926 | -23,39171408 | -23,33378793 | -23,54143944 | | | |
| 1438 | 0 | -38,34034 | -0,0830174 | -9,4189482 | -9,50197 | 0,029822 | -0,08895 | 0,029822 | -68,84636883 | -68,81654645 | -68,93532186 | | | |
| 1438 | 2,501 | 7,906327 | 5,3333994 | 9,508121837 | 14,84152 | 0,030121 | -0,07816 | 0,030121 | 39,96126802 | 39,99138943 | 39,88311106 | | | |
| 1438 | 5,002 | -74,17356 | 10,749816 | 28,43519188 | 39,18501 | 0,03042 | -0,06736 | 0,03042 | -18,05561552 | -18,02519509 | -18,12297643 | | | |
| 1439 | 0 | -87,6097 | 0,522305 | 26,47140198 | 26,99371 | -0,00254 | -0,11691 | -0,00254 | -59,90519082 | -59,90772701 | -60,02209949 | | | |
| 1439 | 2,501 | 8,132626 | 6,5707645 | 10,11887106 | 16,68964 | -0,02158 | -0,06509 | -0,02158 | 43,95168494 | 43,93010259 | 43,88659689 | | | |
| 1439 | 5,002 | -24,45161 | 12,619224 | -6,23365986 | 6,385564 | -0,04063 | -0,01327 | -0,04063 | -19,0159597 | -19,05658821 | -19,02922713 | | | |
| 1440 | 0 | 18,2139 | 23,099224 | -1,71230863 | 21,38691 | -0,07678 | -0,07678 | -0,07678 | 66,45189734 | 66,37511597 | 66,10581682 | | | |
| 1440 | 2,501 | 94,41917 | 27,493499 | 17,94649954 | 45,44 | -0,12096 | -0,24485 | -0,12096 | 213,6249233 | 213,5039665 | 213,3800777 | | | |
| 1440 | 5,002 | 42,29804 | 31,88775 | 37,6053077 | 69,49308 | -0,14361 | -0,16513 | -0,14361 | 193,9736164 | 193,8084842 | 193,8300058 | | | |
| 1441 | 0 | 43,82387 | 32,515478 | 37,76556675 | 70,28104 | -0,17777 | -0,1493 | -0,17777 | 197,5331237 | 197,355351 | 197,383822 | | | |
| 1441 | 2,501 | 86,61321 | 23,786404 | 17,15457117 | 40,94098 | -0,11305 | -0,02775 | -0,11305 | 194,4791231 | 194,3660749 | 194,4513734 | | | |
| 1441 | 5,002 | 1,076136 | 15,057331 | -3,45642441 | 11,60091 | -0,04832 | 0,093802 | -0,04832 | 24,60078965 | 24,55246588 | 24,69459197 | | | |
| 1442 | 0 | -33,51493 | 3,8670427 | -5,12697577 | -1,25993 | 0,07371 | 0,020566 | 0,07371 | -46,08927934 | -46,01556966 | -46,06871289 | | | |
| 1442 | 2,501 | 57,84179 | 13,985846 | -2,38320814 | 11,60264 | -0,00417 | -0,16416 | -0,00417 | 98,39960047 | 98,39543523 | 98,23544474 | | | |
| 1442 | 5,002 | 20,8721 | 24,10465 | 0,360559488 | 24,46521 | -0,08204 | -0,34888 | -0,08204 | 76,06414742 | 75,98210727 | 75,71526952 | | | |
| 1443 | 0 | -60,09901 | -6,5307016 | -2,19600106 | -8,7267 | 0,08042 | 0,020518 | 0,08042 | -95,58211307 | -95,50169294 | -95,5615948 | | | |

| | | | | | | | | | | |
|------|-------|-----------|------------|-------------|----------|----------|----------|--------------|--------------|--------------|
| 1443 | 2,501 | 10,10644 | -4,4944414 | -2,57900193 | -7,07344 | 0,07127 | 0,038272 | -1,008509482 | -0,937239551 | -0,970237824 |
| 1443 | 5,002 | -48,01452 | -2,4581811 | -2,96200281 | -5,42018 | 0,06212 | 0,056025 | -73,25923875 | -73,19711901 | -73,2032137 |
| 1444 | 0 | -62,97463 | -7,7108723 | -2,71051653 | -10,4214 | 0,106855 | 0,054837 | -102,7097928 | -102,6029381 | -102,6549554 |
| 1444 | 2,501 | 8,865002 | -4,9172312 | -2,96991831 | -7,88715 | 0,093193 | 0,071617 | -4,249796032 | -4,156602811 | -4,178179129 |
| 1444 | 5,002 | -47,62178 | -2,1235901 | -3,22932009 | -5,35291 | 0,079532 | 0,088396 | -72,61413212 | -72,53460034 | -72,52573568 |
| 1445 | 0 | -63,32243 | -7,8386538 | -3,47613051 | -11,3148 | 0,127287 | 0,109067 | -104,9487336 | -104,821447 | -104,8396662 |
| 1445 | 2,501 | 12,55836 | -3,4507731 | -3,3611378 | -6,81191 | 0,101794 | 0,120921 | 2,702049285 | 2,803843133 | 2,822970684 |
| 1445 | 5,002 | -39,88725 | 0,9371075 | -3,24614509 | -2,30904 | 0,076301 | 0,132775 | -56,47150069 | -56,39519957 | -56,33872524 |
| 1446 | 0 | -54,90856 | -4,6238226 | -4,12236013 | -8,74618 | 0,122313 | 0,179038 | -88,87348867 | -88,75117599 | -88,69445099 |
| 1446 | 2,501 | 26,27353 | 1,9135099 | -3,69648459 | -1,78297 | 0,079099 | 0,086045 | 30,58963741 | 30,66873627 | 30,67568277 |
| 1446 | 5,002 | -20,8708 | 8,4508424 | -3,27060905 | 5,180233 | 0,035885 | -0,00695 | -16,77156937 | -16,73568432 | -16,77851632 |
| 1447 | 0 | -115,2924 | -23,589077 | 19,69362135 | -3,89546 | 0,429423 | 0,026736 | -157,6710295 | -157,2416069 | -157,644293 |
| 1447 | 2,501 | -19,37832 | -14,722157 | 5,801132143 | -8,92103 | 0,239616 | 0,029834 | -43,03386623 | -42,79425068 | -43,00403247 |
| 1447 | 5,002 | -51,79065 | -5,8552376 | -8,09135707 | -13,9466 | 0,049808 | 0,032931 | -95,22103583 | -95,17122734 | -95,18810475 |
| 1448 | 0 | -64,75717 | -8,7151481 | -6,36131918 | -15,0765 | 0,077374 | 0,001194 | -114,3372526 | -114,2598787 | -114,3360583 |
| 1448 | 2,501 | 9,124108 | -5,3329886 | -4,99421633 | -10,3272 | 0,051783 | -0,00604 | -8,793069239 | -8,741286723 | -8,799104728 |
| 1448 | 5,002 | -45,32103 | -1,9508291 | -3,62711348 | -5,57794 | 0,026191 | -0,01327 | -70,07321878 | -70,04702759 | -70,08648405 |
| 1449 | 0 | -58,78873 | -5,9088213 | -2,7403621 | -8,64918 | 0,06478 | -0,02195 | -93,72370994 | -93,65893032 | -93,74565869 |
| 1449 | 2,501 | 11,76656 | -3,9059514 | -2,7755896 | -6,68154 | 0,05195 | 0,003533 | 1,933446467 | 1,985396607 | 1,936979413 |
| 1449 | 5,002 | -46,00456 | -1,9030815 | -2,81081711 | -4,7139 | 0,039121 | 0,029015 | -69,19460932 | -69,20471534 | -69,20471534 |
| 1450 | 0 | 6,135808 | 17,017265 | -1,13920701 | 15,87806 | -0,07393 | 0,062465 | 39,7326659 | 39,65873152 | 39,79513068 |
| 1450 | 2,501 | 40,58331 | 5,6599408 | -4,09718711 | 1,562754 | 0,009503 | 0,08265 | 55,88380589 | 55,89330874 | 55,96645629 |
| 1450 | 5,002 | -53,2956 | -5,6973834 | -7,05516722 | -12,7526 | 0,09294 | 0,102836 | -94,78938696 | -94,69644688 | -94,68655095 |
| 1451 | 0 | -37,64763 | 0,0765139 | -4,92241805 | -4,8459 | 0,032652 | 0,099662 | -58,63372638 | -58,60107484 | -58,53406466 |
| 1451 | 2,501 | 12,88691 | -5,1371852 | -4,98945345 | -10,1266 | 0,063744 | 0,079401 | -3,50029522 | -3,436551338 | -3,420894659 |
| 1451 | 5,002 | -64,90496 | -10,350884 | -5,05648885 | -15,4074 | 0,094836 | 0,059139 | -115,1911969 | -115,0963607 | -115,1320575 |
| 1452 | 0 | -48,98056 | -4,5358608 | -4,13761288 | -8,67347 | 0,036223 | 0,130342 | -81,02168137 | -80,98545877 | -80,89133952 |
| 1452 | 2,501 | 4,002311 | -7,8754838 | -4,3274372 | -12,2029 | 0,060217 | 0,110042 | -19,20283769 | -19,14262085 | -19,09279548 |
| 1452 | 5,002 | -71,34122 | -11,215107 | -4,51726152 | -15,7324 | 0,084211 | 0,089743 | -124,2083269 | -124,1241158 | -124,1185843 |
| 1453 | 0 | -53,42846 | -5,9120144 | -4,34940754 | -10,2614 | 0,028856 | 0,350075 | -89,97984231 | -89,95098604 | -89,62976719 |
| 1453 | 2,501 | -28,85869 | -6,6351205 | -6,04113645 | -12,6763 | 0,032974 | -0,15124 | -62,86881612 | -62,83584234 | -63,02005146 |
| 1453 | 5,002 | -132,6153 | -7,3582265 | -7,73286536 | -15,0911 | 0,037091 | -0,65255 | -202,5821228 | -202,5450315 | -203,2346686 |
| 1454 | 0 | -135,9697 | -1,3737289 | -8,5984603 | -9,97219 | -0,01903 | -0,405 | -196,7050361 | -196,724071 | -197,1100403 |
| 1454 | 2,501 | 37,64971 | -10,257083 | -4,52775989 | -14,7848 | 0,006706 | -0,26564 | 19,37493294 | 19,38163924 | 19,10929198 |
| 1454 | 5,002 | 82,94274 | -19,140438 | -0,45705948 | -19,5975 | 0,032447 | -0,12628 | 68,63056913 | 68,66301662 | 68,50429137 |
| 1455 | 0 | 82,94274 | -19,140438 | -0,45705948 | -19,5975 | 0,032447 | -0,12628 | 68,63056913 | 68,66301662 | 68,50429137 |
| 1455 | 2,501 | -0,090634 | -28,023792 | 3,613640936 | -24,4102 | 0,058189 | 0,013085 | -48,93812754 | -48,87993885 | -48,92504209 |

| | | | | | | | | | | |
|------|-------|-----------|------------|--------------|----------|----------|----------|--------------|--------------|--------------|
| 1455 | 5,002 | -211,4504 | -36,907147 | 7,684341348 | -29,2228 | 0,08393 | 0,152449 | -333,3311571 | -333,2472272 | -333,1787084 |
| 1456 | 0 | -114,8461 | -23,271453 | 19,73147497 | -3,53998 | 0,393638 | 0,009891 | -156,3799117 | -155,9862737 | -156,3700208 |
| 1456 | 2,501 | -19,66638 | -14,941857 | 5,775532658 | -9,16632 | 0,26301 | 0,038927 | -43,89893795 | -43,63592763 | -43,86001095 |
| 1456 | 5,002 | -52,81304 | -6,6122598 | -8,18040965 | -14,7927 | 0,132383 | 0,067963 | -98,24229706 | -98,1099144 | -98,17433394 |
| 1457 | 0 | -66,78449 | -10,564597 | -6,57934611 | -17,1439 | 0,284836 | 0,02177 | -121,1077192 | -120,8228834 | -121,0859488 |
| 1457 | 2,501 | 9,694359 | -4,7560511 | -4,92598577 | -9,68204 | -0,0152 | -0,00606 | -6,761407729 | -6,776605673 | -6,767470404 |
| 1457 | 5,002 | -42,15321 | 1,0524951 | -3,27262543 | -2,22013 | -0,31523 | -0,0339 | -59,23942915 | -59,55466078 | -59,27332484 |
| 1458 | 0 | -56,82207 | -4,0774751 | -2,52369966 | -6,60117 | -0,14416 | -0,03405 | -87,07104546 | -87,21520918 | -87,10509661 |
| 1458 | 2,501 | 14,56776 | -1,3430295 | -2,47337451 | -3,8164 | -0,23848 | -0,02832 | 11,30528149 | 11,0668043 | 11,27696263 |
| 1458 | 5,002 | -42,36881 | 1,391416 | -2,42304936 | -1,03163 | -0,33279 | -0,02259 | -57,14272442 | -57,47551508 | -57,16531098 |
| 1459 | 0 | -57,56139 | -4,2376573 | -1,92564767 | -6,1633 | -0,17927 | -0,01506 | -87,1564112 | -87,33568315 | -87,17146853 |
| 1459 | 2,501 | 13,39377 | -1,5465346 | -2,23211917 | -3,77865 | -0,26167 | -0,01673 | 9,85458937 | 9,59291539 | 9,837858385 |
| 1459 | 5,002 | -43,97749 | 1,144588 | -2,53859066 | -1,394 | -0,34408 | -0,0184 | -59,95874291 | -60,30281892 | -59,97714755 |
| 1460 | 0 | -59,78557 | -4,8574181 | -2,37489091 | -7,23231 | -0,21603 | -0,01244 | -92,18586103 | -92,40188978 | -92,19829873 |
| 1460 | 2,501 | 12,85757 | -1,3495737 | -2,55115229 | -3,90073 | -0,31031 | -0,01872 | 8,913384106 | 8,603074146 | 8,894665295 |
| 1460 | 5,002 | -42,82571 | 2,1582708 | -2,72741367 | -0,58914 | -0,40459 | -0,025 | -56,81170361 | -57,21629478 | -56,83670353 |
| 1461 | 0 | -58,97294 | -3,9380621 | -3,01908189 | -6,95714 | -0,31528 | -0,02109 | -90,57910864 | -90,8943881 | -90,6001981 |
| 1461 | 2,501 | 17,61541 | 1,1947659 | -2,81864445 | -1,62388 | -0,4272 | -0,02795 | 19,65227932 | 19,22508275 | 19,62433323 |
| 1461 | 5,002 | -34,12265 | 6,3275939 | -2,618207 | 3,709387 | -0,53911 | -0,0348 | -36,94066556 | -37,47977926 | -36,97547029 |
| 1462 | 0 | 23,94546 | 28,908991 | -1,01203171 | 27,89696 | -0,73473 | -0,03684 | 86,92301434 | 86,18827968 | 86,88617415 |
| 1462 | 2,501 | 96,75797 | 29,446193 | 18,18599665 | 47,63219 | -0,34537 | -0,02612 | 221,0497439 | 220,7043714 | 221,0236262 |
| 1462 | 5,002 | 41,24408 | 29,983396 | 37,38402502 | 67,36742 | 0,04399 | -0,0154 | 188,3521406 | 188,3961302 | 188,3367453 |
| 1463 | 0 | 43,43609 | 31,744903 | 37,68113059 | 69,42603 | -0,10184 | -0,0113 | 195,318986 | 195,2171476 | 195,3076872 |
| 1463 | 2,501 | 81,13905 | 19,164197 | 16,60902831 | 35,77323 | 0,402431 | -0,00273 | 177,0272156 | 177,4296463 | 177,0244831 |
| 1463 | 5,002 | -9,484402 | 6,5834915 | -4,46307397 | 2,120417 | 0,9067 | 0,005834 | -8,088887594 | -7,182187946 | -8,083053833 |
| 1464 | 0 | -49,12699 | 0,8524435 | -3,486660482 | -2,63416 | -0,50672 | -0,03292 | -69,13341158 | -69,64012822 | -69,16632852 |
| 1464 | 2,501 | 33,55473 | 8,2222961 | -2,94951004 | 5,272786 | -0,62961 | -0,03646 | 54,16672083 | 53,53711304 | 54,13025749 |
| 1464 | 5,002 | -12,08996 | 15,592149 | -2,41241526 | 13,17973 | -0,7525 | -0,04001 | 10,6425204 | 9,890021443 | 10,60251065 |
| 1465 | 0 | -23,31306 | 11,914494 | -4,16352306 | 7,750971 | -0,82006 | -0,036 | -14,80503949 | -15,62510346 | -14,84103522 |
| 1465 | 2,501 | 65,61511 | 20,49978 | -1,60060716 | 18,89917 | -0,732 | -0,03975 | 123,0979856 | 122,3659906 | 123,0582327 |
| 1465 | 5,002 | 26,21687 | 29,085066 | 0,962308734 | 30,04737 | -0,64393 | -0,04351 | 94,17667787 | 93,53275176 | 94,13316779 |
| 1466 | 0 | 2,14639 | 29,532013 | 0,926496476 | 30,45851 | -1,54532 | -0,02458 | 63,70732622 | 62,16200374 | 63,68274667 |
| 1466 | 2,501 | 105,0234 | 50,389271 | 1,697603071 | 52,08687 | -2,12476 | -0,03181 | 240,7041865 | 238,5794262 | 240,6723777 |
| 1466 | 5,002 | 79,57388 | 71,246529 | 2,468709666 | 73,71524 | -2,7042 | -0,03904 | 250,8765263 | 248,1723283 | 250,8374883 |
| 1467 | 0 | 77,68065 | 70,777449 | 2,702450762 | 73,4799 | -2,83839 | -0,03551 | 247,9446441 | 245,1062502 | 247,9091307 |
| 1467 | 2,501 | 161,0128 | 78,290621 | 2,49047498 | 80,7811 | -2,97454 | -0,03116 | 370,8787698 | 367,9042266 | 370,8476078 |
| 1467 | 5,002 | 116,0183 | 85,803794 | 2,278499197 | 88,08229 | -3,11069 | -0,02681 | 326,9883752 | 323,8776826 | 326,9615645 |

| | | | | | | | | | | |
|------|-------|-----------|-------------|-------------|----------|----------|----------|--------------|--------------|--------------|
| 1468 | 0 | 123,05 | 90,057099 | 2,413954207 | 92,47105 | -3,30367 | -0,01571 | 344,9071439 | 341,6034759 | 344,8914341 |
| 1468 | 2,501 | 121,8194 | 45,106002 | 1,225406147 | 46,33141 | -1,64572 | -0,01528 | 251,0280892 | 249,3823707 | 251,0128125 |
| 1468 | 5,002 | -7,737702 | 0,1549052 | 0,036858088 | 0,191763 | 0,012231 | -0,01484 | -9,675485979 | -9,663254888 | -9,690329521 |
| 1469 | 0 | -36,44818 | 2,2213009 | -9,14545073 | -6,92415 | -0,23846 | -0,03473 | -61,23093807 | -61,46940004 | -61,26566987 |
| 1469 | 2,501 | 12,15737 | 9,3560752 | 9,986277578 | 19,34235 | -0,43178 | -0,04383 | 54,48928639 | 54,05750875 | 54,44546025 |
| 1469 | 5,002 | -67,56363 | 16,49085 | 29,11800588 | 45,60886 | -0,62509 | -0,05292 | 3,384990455 | 2,759897152 | 3,332069967 |
| 1470 | 0 | -83,70834 | 4,0946175 | 26,89617405 | 30,99079 | -0,41023 | -0,01998 | -46,83925818 | -47,24949022 | -46,35924054 |
| 1470 | 2,501 | 14,82097 | 12,401411 | 10,81116875 | 23,21258 | -0,68595 | -0,02396 | 65,69242346 | 65,00647217 | 65,66846605 |
| 1470 | 5,002 | -14,97627 | 20,708204 | -5,27383655 | 15,43437 | -0,96167 | -0,02793 | 11,39958471 | 10,43791415 | 11,37165223 |
| 1471 | 0 | -36,42755 | 10,016611 | -4,12747773 | 5,889133 | -0,80514 | -0,01462 | -35,57754352 | -36,38267969 | -35,59216315 |
| 1471 | 2,501 | 54,38699 | 23,420066 | -1,7327933 | 21,68727 | -1,19538 | -0,0222 | 114,0776303 | 112,8822532 | 114,0554278 |
| 1471 | 5,002 | 16,87497 | 36,823521 | 0,661891122 | 37,48541 | -1,58562 | -0,02979 | 96,90828376 | 95,3226657 | 96,8784984 |
| 1472 | 0 | -198,0824 | -42,210449 | 7,06046452 | -35,15 | 0,165383 | 0,388957 | -327,8071065 | -327,6417231 | -327,4181493 |
| 1472 | 2,501 | -52,74891 | -23,024005 | -1,8676801 | -24,8917 | 0,312631 | -0,05352 | -118,3569585 | -118,0443272 | -118,4104789 |
| 1472 | 5,002 | -35,74197 | -3,8375617 | -10,7958247 | -14,6334 | 0,459879 | -0,496 | -75,73133089 | -75,27145178 | -76,22732891 |
| 1473 | 0 | -56,0563 | -16,855458 | -12,6398601 | -29,4953 | 0,674346 | -0,25996 | -131,8638315 | -131,1894855 | -132,1237964 |
| 1473 | 2,501 | 24,6997 | -0,4598588 | -8,5147675 | -8,97463 | 0,092584 | -0,17669 | 14,16035397 | 14,25293755 | 13,98366749 |
| 1473 | 5,002 | -22,87086 | 15,93574 | -4,38967489 | 11,54607 | -0,48918 | -0,09341 | -6,639980948 | -7,129159782 | -6,733389051 |
| 1474 | 0 | -137,3103 | -3,1705082 | -8,82262985 | -11,9931 | 0,192814 | 0,33386 | -202,4897132 | -202,2968996 | -202,1558529 |
| 1474 | 2,501 | 35,62241 | -12,402267 | -4,79122583 | -17,1935 | 0,260365 | 0,282559 | 11,92214752 | 12,18251213 | 12,20470657 |
| 1474 | 5,002 | 80,22875 | -21,634026 | -0,7598218 | -22,3938 | 0,327916 | 0,231258 | 59,50967539 | 59,83759097 | 59,74093315 |
| 1475 | 0 | 80,22875 | -21,634026 | -0,7598218 | -22,3938 | 0,327916 | 0,231258 | 59,50967539 | 59,83759097 | 59,74093315 |
| 1475 | 2,501 | -3,491327 | -30,865784 | 3,271582222 | -27,5942 | 0,395467 | 0,179956 | -59,72712959 | -59,33166303 | -59,54717312 |
| 1475 | 5,002 | -215,5378 | -40,097543 | 7,302986247 | -32,7946 | 0,463018 | 0,128655 | -345,7882674 | -345,3252499 | -345,6596122 |
| 1476 | 0 | -57,00448 | -11,428574 | -4,96858005 | -16,3972 | 0,826405 | -0,08494 | -106,9001388 | -106,0737334 | -106,9850795 |
| 1476 | 2,501 | -3,098459 | -14,062027 | -5,06160569 | -19,1236 | 0,762471 | -0,09581 | -42,27526217 | -41,51279152 | -42,37107375 |
| 1476 | 5,002 | -77,51884 | -16,69548 | -5,15463133 | -21,8501 | 0,698536 | -0,10668 | -144,4747184 | -143,7761825 | -144,5814008 |
| 1477 | 0 | -59,91983 | -11,721013 | -5,02048756 | -16,7415 | 0,668672 | -0,39357 | -110,7101127 | -110,7101127 | -111,7723517 |
| 1477 | 2,501 | -32,99644 | -10,434132 | -6,4917787 | -16,9259 | 0,465182 | 0,090458 | -76,74719884 | -76,28201697 | -76,65674112 |
| 1477 | 5,002 | -134,3995 | -9,1472509 | -7,96306985 | -17,1103 | 0,261692 | 0,574483 | -208,939946 | -208,6782541 | -208,3654634 |
| 1478 | 0 | -3,068912 | 9,4372819 | -2,03648403 | 7,400798 | 0,774138 | -0,00084 | 10,81201019 | 11,58614771 | 10,81171158 |
| 1478 | 2,501 | 30,28068 | -3,3276578 | -5,16066904 | -8,48833 | 1,020717 | 0,006802 | 22,38823288 | 23,40894999 | 22,39503462 |
| 1478 | 5,002 | -64,69613 | -16,092597 | -8,28485405 | -24,3775 | 1,267297 | 0,014442 | -132,8598773 | -131,5925806 | -132,8454352 |
| 1479 | 0 | -47,93535 | -9,23866309 | -6,01625703 | -15,2549 | 1,072027 | -0,01874 | -92,82572716 | -91,75370058 | -92,84447069 |
| 1479 | 2,501 | 3,591842 | -13,367211 | -5,96933252 | -19,3365 | 0,99846 | -0,00686 | -34,0036926 | -33,00523257 | -34,01055214 |
| 1479 | 5,002 | -73,20738 | -17,495792 | -5,92240801 | -23,4182 | 0,924893 | 0,005024 | -142,0059909 | -141,0810974 | -142,0009665 |

TABEL MOMEN BALOK LINTANG STRUKTUR ATAS

| FRAME | STA | MD | | ML | | ML TOT | ME | | COMB1 | | COMB 2 | | COMB 3 | |
|-------|--------|-----------|-----------|---------------|----------|-----------|-----------|---------------------|--------------------------|--------------------------|--------|--|--------|--|
| | | MD | ML merata | ML Koef kejut | ME X | | ME Y | 1,3MD + 2 (MLQ+MLP) | 1,3MD + 2 (MLQ+MLP)+1MEX | 1,3MD + 2 (MLQ+MLP)+1MEY | | | | |
| 8 | 0 | -301,2943 | -155,4718 | -0,63777205 | -156,11 | 0,034178 | 0,565046 | -703,9016632 | -703,8674847 | -703,3366171 | | | | |
| 8 | 1,0313 | -134,608 | -48,627 | -0,49048606 | -49,1175 | 0,022839 | 0,46167 | -273,22533 | -273,202491 | -272,7636596 | | | | |
| 8 | 2,0625 | 32,07836 | 26,55627 | -0,34320008 | 26,2131 | 0,0115 | 0,358295 | 94,12800725 | 94,13950675 | 94,48630178 | | | | |
| 9 | 0 | 31,95049 | 27,59487 | -0,12305033 | 27,4718 | 0,012479 | 0,28076 | 96,47927239 | 96,49175186 | 96,76003212 | | | | |
| 9 | 1,0313 | 98,44031 | 71,59764 | -0,0149432 | 71,5827 | 0,000504 | 0,154458 | 271,1377934 | 271,138297 | 271,2922516 | | | | |
| 9 | 2,0625 | 164,9301 | 84,1044 | 0,09316392 | 84,1976 | -0,011472 | 0,028157 | 382,8042929 | 382,7928206 | 382,8324495 | | | | |
| 10 | 0 | 162,1899 | 84,17079 | 0,24902827 | 84,4198 | -0,010949 | -0,03295 | 379,6865319 | 379,6755827 | 379,6535815 | | | | |
| 10 | 1,0313 | 127,0887 | 64,74422 | 0,32733501 | 65,0716 | -0,012634 | -0,174747 | 295,3583931 | 295,3457594 | 295,183646 | | | | |
| 10 | 2,0625 | 91,98742 | 13,82165 | 0,40564176 | 14,2273 | -0,014318 | -0,316544 | 148,0382327 | 148,0239147 | 147,721689 | | | | |
| 11 | 0 | 87,02495 | 13,00046 | 0,44028788 | 13,4408 | -0,013514 | -0,356725 | 140,0139407 | 140,0004268 | 139,6572155 | | | | |
| 11 | 1,0313 | -52,32286 | -54,30108 | 0,46569432 | -53,8354 | -0,017148 | -0,492285 | -175,6904942 | -175,7076419 | -176,182779 | | | | |
| 11 | 2,0625 | -191,6707 | -122,1708 | 0,49110075 | -121,68 | -0,020782 | -0,627844 | -492,5312746 | -492,5520562 | -493,1591191 | | | | |
| 16 | 0 | -176,7288 | -122,2548 | 0,49110075 | -121,764 | -0,020782 | -0,045236 | -473,274924 | -473,2957056 | -473,3201604 | | | | |
| 16 | 1,0313 | -38,46391 | -54,27035 | 0,46569432 | -53,8047 | -0,017148 | -0,016923 | -157,6123923 | -157,6295401 | -157,6293153 | | | | |
| 16 | 2,0625 | 99,801 | 13,04731 | 0,44028788 | 13,4876 | -0,013514 | 0,01139 | 156,7165116 | 156,7029977 | 156,727902 | | | | |
| 17 | 0 | 99,24729 | 13,86878 | 0,40564176 | 14,2744 | -0,014318 | -0,040611 | 157,5703219 | 157,5560038 | 157,5297104 | | | | |
| 17 | 1,0313 | 132,0025 | 64,77589 | 0,32733501 | 65,1032 | -0,012634 | -0,018492 | 301,8097161 | 301,7970824 | 301,7912237 | | | | |
| 17 | 2,0625 | 164,7577 | 84,18699 | 0,24902827 | 84,436 | -0,010949 | 0,003627 | 383,0570887 | 383,0461394 | 383,0607155 | | | | |
| 18 | 0 | 161,8631 | 84,1208 | 0,09316392 | 84,214 | -0,011472 | -0,031939 | 378,8500078 | 378,8385355 | 378,8180688 | | | | |
| 18 | 1,0313 | 92,95129 | 71,5986 | -0,0149432 | 71,5837 | 0,000504 | -0,02576 | 264,0039974 | 264,004501 | 263,9782374 | | | | |
| 18 | 2,0625 | 24,03945 | 27,58039 | -0,12305033 | 27,4573 | 0,012479 | -0,019581 | 86,16596542 | 86,17844489 | 86,14638446 | | | | |
| 21 | 0 | 18,89145 | 26,54176 | -0,34320008 | 26,1986 | 0,0115 | -0,025506 | 76,95601791 | 76,96751741 | 76,93051217 | | | | |
| 21 | 1,0313 | -149,2569 | -48,65683 | -0,49048606 | -49,1473 | 0,022839 | -0,035193 | -292,3286619 | -292,3058229 | -292,3638549 | | | | |
| 21 | 2,0625 | -317,4053 | -155,5169 | -0,63777205 | -156,155 | 0,034178 | -0,04488 | -724,9363378 | -724,9021593 | -724,9812179 | | | | |
| 22 | 0 | -283,049 | -153,2309 | 0,51097346 | -152,72 | 0,024099 | 0,424793 | -673,403524 | -673,3794249 | -672,9787307 | | | | |
| 22 | 1,0313 | -121,8965 | -47,33407 | 0,34163084 | -46,9924 | 0,018652 | 0,34478 | -252,4502769 | -252,4316252 | -252,1054972 | | | | |
| 22 | 2,0625 | 39,25609 | 26,90124 | 0,17228822 | 27,0735 | 0,013204 | 0,264766 | 105,1799743 | 105,1931785 | 105,4447403 | | | | |
| 23 | 0 | 38,58441 | 27,80739 | 0,28707107 | 28,0945 | 0,012114 | 0,207914 | 106,3486522 | 106,3607663 | 106,5565662 | | | | |
| 23 | 1,0313 | 100,0704 | 71,08895 | 0,11061852 | 71,1996 | 0,003899 | 0,122914 | 272,4906529 | 272,494552 | 272,6135668 | | | | |
| 23 | 2,0625 | 161,5564 | 82,8745 | -0,06583403 | 82,8087 | -0,004316 | 0,037914 | 375,6406321 | 375,6363161 | 375,6785458 | | | | |
| 24 | 0 | 158,4919 | 82,93908 | 0,04214473 | 82,9812 | -0,00437 | -0,024582 | 372,0019354 | 371,9975658 | 371,9773539 | | | | |
| 24 | 1,0313 | 119,5164 | 63,19852 | -0,11080063 | 63,0877 | -0,008083 | -0,113702 | 281,5468239 | 281,5387407 | 281,4331219 | | | | |

| | | | | | | | | | | |
|----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 24 | 2,0625 | 80,54098 | 11,96196 | -0,26374598 | 11,6982 | -0,011797 | -0,202822 | 128,0996908 | 128,087894 | 127,8968684 |
| 25 | 0 | 75,62365 | 11,24311 | -0,20945956 | 11,0336 | -0,010021 | -0,256317 | 120,3780446 | 120,3680235 | 120,1217274 |
| 25 | 1,0313 | -67,06775 | -56,20141 | -0,37285248 | -56,5743 | -0,017986 | -0,34069 | -200,3366037 | -200,3545897 | -200,6772936 |
| 25 | 2,0625 | -209,7591 | -124,2141 | -0,53624539 | -124,75 | -0,025951 | -0,425063 | -522,1875975 | -522,2135484 | -522,6126603 |
| 26 | 0 | -177,5929 | -124,296 | -0,53624539 | -124,832 | -0,025951 | 0,334003 | -480,5353232 | -480,5612741 | -480,2013204 |
| 26 | 1,0313 | -40,17744 | -56,16899 | -0,37285248 | -56,5418 | -0,017986 | 0,265823 | -165,3143633 | -165,3323493 | -165,0485401 |
| 26 | 2,0625 | 97,23805 | 11,29121 | -0,20945956 | 11,0818 | -0,010021 | 0,197644 | 148,5729688 | 148,5629477 | 148,7706125 |
| 27 | 0 | 96,40604 | 12,0103 | -0,26374598 | 11,7466 | -0,011797 | 0,159102 | 148,8209612 | 148,8091643 | 148,9800635 |
| 27 | 1,0313 | 128,7346 | 63,23098 | -0,11080063 | 63,1202 | -0,008083 | 0,08444 | 293,5953101 | 293,5872268 | 293,6797496 |
| 27 | 2,0625 | 161,0631 | 82,95564 | 0,04214473 | 82,9978 | -0,00437 | 0,009777 | 375,3776374 | 375,3732678 | 375,3874141 |
| 28 | 0 | 158,1284 | 82,89126 | -0,06583403 | 82,8254 | -0,004316 | -0,023309 | 371,2178104 | 371,2134945 | 371,1945014 |
| 28 | 1,0313 | 89,85848 | 71,08981 | 0,11061852 | 71,2004 | 0,003899 | -0,102828 | 259,2168865 | 259,2207857 | 259,1140582 |
| 28 | 2,0625 | 21,58853 | 27,79235 | 0,28707107 | 28,0794 | 0,012114 | -0,182348 | 84,22394111 | 84,23605527 | 84,04159339 |
| 29 | 0 | 16,82923 | 26,88623 | 0,17228822 | 27,0585 | 0,013204 | -0,207551 | 75,99503534 | 76,00823959 | 75,78748423 |
| 29 | 1,0313 | -150,0838 | -47,36488 | 0,34163084 | -47,0232 | 0,018652 | -0,286746 | -289,1553951 | -289,1367434 | -289,4421407 |
| 29 | 2,0625 | -316,9968 | -153,2775 | 0,51097346 | -152,767 | 0,024099 | -0,36594 | -717,6288215 | -717,6047224 | -717,9947617 |
| 30 | 0 | -252,1746 | -149,5236 | 1,4623208 | -148,061 | 0,015312 | 0,373592 | -623,9494824 | -623,9341707 | -623,57589 |
| 30 | 1,0313 | -98,892 | -44,61516 | 0,82958824 | 43,7856 | 0,014423 | 0,285002 | -216,1307358 | -216,116313 | -215,8457341 |
| 30 | 2,0625 | 54,3906 | 28,63176 | 0,19685568 | 28,8286 | 0,013534 | 0,196411 | 128,3650147 | 128,3785486 | 128,5614258 |
| 31 | 0 | 52,97152 | 29,24778 | 0,33268935 | 29,5805 | 0,012926 | 0,159082 | 128,0239253 | 128,0368516 | 128,1830071 |
| 31 | 1,0313 | 106,7402 | 71,62785 | -0,10759881 | 71,5203 | 0,006883 | 0,083515 | 281,8027878 | 281,8096705 | 281,8863032 |
| 31 | 2,0625 | 160,5089 | 82,51191 | -0,54788697 | 81,964 | 0,000939 | 0,007949 | 372,5896287 | 372,5904679 | 372,5975776 |
| 32 | 0 | 157,1536 | 82,55724 | -0,46800056 | 82,0892 | 0,000452 | -0,045065 | 368,4781976 | 368,47865 | 368,4331326 |
| 32 | 1,0313 | 111,2173 | 62,20163 | -0,47884656 | 61,7228 | -0,00408 | -0,10823 | 268,0280655 | 268,0239856 | 267,9198353 |
| 32 | 2,0625 | 65,28097 | 10,35002 | -0,48969256 | 9,86032 | -0,008612 | -0,171395 | 104,5859117 | 104,5772997 | 104,4145164 |
| 33 | 0 | 60,76376 | 9,850105 | -0,49094818 | 9,35916 | -0,00807 | -0,225468 | 97,71120285 | 97,70313241 | 97,48573451 |
| 33 | 1,0313 | -88,64618 | -58,11982 | -0,35708494 | -58,4769 | -0,01904 | -0,281842 | -232,193851 | -232,2128907 | -232,4756928 |
| 33 | 2,0625 | -238,0561 | -126,6579 | -0,2232217 | -126,881 | -0,030009 | -0,338215 | -563,2352504 | -563,2652594 | -563,5734656 |
| 34 | 0 | -172,8313 | -126,7377 | -0,2232217 | -126,961 | -0,030009 | 0,636579 | -478,6024537 | -478,6324628 | -477,9658743 |
| 34 | 1,0313 | -37,19075 | -58,08556 | -0,35708494 | -58,4426 | -0,01904 | 0,480377 | -165,2332646 | -165,2523043 | -164,7528878 |
| 34 | 2,0625 | 98,4498 | 9,899728 | -0,49094818 | 9,40878 | -0,00807 | 0,324174 | 146,8022968 | 146,7942263 | 147,1264708 |
| 35 | 0 | 97,33696 | 10,39982 | -0,48969256 | 9,91012 | -0,008612 | 0,295824 | 146,3582888 | 146,3496768 | 146,6541124 |
| 35 | 1,0313 | 128,1467 | 62,23521 | -0,47884656 | 61,7564 | -0,00408 | 0,138491 | 290,1033999 | 290,0993201 | 290,2418906 |
| 35 | 2,0625 | 158,9564 | 82,57459 | -0,46800056 | 82,1066 | 0,000452 | -0,018842 | 370,8564895 | 370,8569419 | 370,8376471 |
| 36 | 0 | 156,3846 | 82,52944 | -0,54788697 | 81,9815 | 0,000839 | -0,04799 | 367,2630733 | 367,2639124 | 367,2150831 |

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|----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 36 | 1,0313 | 87,44222 | 71,62912 | -0,10759881 | 71,5215 | 0,006883 | -0,196275 | 256,7179296 | 256,7248123 | 256,5216546 |
| 36 | 2,0625 | 18,49985 | 29,23279 | 0,33268935 | 29,5655 | 0,012926 | -0,34456 | 83,18076427 | 83,1936906 | 82,83620449 |
| 37 | 0 | 14,83131 | 28,61684 | 0,19685568 | 28,8137 | 0,013534 | -0,37955 | 76,90809928 | 76,92162321 | 76,52853908 |
| 37 | 1,0313 | -152,4528 | -44,64626 | 0,82958824 | -43,8167 | 0,014423 | -0,513047 | -285,8220417 | -285,8076189 | -286,3350885 |
| 37 | 2,0625 | -319,737 | -149,5709 | 1,4623208 | -148,109 | 0,015312 | -0,646544 | -711,859857 | -711,859857 | -712,5217122 |
| 38 | 0 | -203,499 | -144,0943 | 1,85166975 | -142,243 | -0,027567 | 0,326799 | -549,0340635 | -549,0616309 | -548,7072641 |
| 38 | 1,0313 | -62,79925 | -40,86659 | 0,6086169 | -40,258 | -0,003965 | 0,25472 | -162,1549758 | -162,1589404 | -161,9002561 |
| 38 | 2,0625 | 77,9005 | 30,69967 | -0,63443596 | 30,0652 | 0,019638 | 0,18264 | 161,4011158 | 161,4207542 | 161,5837558 |
| 39 | 0 | 76,4641 | 31,22952 | 0,58427584 | 31,8138 | 0,007994 | 0,172371 | 163,0309196 | 163,0389137 | 163,2032908 |
| 39 | 1,0313 | 117,8099 | 72,15038 | -0,02570159 | 72,1247 | 0,023367 | 0,116218 | 297,4022047 | 297,425572 | 297,5184229 |
| 39 | 2,0625 | 159,1557 | 81,57523 | -0,63567902 | 80,9396 | 0,03874 | 0,060065 | 368,7814683 | 368,8202086 | 368,8415334 |
| 46 | 0 | -20,60179 | -106,6257 | 0,56221472 | -106,064 | -2,91809 | 1,036268 | -238,909397 | -241,8274868 | -237,8731293 |
| 46 | 1,0313 | 49,3517 | 33,13637 | 0,54263787 | 33,679 | -0,861097 | 0,828623 | 131,5152214 | 130,6541247 | 132,343844 |
| 46 | 2,0625 | 119,3052 | 130,3752 | 0,52306102 | 130,898 | 1,195896 | 0,620978 | 416,8931982 | 418,0890945 | 417,5141757 |
| 47 | 0 | 128,417 | 130,3807 | 0,55671668 | 130,937 | 1,236116 | 0,601731 | 428,8170711 | 430,0531868 | 429,4188023 |
| 47 | 1,0313 | 131,7308 | 170,5254 | 0,3821956 | 170,908 | 1,92706 | 0,389412 | 513,0652301 | 514,9922902 | 513,4546418 |
| 47 | 2,0625 | 135,0445 | 164,7819 | 0,20767452 | 164,99 | 2,618005 | 0,177092 | 505,5369338 | 508,1549384 | 505,7140261 |
| 48 | 0 | 146,1848 | 170,1139 | 0,28455347 | 170,398 | 2,589685 | 0,141322 | 530,8372404 | 533,426925 | 530,9785619 |
| 48 | 1,0313 | 82,35643 | 108,5813 | 0,10892074 | 108,69 | 1,604371 | -0,081313 | 324,4437748 | 326,0481458 | 324,3624616 |
| 48 | 2,0625 | 18,52802 | 1,160427 | -0,066712 | 1,09372 | 0,619057 | -0,303948 | 26,27385396 | 26,89291134 | 25,969906 |
| 49 | 0 | 26,7206 | 8,686608 | 0,01952396 | 8,70613 | 0,511545 | -0,355715 | 52,14904888 | 52,6605941 | 51,79333422 |
| 49 | 1,0313 | -114,4506 | -138,9704 | -0,27385936 | -139,244 | -1,810656 | -0,537239 | -427,2741704 | -429,0848264 | -427,8114093 |
| 49 | 2,0625 | -255,6218 | -287,4547 | -0,56724267 | -288,022 | -4,132857 | -0,718763 | -908,352262 | -912,4851192 | -909,071025 |
| 50 | 0 | -252,4882 | -287,5192 | -0,56724267 | -288,086 | -4,132857 | 0,381758 | -904,4076384 | -908,5404956 | -904,0258807 |
| 50 | 1,0313 | -112,23 | -138,8813 | -0,27385936 | -139,155 | -1,810656 | 0,358368 | -424,2092762 | -426,0199322 | -423,8509083 |
| 50 | 2,0625 | 28,02816 | 8,785628 | 0,01952396 | 8,80515 | 0,511545 | 0,334978 | 54,04690955 | 54,55845477 | 54,38188774 |
| 51 | 0 | 20,20885 | 1,259568 | -0,066712 | 1,19286 | 0,619057 | 0,227794 | 28,65721539 | 29,27627277 | 28,88500948 |
| 51 | 1,0313 | 83,04082 | 108,6506 | 0,10892074 | 108,76 | 1,604371 | 0,149955 | 325,4720616 | 327,0764326 | 325,6220168 |
| 51 | 2,0625 | 145,8728 | 170,1534 | 0,28455347 | 170,438 | 2,589685 | 0,072116 | 530,5104526 | 533,1001371 | 530,5825689 |
| 52 | 0 | 135,2349 | 164,8259 | 0,20767452 | 165,034 | 2,618005 | -0,051407 | 505,8725101 | 508,4905147 | 505,8211035 |
| 52 | 1,0313 | 130,8415 | 170,5427 | 0,3821956 | 170,925 | 1,92706 | -0,13695 | 511,943854 | 513,8709142 | 511,806904 |
| 52 | 2,0625 | 126,4482 | 130,3713 | 0,55671668 | 130,928 | 1,236116 | -0,222494 | 426,2387427 | 427,4748584 | 426,0162492 |
| 53 | 0 | 117,8074 | 130,3707 | 0,52306102 | 130,894 | 1,195896 | -0,375952 | 414,9371223 | 416,1330186 | 414,5611706 |
| 53 | 1,0313 | 46,51671 | 33,10452 | 0,54263787 | 33,6472 | -0,861097 | -0,369566 | 127,7660335 | 126,9049368 | 127,3964674 |
| 53 | 2,0625 | -24,77399 | -106,685 | 0,56221472 | -106,123 | -2,91809 | -0,363181 | -244,4516969 | -247,3697866 | -244,8148774 |

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|----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 54 | 0 | -161,4661 | -165,1479 | 0,01782817 | -165,13 | -0,811418 | 0,256485 | -540,1660652 | -540,9774828 | -539,9095805 |
| 54 | 1,0313 | -47,63616 | -77,90362 | 0,21568741 | -77,6879 | -0,667732 | 0,299867 | -217,302866 | -217,9705983 | -217,0029991 |
| 54 | 2,0625 | 66,19379 | 8,36957 | 0,41354664 | 8,78312 | -0,524047 | 0,343249 | 103,6181568 | 103,0941098 | 103,9614058 |
| 55 | 0 | 71,96292 | 14,0176 | 0,24865107 | 14,2662 | -0,002649 | 0,087852 | 122,0842931 | 122,0816437 | 122,1721452 |
| 55 | 1,0313 | 109,6881 | 92,66955 | 0,28918212 | 92,9587 | 0,20812 | 0,117135 | 328,5120351 | 328,7201552 | 328,6291701 |
| 55 | 2,0625 | 147,4133 | 125,4333 | 0,32971318 | 125,763 | 0,41889 | 0,146418 | 443,1633219 | 443,5822114 | 443,3097397 |
| 56 | 0 | 153,3888 | 128,5219 | 0,22218337 | 128,744 | 0,402364 | -0,142328 | 456,8935569 | 457,2959207 | 456,7512289 |
| 56 | 1,0313 | 115,5067 | 127,706 | 0,23210076 | 127,938 | 0,479837 | -0,062536 | 406,0348881 | 406,5147254 | 405,9723518 |
| 56 | 2,0625 | 77,6246 | 81,00187 | 0,24201816 | 81,2439 | 0,557311 | 0,017255 | 263,399764 | 263,9570749 | 263,4170193 |
| 57 | 0 | 82,02069 | 80,53961 | 0,23179558 | 80,7714 | 0,004874 | -0,259926 | 268,1697013 | 268,1745756 | 267,9097753 |
| 57 | 1,0313 | -34,81887 | -0,250909 | 0,16238039 | -0,08853 | 0,138003 | -0,075577 | -45,44158473 | -45,30358154 | -45,51716218 |
| 57 | 2,0625 | -151,6584 | -123,5647 | 0,09296652 | -123,472 | 0,271132 | 0,108771 | -444,0995123 | -443,8283803 | -443,9907413 |
| 58 | 0 | -161,6579 | -165,1592 | 0,01782817 | -165,141 | -0,811418 | -0,418935 | -540,4380799 | -541,2494975 | -540,8570151 |
| 58 | 1,0313 | -47,91943 | -77,92557 | 0,21568741 | -77,7099 | -0,667732 | -0,392755 | -217,7150385 | -218,3827708 | -218,1077939 |
| 58 | 2,0625 | 65,81907 | 8,336971 | 0,41354664 | 8,75052 | -0,524047 | -0,366575 | 103,0658264 | 102,5417794 | 102,699251 |
| 59 | 0 | 71,82597 | 13,98414 | 0,24865107 | 14,2328 | -0,002649 | -0,174522 | 121,8393498 | 121,8367004 | 121,6648281 |
| 59 | 1,0313 | 109,6218 | 92,63835 | 0,28918212 | 92,9275 | 0,20812 | -0,078088 | 328,3634245 | 328,5715446 | 328,2853368 |
| 59 | 2,0625 | 147,4177 | 125,4043 | 0,32971318 | 125,734 | 0,41889 | 0,018346 | 443,1110439 | 443,5299335 | 443,1293901 |
| 60 | 0 | 153,5664 | 128,4979 | 0,22218337 | 128,72 | 0,402364 | 0,200532 | 457,0764555 | 457,4788193 | 457,2769876 |
| 60 | 1,0313 | 115,7596 | 127,6912 | 0,23210076 | 127,923 | 0,479837 | 0,349331 | 406,3340727 | 406,8139101 | 406,6834038 |
| 60 | 2,0625 | 77,95279 | 80,99628 | 0,24201816 | 81,2383 | 0,557311 | 0,49813 | 263,8152347 | 264,3725457 | 264,3133648 |
| 61 | 0 | 82,42679 | 80,53835 | 0,23179558 | 80,7701 | 0,004874 | 0,674566 | 268,695115 | 268,6999893 | 269,3696807 |
| 61 | 1,0313 | -34,41709 | -0,242837 | 0,16238039 | -0,08046 | 0,138003 | 0,859722 | -44,90313092 | -44,76512774 | -44,04340895 |
| 61 | 2,0625 | -151,261 | -123,5473 | 0,09296652 | -123,454 | 0,271132 | 1,044878 | -443,5480184 | -443,2768864 | -442,5031401 |
| 62 | 0 | -253,2072 | -185,5901 | -0,28627074 | -185,876 | 0,860432 | 0,288307 | -700,9220976 | -700,0616654 | -700,6337905 |
| 62 | 1,0313 | -98,16826 | -41,7625 | -0,48755554 | -42,2501 | 0,370978 | 0,370872 | -212,1188389 | -211,7478606 | -211,7479665 |
| 62 | 2,0625 | 56,87072 | 59,54176 | -0,68884034 | 58,8529 | -0,118476 | 0,453438 | 191,6377783 | 191,5193026 | 192,0912159 |
| 63 | 0 | 52,42236 | 58,03108 | -0,52255349 | 57,5085 | 0,274939 | 0,241811 | 183,1661336 | 183,4410726 | 183,4079446 |
| 63 | 1,0313 | 113,6416 | 117,568 | -0,44657416 | 117,121 | 0,020801 | 0,208959 | 381,9767792 | 381,9975799 | 382,1857381 |
| 63 | 2,0625 | 174,8608 | 131,2166 | -0,37059482 | 130,846 | -0,233338 | 0,176107 | 489,0109695 | 488,777632 | 489,1870763 |
| 64 | 0 | 170,2806 | 129,0289 | -0,23304162 | 128,796 | -0,212518 | -0,046547 | 478,9564512 | 478,7439332 | 478,9099046 |
| 64 | 1,0313 | 136,4916 | 101,2646 | 0,35519841 | 101,62 | -0,227652 | -0,107552 | 380,6787436 | 380,4510912 | 380,571192 |
| 64 | 2,0625 | 102,7026 | 27,61214 | 0,94343844 | 28,5556 | -0,242787 | -0,168557 | 190,6245807 | 190,3817938 | 190,4560241 |
| 65 | 0 | 99,84774 | 25,92435 | 0,99694854 | 26,9213 | -0,591389 | -0,373886 | 183,6446565 | 183,0532678 | 183,2707704 |
| 65 | 1,0313 | -32,77319 | -67,94673 | 1,7659446 | -66,1808 | -0,375071 | -0,409676 | -174,9667259 | -175,3417966 | -175,376402 |

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|----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 65 | 2,0625 | -165,3941 | -162,6452 | 2,53494067 | -160,11 | -0,158753 | 0,445466 | -535,2329804 | -535,3917333 | -535,6784467 |
| 66 | 0 | -166,2199 | -162,7595 | 2,53494067 | -160,225 | -0,158753 | 0,519433 | -536,5349801 | -536,6937329 | -536,015547 |
| 66 | 1,0313 | -33,25783 | -67,90053 | 1,7659446 | -66,1346 | -0,375071 | 0,488634 | -175,5043482 | -175,879419 | -175,0157143 |
| 66 | 2,0625 | 99,70423 | 25,98736 | 0,99694854 | 26,9843 | -0,591389 | 0,457835 | 183,5841072 | 182,9927186 | 184,041942 |
| 67 | 0 | 102,29 | 27,67467 | 0,94343844 | 28,6181 | -0,242787 | 0,250317 | 190,2132082 | 189,9704213 | 190,4635256 |
| 67 | 1,0313 | 136,3205 | 101,3069 | 0,35519841 | 101,662 | -0,227652 | 0,169332 | 380,5407853 | 380,3131329 | 380,7101175 |
| 67 | 2,0625 | 170,351 | 129,0508 | -0,23304162 | 128,818 | -0,212518 | 0,088347 | 479,0919071 | 478,8793891 | 479,1802541 |
| 68 | 0 | 174,7502 | 131,2389 | -0,37059482 | 130,868 | -0,233338 | -0,12905 | 488,9117587 | 488,6784211 | 488,7827087 |
| 68 | 1,0313 | 113,7923 | 117,575 | -0,44657416 | 117,128 | 0,020801 | -0,229445 | 382,1869437 | 382,2077445 | 381,9574991 |
| 68 | 2,0625 | 52,83449 | 58,02297 | -0,52255349 | 57,5004 | 0,274939 | -0,329839 | 183,6856735 | 183,9606125 | 183,3558341 |
| 69 | 0 | 57,15765 | 59,53308 | -0,68884034 | 58,8442 | -0,118476 | -0,540669 | 191,9934282 | 191,8749524 | 191,4527593 |
| 69 | 1,0313 | -97,54881 | -41,7849 | -0,48755554 | -42,2725 | 0,370978 | -0,668945 | -211,3583658 | -210,9873876 | -212,0273113 |
| 69 | 2,0625 | -252,2553 | -185,6262 | -0,28627074 | -185,912 | 0,860432 | -0,797222 | -699,7568014 | -698,8963692 | -700,5540234 |
| 70 | 0 | -309,4325 | -225,6262 | -1,99662654 | -227,623 | 0,838458 | 0,893093 | -857,5078961 | -856,6694382 | -856,6148027 |
| 70 | 1,0313 | -136,0385 | -68,9171 | -2,3859821 | -71,3031 | 0,393229 | 0,758628 | -319,4562369 | -319,063008 | -318,6976087 |
| 70 | 2,0625 | 37,35547 | 45,26867 | -2,77533766 | 42,4933 | -0,052 | 0,624163 | 133,5487808 | 133,4967806 | 134,1729438 |
| 71 | 0 | 35,89877 | 44,92469 | -1,38712125 | 43,5376 | 0,237864 | 0,448553 | 133,7435242 | 133,9813884 | 134,192077 |
| 71 | 1,0313 | 106,7035 | 111,6869 | -0,87234444 | 110,815 | -0,010974 | 0,27405 | 360,3435567 | 360,3325824 | 360,6176063 |
| 71 | 2,0625 | 177,5082 | 132,5608 | -0,35756763 | 132,203 | -0,259813 | 0,099546 | 495,1671339 | 494,9073212 | 495,2666803 |
| 72 | 0 | 175,5331 | 131,7555 | -0,29870336 | 131,457 | -0,243901 | -0,085264 | 491,1066546 | 490,862754 | 491,0213907 |
| 72 | 1,0313 | 142,1502 | 103,8472 | 1,21025802 | 105,057 | -0,256064 | -0,250076 | 394,9101845 | 394,6541205 | 394,6601087 |
| 72 | 2,0625 | 108,7673 | 30,05064 | 2,71921941 | 32,7699 | -0,268227 | -0,414888 | 206,9372592 | 206,6690318 | 206,5223714 |
| 73 | 0 | 107,2496 | 29,44803 | 1,48685758 | 30,9349 | -0,525589 | -0,592989 | 201,2942315 | 200,7686425 | 200,7012424 |
| 73 | 1,0313 | -34,1986 | -70,36935 | 3,72858797 | -66,6408 | -0,345537 | -0,713921 | -177,7397175 | -178,0852542 | -178,4536387 |
| 73 | 2,0625 | -175,6468 | -171,0142 | 5,97031836 | -165,044 | -0,165484 | -0,834853 | -558,4285388 | -558,5940232 | -559,2633919 |
| 74 | 0 | -176,9584 | -171,1474 | 5,97031836 | -165,177 | -0,165484 | 1,075452 | -560,4000237 | -560,5655081 | -559,3245713 |
| 74 | 1,0313 | -35,01226 | -70,33054 | 3,72858797 | -66,602 | -0,345537 | 0,887737 | -178,7198472 | -179,0653839 | -177,8321099 |
| 74 | 2,0625 | 106,9339 | 29,51519 | 1,48685758 | 31,002 | -0,525589 | 0,700022 | 201,0181529 | 200,4925639 | 201,7181751 |
| 75 | 0 | 108,213 | 30,11695 | 2,71921941 | 32,8362 | -0,268227 | 0,521071 | 206,3492999 | 206,0810725 | 206,870371 |
| 75 | 1,0313 | 141,9305 | 103,8938 | 1,21025802 | 105,104 | -0,256064 | 0,284788 | 394,7178247 | 394,4617607 | 395,0026129 |
| 75 | 2,0625 | 175,6479 | 131,7825 | -0,29870336 | 131,484 | -0,243901 | 0,048505 | 491,3098943 | 491,0659937 | 491,3583995 |
| 76 | 0 | 177,5045 | 132,5876 | -0,35756763 | 132,23 | -0,259813 | -0,146799 | 495,2159187 | 494,956106 | 495,0691198 |
| 76 | 1,0313 | 107,0141 | 111,6933 | -0,87234444 | 110,821 | -0,010974 | -0,375151 | 360,7603107 | 360,7493365 | 360,3851593 |
| 76 | 2,0625 | 36,52377 | 44,91079 | -1,38712125 | 43,5237 | 0,237864 | -0,603504 | 134,5282475 | 134,7661117 | 133,9247436 |
| 77 | 0 | 37,86164 | 45,25467 | -2,77533766 | 42,4793 | -0,052 | -0,790387 | 134,1787968 | 134,1267966 | 133,3884096 |

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|----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 77 | 1,0313 | -135,1443 | -68,95152 | -2,3859821 | -71,3375 | 0,393229 | -0,962788 | -318,362525 | -317,9693236 | -319,3253405 |
| 77 | 2,0625 | -308,1502 | -225,681 | -1,99662654 | -227,678 | 0,838458 | -1,135189 | -855,9505433 | -855,1120853 | -857,0857321 |
| 78 | 0 | -309,2405 | -233,431 | -28,781258 | -262,212 | 0,720216 | 1,842107 | -926,4371837 | -925,7169677 | -924,5950772 |
| 78 | 1,0313 | -144,3548 | -77,15075 | -13,9653035 | -91,1161 | 0,361666 | 1,476313 | -369,8933897 | -369,5317236 | -368,4170762 |
| 78 | 2,0625 | 20,53085 | 36,60618 | 0,85065102 | 37,4568 | 0,003116 | 1,11052 | 101,6037629 | 101,6068789 | 102,7142832 |
| 79 | 0 | 24,08127 | 37,60356 | 2,37020041 | 39,9738 | 0,230191 | 1,014259 | 111,2531703 | 111,4833616 | 112,2674295 |
| 79 | 1,0313 | 94,19766 | 104,8735 | 9,66805035 | 114,542 | 0,015708 | 0,576262 | 351,5401064 | 351,5558144 | 352,1163681 |
| 79 | 2,0625 | 164,314 | 126,2553 | 16,9659003 | 143,221 | -0,198775 | 0,138264 | 500,0505872 | 499,851812 | 500,1888514 |
| 80 | 0 | 163,3454 | 126,0272 | 16,754237 | 142,781 | -0,18936 | 0,021726 | 497,9118793 | 497,7225197 | 497,9336053 |
| 80 | 1,0313 | 132,049 | 99,24802 | 12,7696139 | 112,018 | -0,202752 | -0,437545 | 395,6990251 | 395,496273 | 395,2614805 |
| 80 | 2,0625 | 100,7527 | 26,5806 | 8,78499075 | 35,3656 | -0,216145 | -0,896815 | 201,7097156 | 201,4935711 | 200,8129005 |
| 81 | 0 | 95,96234 | 25,50395 | 7,00465924 | 32,5086 | -0,422114 | -1,014653 | 189,7682673 | 189,3461537 | 188,7536139 |
| 81 | 1,0313 | -35,22114 | -72,09126 | -4,48750155 | -76,5788 | -0,298354 | -1,4418 | -198,9450183 | -199,2433725 | -200,3868185 |
| 81 | 2,0625 | -166,4046 | -170,5139 | -15,9796623 | -186,494 | -0,174595 | -1,868947 | -589,313176 | -589,4877709 | -591,1821231 |
| 82 | 0 | -167,8152 | -170,6458 | -15,9796623 | -186,625 | -0,174595 | 2,110185 | -591,4105892 | -591,5851841 | -589,3004037 |
| 82 | 1,0313 | -36,09527 | -72,05296 | -4,48750155 | -76,5405 | -0,298354 | 1,644256 | -200,0047885 | -200,3031427 | -198,3605321 |
| 82 | 2,0625 | 95,62461 | 25,56876 | 7,00465924 | 32,5734 | -0,422114 | 1,178327 | 189,4588357 | 189,0367222 | 190,6371631 |
| 83 | 0 | 100,2178 | 26,64538 | 8,78499075 | 35,4304 | -0,216145 | 1,07571 | 201,143888 | 200,9277435 | 202,219598 |
| 83 | 1,0313 | 131,8271 | 99,29324 | 12,7696139 | 112,063 | -0,202752 | 0,562855 | 395,5009939 | 395,2982418 | 396,0638491 |
| 83 | 2,0625 | 163,4965 | 126,0529 | 16,754237 | 142,807 | -0,18936 | 0,050001 | 498,0816444 | 497,8922848 | 498,1316449 |
| 84 | 0 | 164,3493 | 126,2807 | 16,9659003 | 143,247 | -0,198775 | -0,053448 | 500,1473198 | 499,9485446 | 500,0938716 |
| 84 | 1,0313 | 94,51337 | 104,8782 | 9,66805035 | 114,546 | 0,015708 | -0,572368 | 351,9599004 | 351,9756084 | 351,3875324 |
| 84 | 2,0625 | 24,67742 | 37,58749 | 2,37020041 | 39,9577 | 0,230191 | -1,091288 | 111,9960257 | 112,226217 | 110,9047379 |
| 85 | 0 | 21,00952 | 36,58969 | 0,85065102 | 37,4403 | 0,003116 | -1,202121 | 102,1930521 | 102,1961681 | 100,9909315 |
| 85 | 1,0313 | -143,4607 | -77,18865 | -13,9653035 | -91,154 | 0,361666 | -1,683717 | -368,8067998 | -368,4451337 | -370,4905171 |
| 85 | 2,0625 | -307,9309 | -233,4903 | -28,781258 | -262,272 | 0,720216 | -2,165314 | -924,8532932 | -924,1330772 | -927,0186074 |
| 86 | 0 | -346,2691 | -227,8498 | -94,1820735 | -322,032 | 0,547115 | 3,67296 | -1094,213556 | -1093,666442 | -1090,540596 |
| 86 | 1,0313 | -153,0507 | -75,05069 | -35,9928804 | -111,044 | 0,278534 | 2,892465 | -421,0530355 | -420,7745018 | -418,16057 |
| 86 | 2,0625 | 40,16767 | 35,22513 | 22,1963128 | 57,4214 | 0,009953 | 2,111971 | 167,060844 | 167,0707965 | 169,1728145 |
| 87 | 0 | 35,88909 | 36,25218 | 15,9163736 | 52,1686 | 0,193941 | 2,140378 | 150,992925 | 151,1868659 | 153,1333032 |
| 87 | 1,0313 | 109,1817 | 101,6197 | 34,2366366 | 135,856 | 0,027419 | 1,220308 | 413,648816 | 413,6762352 | 414,8691235 |
| 87 | 2,0625 | 182,4743 | 121,0989 | 52,5568997 | 173,656 | -0,139103 | 0,300237 | 584,5282518 | 584,3891493 | 584,8284886 |
| 88 | 0 | 181,6022 | 121,0572 | 52,1056405 | 173,163 | -0,133771 | 0,361496 | 582,4085616 | 582,2747905 | 582,7700577 |
| 88 | 1,0313 | 140,8704 | 94,39014 | 36,9816641 | 131,372 | -0,138919 | -0,613502 | 445,8751488 | 445,7362294 | 445,2616467 |
| 88 | 2,0625 | 100,1387 | 21,83482 | 21,8576877 | 43,6925 | -0,144068 | -1,5885 | 217,5652808 | 217,421213 | 215,9767805 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 89 | 0 | 102,763 | 20,87229 | 27,1483131 | 48,0206 | -0,312528 | -1,545795 | 229,6330984 | 229,3205702 | 228,0873032 |
| 89 | 1,0313 | -62,1495 | -75,03968 | -27,1478814 | -102,188 | -0,223044 | -2,547598 | -285,1694777 | -285,3925213 | -287,7170759 |
| 89 | 2,0625 | -227,062 | -171,7791 | -81,4440759 | -253,223 | -0,133559 | -3,549401 | -801,626926 | -801,7604851 | -805,1763272 |
| 90 | 0 | -228,1312 | -171,9131 | -81,4440759 | -253,357 | -0,133559 | 3,470598 | -803,2850599 | -803,418619 | -799,8144618 |
| 90 | 1,0313 | -62,74912 | -75,00105 | -27,1478814 | -102,149 | -0,223044 | 2,578175 | -285,8717195 | -286,0947631 | -283,2935442 |
| 90 | 2,0625 | 102,633 | 20,93995 | 27,1483131 | 48,0883 | -0,312528 | 1,685752 | 229,5994445 | 229,2869163 | 231,285197 |
| 91 | 0 | 99,82694 | 21,90094 | 21,8576877 | 43,7586 | -0,144068 | 1,747315 | 217,2922808 | 217,148213 | 219,0395955 |
| 91 | 1,0313 | 140,7282 | 94,43558 | 36,9816641 | 131,417 | -0,138919 | 0,879146 | 445,7811425 | 445,642223 | 446,6602885 |
| 91 | 2,0625 | 181,6295 | 121,082 | 52,1056405 | 173,188 | -0,133771 | 0,010977 | 582,4935489 | 582,3597778 | 582,5045263 |
| 92 | 0 | 182,4851 | 121,1242 | 52,5568997 | 173,681 | -0,139103 | 0,106768 | 584,5928321 | 584,4537296 | 584,6996006 |
| 92 | 1,0313 | 109,3541 | 101,6235 | 34,2366366 | 135,86 | 0,027419 | -0,749683 | 413,8806146 | 413,9080338 | 413,1309315 |
| 92 | 2,0625 | 36,22312 | 36,23457 | 15,9163736 | 52,1509 | 0,193941 | -1,606135 | 151,3919417 | 151,5858827 | 149,7858072 |
| 93 | 0 | 40,36935 | 35,20864 | 22,1963128 | 57,405 | 0,009953 | -1,556375 | 167,3000065 | 167,3000065 | 165,7336789 |
| 93 | 1,0313 | -152,4299 | -75,08827 | -35,9928804 | -111,081 | 0,278534 | -2,411358 | -420,0426564 | -420,0426564 | -422,7325482 |
| 93 | 2,0625 | -345,2292 | -227,9085 | -94,1820735 | -322,091 | 0,547115 | -3,266341 | -1092,979076 | -1092,431961 | -1096,245417 |
| 94 | 0 | -258,8976 | -215,3459 | -25,6252824 | -240,971 | 0,367847 | 6,389493 | -818,509329 | -818,1414823 | -812,1198356 |
| 94 | 1,0313 | -115,2898 | -68,05697 | -13,2020269 | -81,259 | 0,179822 | 4,593807 | -312,3946797 | -312,2148576 | -307,8008731 |
| 94 | 2,0625 | 28,31808 | 36,70869 | -0,77877145 | 35,9299 | -0,008202 | 2,79812 | 108,673328 | 108,6651256 | 111,4714478 |
| 95 | 0 | 30,93816 | 37,89064 | 2,18387347 | 40,0745 | 0,140522 | 3,040914 | 120,3686408 | 120,5091632 | 123,4095549 |
| 95 | 1,0313 | 86,53173 | 100,0947 | 8,51812798 | 108,613 | 0,02064 | 1,705914 | 329,7168095 | 329,7374495 | 331,4227232 |
| 95 | 2,0625 | 142,1253 | 116,4104 | 14,8523825 | 131,263 | -0,099243 | 0,370913 | 447,1892805 | 447,1892805 | 447,6594363 |
| 96 | 0 | 141,2451 | 116,4234 | 14,5949266 | 131,018 | -0,09516 | 0,661084 | 445,6551899 | 445,5600298 | 446,3162741 |
| 96 | 1,0313 | 108,1879 | 89,54425 | 11,5476868 | 101,092 | -0,083233 | -0,566356 | 342,8281338 | 342,7449008 | 342,2617782 |
| 96 | 2,0625 | 75,13069 | 16,77691 | 8,50044704 | 25,2774 | -0,071306 | -1,793795 | 148,2246224 | 148,1533165 | 146,4308271 |
| 97 | 0 | 71,13684 | 15,60684 | 5,27608799 | 20,8829 | -0,205339 | -1,516802 | 134,2437472 | 134,0384077 | 132,7269454 |
| 97 | 1,0313 | -54,32008 | -77,94281 | -3,91449857 | -81,8573 | -0,139505 | -2,957334 | -234,3307147 | -234,47022 | -237,2880483 |
| 97 | 2,0625 | -179,777 | -172,3199 | -13,1050851 | -185,425 | -0,073671 | -4,397865 | -604,5600488 | -604,6337199 | -608,9579142 |
| 98 | 0 | -179,183 | -172,4263 | -13,1050851 | -185,531 | -0,073671 | 3,755906 | -604,0006353 | -604,0743063 | -600,2447295 |
| 98 | 1,0313 | -53,74126 | -77,8993 | -3,91449857 | -81,8138 | -0,139505 | 2,604891 | -233,4912347 | -233,63074 | -230,8863436 |
| 98 | 2,0625 | 71,70044 | 15,65662 | 5,27608799 | 20,9327 | -0,205339 | 1,453877 | 135,0759895 | 134,87065 | 136,529866 |
| 99 | 0 | 75,54023 | 16,8268 | 8,50044704 | 25,3272 | -0,071306 | 1,762319 | 148,8567945 | 148,7854886 | 150,6191135 |
| 99 | 1,0313 | 108,3584 | 89,57235 | 11,5476868 | 101,12 | -0,083233 | 0,877555 | 343,1059779 | 343,0227449 | 343,9835334 |
| 99 | 2,0625 | 141,1765 | 116,4297 | 14,5949266 | 131,025 | -0,09516 | -0,007208 | 445,5787061 | 445,4835459 | 445,571498 |
| 100 | 0 | 141,9687 | 116,4195 | 14,8523825 | 131,272 | -0,099243 | 0,289794 | 447,1032129 | 447,0039703 | 447,393007 |
| 100 | 1,0313 | 86,18945 | 100,0918 | 8,51812798 | 108,61 | 0,02064 | -0,550026 | 329,2660785 | 329,2867185 | 328,7160526 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 100 | 2,0625 | 30,41016 | 37,87577 | 2,18387347 | 40,0596 | 0,140522 | -1,389846 | 119,6524889 | 119,7930113 | 118,2626429 |
| 101 | 0 | 27,61182 | 36,69492 | -0,77877145 | 35,9162 | -0,008202 | -1,137459 | 107,727666 | 107,7194636 | 106,5902066 |
| 101 | 1,0313 | -115,7872 | -68,08033 | -13,2020269 | -81,2824 | 0,179822 | -2,121987 | -313,0880596 | -312,9082374 | -315,2100468 |
| 101 | 2,0625 | -259,1862 | -215,3789 | -25,6252824 | -241,004 | 0,367847 | -3,106515 | -818,9504267 | -818,58258 | -822,0569418 |
| 102 | 0 | -212,7468 | -207,4272 | -20,2584668 | -227,686 | 0,292796 | -1,04126 | -731,9420747 | -731,6492787 | -732,9833348 |
| 102 | 1,0313 | -92,4543 | -62,61725 | -10,1417047 | -72,759 | 0,109656 | -0,54249 | -265,708486 | -265,5988298 | -266,2509757 |
| 102 | 2,0625 | 27,83818 | 39,66935 | -0,02494264 | 39,6444 | -0,073484 | -0,043719 | 115,4784611 | 115,4049776 | 115,4347419 |
| 103 | 0 | 40,2683 | 41,37842 | 4,21696261 | 45,5954 | 0,063402 | -0,398267 | 143,539567 | 143,6029687 | 143,1413004 |
| 103 | 1,0313 | 86,21729 | 101,9438 | 9,15190048 | 111,096 | -0,028427 | 0,124785 | 334,2738994 | 334,2454727 | 334,3986845 |
| 103 | 2,0625 | 132,1663 | 116,621 | 14,0868384 | 130,708 | -0,120255 | 0,647837 | 433,2317766 | 433,1115214 | 433,8796134 |
| 104 | 0 | 132,8974 | 116,9625 | 14,1058642 | 131,068 | -0,116909 | 0,416158 | 320,2845472 | 320,210168 | 321,1157576 |
| 104 | 1,0313 | 95,49613 | 87,90185 | 10,1679376 | 98,0698 | -0,074379 | 0,83121 | 113,8891973 | 113,8573484 | 115,1354603 |
| 104 | 2,0625 | 58,09481 | 12,95296 | 6,23001114 | 19,183 | -0,031849 | 1,246263 | 87,26662342 | 87,10961581 | 88,10793958 |
| 105 | 0 | 46,20285 | 11,52669 | 2,0747644 | 13,6015 | -0,157008 | 0,841316 | -269,0507553 | -269,072767 | -267,9913769 |
| 105 | 1,0313 | -67,85305 | -83,61655 | -6,80434778 | -90,4209 | -0,022012 | 1,059378 | -627,0230062 | -626,910022 | -625,7455655 |
| 105 | 2,0625 | -181,9089 | -179,5872 | -15,68346 | -195,377 | 0,112984 | -3,112642 | -634,9988971 | -634,8859128 | -638,111539 |
| 106 | 0 | -187,8803 | -179,6938 | -15,68346 | -195,377 | 0,112984 | -3,112642 | -275,6216759 | -275,6436876 | -277,7249822 |
| 106 | 1,0313 | -72,9624 | -83,58093 | -6,80434778 | -90,3853 | -0,022012 | -2,103306 | 81,81336894 | 81,65636132 | 80,71939814 |
| 106 | 2,0625 | 41,95554 | 11,56082 | 2,0747644 | 13,6356 | -0,157008 | -1,093971 | 108,502901 | 108,4710521 | 107,0770853 |
| 107 | 0 | 53,90294 | 12,98453 | 6,23001114 | 19,2145 | -0,031849 | -1,425816 | 317,6153874 | 317,5410083 | 317,3783635 |
| 107 | 1,0313 | 93,42447 | 87,91385 | 10,1679376 | 98,0818 | -0,074379 | -0,237024 | 434,8345092 | 434,8345092 | 435,9031864 |
| 107 | 2,0625 | 132,946 | 116,9549 | 14,1058642 | 131,061 | -0,116909 | 0,951768 | 433,5319515 | 433,4116963 | 434,3866753 |
| 108 | 0 | 132,3986 | 116,62 | 14,0868384 | 130,707 | -0,120255 | 0,854724 | 337,2945676 | 337,2661409 | 339,0819159 |
| 108 | 1,0313 | 88,54703 | 101,9398 | 9,15190048 | 111,092 | -0,028427 | 1,787348 | 149,2807285 | 149,3441303 | 152,0007012 |
| 108 | 2,0625 | 44,6954 | 41,37139 | 4,21696261 | 45,5884 | 0,063402 | 2,719973 | 121,3631034 | 121,2896199 | 123,7729511 |
| 109 | 0 | 32,36798 | 39,66731 | -0,02494264 | 39,6424 | -0,073484 | 2,409848 | -258,8144635 | -258,7048072 | -256,227403 |
| 109 | 1,0313 | -87,14924 | -62,61852 | -10,1417047 | -72,7602 | 0,109656 | 2,587061 | -724,038672 | -723,7458759 | -721,2743986 |
| 109 | 2,0625 | -206,6664 | -207,4277 | -20,2584668 | -227,686 | 0,292796 | 2,764273 | -1226,938193 | -1226,864059 | -1212,643904 |
| 110 | 0 | -413,8229 | -237,9614 | -106,522805 | -344,484 | 0,074134 | 14,29429 | -417,0351211 | -417,0419936 | -406,7750622 |
| 110 | 1,0313 | -148,5755 | -73,76647 | -38,177003 | -111,943 | -0,006873 | 10,26006 | 307,8213094 | 307,7334305 | 314,0471378 |
| 110 | 2,0625 | 116,6719 | 47,90514 | 30,1687991 | 78,0739 | -0,087879 | 6,225828 | 281,6851324 | 281,6874089 | 288,3604257 |
| 111 | 0 | 109,2546 | 45,67231 | 24,1547386 | 69,8271 | 0,002277 | 6,675293 | 557,83388 | 557,8012097 | 561,3971258 |
| 111 | 1,0313 | 190,1717 | 110,5984 | 44,70695 | 155,305 | -0,03267 | 3,563246 | 742,138552 | 742,138552 | 742,6573706 |
| 111 | 2,0625 | 271,0889 | 129,6362 | 65,2591615 | 194,895 | -0,067617 | 0,451198 | 753,1016634 | 753,039293 | 754,2318555 |
| 112 | 0 | 277,4415 | 130,4715 | 65,7423585 | 196,214 | -0,06237 | 1,130192 | | | |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 112 | 1,0313 | 180,353 | 96,30132 | 43,1551926 | 139,457 | -0,01661 | -1,657135 | 513,3719459 | 513,3553359 | 511,7148105 |
| 112 | 2,0625 | 83,26452 | 16,24292 | 20,5680267 | 36,8109 | 0,029151 | -4,444463 | 181,865773 | 181,8949236 | 177,4213103 |
| 113 | 0 | 100,9446 | 19,85269 | 27,1772709 | 47,03 | -0,045254 | -3,881482 | 225,2879523 | 225,2426987 | 221,4064703 |
| 113 | 1,0313 | -196,8626 | -96,26724 | -43,8694219 | -140,137 | 0,027206 | -6,866281 | -536,194663 | -536,1674571 | -543,0609441 |
| 113 | 2,0625 | -494,6698 | -213,2146 | -114,916115 | -328,131 | 0,099665 | -9,85108 | -1299,33215 | -1299,232485 | -1309,183231 |
| 114 | 0 | -460,8157 | -213,3262 | -114,916115 | -328,242 | 0,099665 | 5,918758 | -1255,544997 | -1255,445332 | -1249,626239 |
| 114 | 1,0313 | -172,0542 | -96,2274 | -43,8694219 | -140,097 | 0,027206 | 4,487295 | -503,8641111 | -503,8369052 | -499,3768162 |
| 114 | 2,0625 | 116,7072 | 19,90032 | 27,1772709 | 47,0776 | -0,045254 | 3,055832 | 245,8745984 | 245,8293448 | 248,9304303 |
| 115 | 0 | 100,695 | 16,2903 | 20,5680267 | 36,8583 | 0,029151 | 3,312263 | 204,6201626 | 204,6493132 | 207,9324258 |
| 115 | 1,0313 | 188,4519 | 96,32699 | 43,1551926 | 139,482 | -0,01661 | 2,052835 | 523,9518498 | 523,9352399 | 526,0046844 |
| 115 | 2,0625 | 276,2088 | 130,4755 | 65,7423585 | 196,218 | -0,06237 | 0,793406 | 751,5070818 | 751,4447113 | 752,3004877 |
| 116 | 0 | 272,062 | 129,6445 | 65,2591615 | 194,904 | -0,067617 | 1,152914 | 743,4879858 | 743,4203686 | 744,6409 |
| 116 | 1,0313 | 181,6234 | 110,5949 | 44,70695 | 155,302 | -0,03267 | -0,06112 | 546,7140863 | 546,681416 | 546,6529659 |
| 116 | 2,0625 | 91,18475 | 45,65704 | 24,1547386 | 69,8118 | 0,002277 | -1,275155 | 258,1637316 | 258,1660081 | 256,8885765 |
| 117 | 0 | 100,269 | 47,89311 | 30,1687991 | 78,0619 | -0,087879 | -0,764981 | 286,4734896 | 286,3856107 | 285,7085089 |
| 117 | 1,0313 | -174,4811 | -73,78847 | -38,177003 | -111,965 | -0,006873 | -2,168317 | -450,7564085 | -450,763281 | -452,9247259 |
| 117 | 2,0625 | -449,2312 | -237,9934 | -106,522805 | -344,516 | 0,074134 | -3,571654 | -1273,032948 | -1272,958814 | -1276,604602 |
| 118 | 0 | 16,65557 | -147,067 | 0,92992299 | -146,137 | -0,119486 | 23,64207 | -270,6219415 | -270,7414274 | -246,9798739 |
| 118 | 1,0313 | 12,93168 | -42,25645 | 0,72213341 | -41,5343 | -0,089302 | 18,05947 | -66,25744369 | -66,3467459 | -48,19797652 |
| 118 | 2,0625 | 9,20779 | 30,89262 | 0,51434383 | 31,407 | -0,059119 | 12,47687 | 74,78405814 | 74,72493957 | 87,2609248 |
| 119 | 0 | 9,20779 | 30,89262 | 0,51434383 | 31,407 | -0,059119 | 12,47687 | 74,78405814 | 74,72493957 | 87,2609248 |
| 119 | 1,0313 | 5,483895 | 72,5457 | 0,30655415 | 72,8522 | -0,028935 | 6,894263 | 152,8046271 | 152,8046271 | 159,7278253 |
| 119 | 2,0625 | 1,760001 | 82,70273 | 0,09876447 | 82,8015 | 0,001249 | 1,31166 | 167,8922292 | 167,8922292 | 169,2026404 |
| 120 | 0 | 1,760001 | 82,70273 | 0,09876447 | 82,8015 | 0,001249 | 1,31166 | 167,8922292 | 167,8922292 | 169,2026404 |
| 120 | 1,0312 | -1,963891 | 61,36374 | -0,10902508 | 61,2547 | 0,031432 | -4,27094 | 119,9563671 | 119,9877995 | 115,6854275 |
| 120 | 2,0625 | -5,687783 | 8,52875 | -0,31681462 | 8,21194 | 0,061616 | -9,853539 | 9,029753458 | 9,091369479 | -0,823785662 |
| 121 | 0 | -5,687783 | 8,52875 | -0,31681462 | 8,21194 | 0,061616 | -9,853539 | 9,029753458 | 9,091369479 | -0,823785662 |
| 121 | 1,0312 | -9,411674 | -61,04853 | -0,52460413 | -61,5731 | 0,0918 | -15,43614 | -135,2896403 | -135,2896403 | -150,8175777 |
| 121 | 2,0625 | -13,13557 | -131,194 | -0,73239364 | -131,926 | 0,121983 | -21,01874 | -280,9289789 | -280,8069957 | -301,9477153 |
| 122 | 0 | 38,53202 | -131,2788 | -0,73239364 | -132,011 | 0,121983 | 18,54097 | -213,9306639 | -213,8086806 | -195,3896949 |
| 122 | 1,0313 | 29,11822 | -61,018 | -0,52460406 | -61,5426 | 0,0918 | 13,98001 | -85,1397374 | -85,1397374 | -71,25152255 |
| 122 | 2,0625 | 19,70441 | 8,575929 | -0,31681448 | 8,25911 | 0,061616 | 9,41906 | 42,13396196 | 42,19557796 | 51,55302201 |
| 123 | 0 | 19,70441 | 8,575929 | -0,31681448 | 8,25911 | 0,061616 | 9,41906 | 42,13396196 | 42,19557796 | 51,55302201 |
| 123 | 1,0313 | 10,2906 | 61,39601 | -0,1090248 | 61,287 | 0,031432 | 4,858103 | 135,9517467 | 135,983179 | 140,80985 |
| 123 | 2,0625 | 0,876789 | 82,72005 | 0,09876489 | 82,8188 | 0,001249 | 0,297147 | 166,7774459 | 166,7786946 | 167,0745925 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 125 | 0 | 0,876789 | 82,72005 | 0,09876489 | 82,8188 | 0,001249 | 0,297147 | 166,7774459 | 166,7786946 | 167,0745925 |
| 125 | 1,0312 | -8,537016 | 72,54806 | 0,30655443 | 72,8546 | -0,028935 | -4,263807 | 134,6111028 | 134,5821678 | 130,3472957 |
| 125 | 2,0625 | -17,95082 | 30,88007 | 0,51434398 | 31,3944 | -0,059119 | -8,824761 | 39,45275938 | 39,39364079 | 30,62799857 |
| 126 | 0 | -17,95082 | 30,88007 | 0,51434398 | 31,3944 | -0,059119 | -8,824761 | 39,45275938 | 39,39364079 | 30,62799857 |
| 126 | 1,0312 | -27,36462 | -42,2839 | 0,72213348 | -41,5618 | -0,089302 | -13,38571 | -118,6975523 | -118,7868545 | -132,083266 |
| 126 | 2,0625 | -36,77843 | -147,1094 | 0,92992299 | -146,179 | -0,119486 | -17,94667 | -340,1708167 | -340,2903025 | -358,1174833 |
| 127 | 0 | -447,5415 | -145,2422 | -8,0185678 | -153,261 | -0,162496 | -11,71124 | -888,3254688 | -888,4879643 | -900,036707 |
| 127 | 1,0313 | -191,1165 | -43,53257 | -3,46408092 | -46,9967 | -0,154322 | -8,687621 | -342,4447683 | -342,59909 | -351,1323891 |
| 127 | 2,0625 | 65,30851 | 26,51553 | 1,09040596 | 27,6059 | -0,146148 | -5,664003 | 140,1129362 | 139,9667884 | 134,4489329 |
| 129 | 0 | 55,89432 | 28,95728 | 2,89189197 | 31,8492 | -0,087238 | -5,657387 | 136,3609455 | 136,2737079 | 130,7035582 |
| 129 | 1,0313 | 149,8043 | 69,93071 | 4,75168674 | 74,6824 | -0,053996 | -2,810787 | 344,1104034 | 344,0564077 | 341,2996164 |
| 129 | 2,0625 | 243,7143 | 79,40813 | 6,6114815 | 86,0196 | -0,020754 | 0,035813 | 488,8678397 | 488,847086 | 488,9036529 |
| 130 | 0 | 240,7615 | 79,58366 | 6,71433277 | 86,298 | -0,021493 | -0,299282 | 485,5858957 | 485,5644024 | 485,2866137 |
| 130 | 1,0313 | 179,7601 | 60,15961 | 4,19934658 | 64,359 | 0,057279 | 2,552392 | 362,405988 | 362,463267 | 364,9583797 |
| 130 | 2,0625 | 118,7586 | 9,239563 | 1,68436039 | 10,9239 | 0,136051 | 5,404065 | 176,2340588 | 176,37011 | 181,6381241 |
| 131 | 0 | 123,1596 | 7,206607 | 0,05976899 | 7,26638 | 0,078831 | 5,271523 | 174,6402848 | 174,7191159 | 179,9118082 |
| 131 | 1,0313 | -105,2195 | -56,64295 | -4,84033546 | -61,4833 | 0,181867 | 8,364359 | -259,7519801 | -259,5701136 | -251,3876211 |
| 131 | 2,0625 | -333,5987 | -121,1593 | -9,7404399 | -130,9 | 0,284902 | 11,45719 | -695,4778727 | -695,1929708 | -684,0206783 |
| 132 | 0 | -406,9295 | -121,0965 | -9,7404399 | -130,837 | 0,284902 | -11,3597 | -790,6821071 | -790,3972052 | -802,0418103 |
| 132 | 1,0313 | -156,4878 | -56,67591 | -4,84033546 | -61,5162 | 0,181867 | -8,257383 | -326,4665799 | -326,2847134 | -334,7239633 |
| 132 | 2,0625 | 93,95392 | 7,176481 | 0,05976899 | 7,23625 | 0,078831 | -5,155064 | 136,6126016 | 136,6914327 | 131,4575381 |
| 133 | 0 | 84,348 | 9,20908 | 1,68436039 | 10,8934 | 0,136051 | -5,15657 | 131,439281 | 131,5753322 | 126,282711 |
| 133 | 1,0313 | 164,6885 | 60,13773 | 4,19934658 | 64,3371 | 0,057279 | -2,280565 | 342,7692151 | 342,8264941 | 340,4886504 |
| 133 | 2,0625 | 245,029 | 79,57037 | 6,71433277 | 86,2847 | -0,021493 | 0,595441 | 491,1071277 | 491,0856344 | 491,7025682 |
| 138 | 0 | 241,7871 | 79,39519 | 6,6114815 | 86,0067 | -0,020754 | 0,413668 | 486,3366309 | 486,3158772 | 486,7502984 |
| 138 | 1,0313 | 167,0207 | 69,9298 | 4,75168674 | 74,6815 | -0,053996 | 3,10799 | 366,4898954 | 366,4358997 | 369,5978858 |
| 138 | 2,0625 | 92,25427 | 28,9684 | 2,89189197 | 31,8603 | -0,087238 | 5,802313 | 183,6511383 | 183,5639007 | 189,4534517 |
| 139 | 0 | 96,76002 | 26,52644 | 1,09040596 | 27,6168 | -0,146148 | 5,831816 | 181,021718 | 180,8755701 | 186,853534 |
| 139 | 1,0313 | -138,3338 | -43,50885 | -3,46408092 | -46,9729 | -0,154322 | 8,34331 | -273,7798392 | -273,9341609 | -265,4365292 |
| 139 | 2,0625 | -373,4277 | -145,2056 | -8,0185678 | -153,224 | -0,162496 | 10,8548 | -791,9043924 | -792,066888 | -781,0495883 |
| 140 | 0 | -252,7147 | -155,878 | 1,807098 | -154,071 | -0,205701 | 4,171297 | -636,6708028 | -636,8765041 | -632,4995054 |
| 140 | 1,0313 | -108,0328 | -47,51781 | 0,47499371 | -47,0428 | -0,199261 | 3,234393 | -234,5283013 | -234,7275624 | -231,2939085 |
| 140 | 2,0625 | 36,64903 | 29,18084 | -0,85711059 | 28,3237 | -0,192821 | 2,297488 | 104,2912041 | 104,0983833 | 106,5886924 |
| 141 | 0 | 46,46338 | 28,65286 | -0,06884492 | 28,584 | -0,126085 | 2,235151 | 117,5704389 | 117,4443539 | 119,8055896 |
| 141 | 1,0313 | 99,40303 | 71,97185 | -0,71143192 | 71,2604 | -0,081858 | 1,179802 | 271,7447673 | 271,6629095 | 272,9245688 |

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|-----|--------|-----------|-----------|--------------|----------|-----------|-----------|--------------|--------------|--------------|
| 141 | 2,0625 | 152,3427 | 83,79482 | -1,35401893 | 82,4408 | -0,037631 | 0,124452 | 362,9270741 | 362,8894434 | 363,0515265 |
| 142 | 0 | 155,5939 | 83,84187 | -1,18442819 | 82,6574 | -0,039438 | -0,064711 | 367,5869318 | 367,5474936 | 367,5222208 |
| 142 | 1,0313 | 113,3971 | 64,09709 | -0,53237427 | 63,5647 | 0,063229 | -1,10386 | 274,545728 | 274,610957 | 273,441868 |
| 142 | 2,0625 | 71,20041 | 12,85631 | 0,11967965 | 12,976 | 0,169896 | -2,143009 | 118,5125027 | 118,6823987 | 116,3694937 |
| 143 | 0 | 68,82119 | 13,6707 | -0,34557531 | 13,3251 | 0,104649 | -2,278663 | 116,1178038 | 116,2224524 | 113,8391412 |
| 143 | 1,0313 | -70,75166 | -56,23291 | 0,8341883 | -55,3987 | 0,247375 | -3,117452 | -202,7746065 | -202,5272317 | -205,8920582 |
| 143 | 2,0625 | -210,3245 | -126,7047 | 2,01395191 | -124,691 | 0,390101 | -3,956241 | -522,8033623 | -522,4132613 | -526,7596032 |
| 144 | 0 | -164,0887 | -126,7803 | 2,01395191 | -124,766 | 0,390101 | 4,291433 | -462,8478932 | -462,4577922 | -458,5564598 |
| 144 | 1,0313 | -39,16374 | -56,2003 | 0,8341883 | -55,3661 | 0,247375 | 3,346327 | -161,6450888 | -161,397714 | -158,2987622 |
| 144 | 2,0625 | 85,76119 | 13,71284 | -0,34557531 | 13,3673 | 0,104649 | 2,40122 | 138,2240878 | 138,3287363 | 140,6253075 |
| 145 | 0 | 95,19756 | 12,8985 | 0,11967965 | 13,0182 | 0,169896 | 2,321795 | 149,7931731 | 149,9630691 | 152,1149683 |
| 145 | 1,0313 | 123,3358 | 64,12317 | -0,53237427 | 63,5908 | 0,065229 | 1,148244 | 287,5181445 | 287,5833734 | 288,6663883 |
| 145 | 2,0625 | 151,4741 | 83,85183 | -1,18442819 | 82,6674 | -0,039438 | -0,025308 | 362,2510944 | 366,422824 | 362,2257868 |
| 150 | 0 | 155,0435 | 83,80594 | -1,35401893 | 82,4519 | -0,037631 | -0,164509 | 366,4604547 | 366,422824 | 366,2959457 |
| 150 | 1,0313 | 88,03627 | 71,97037 | -0,711143192 | 71,2589 | -0,081858 | -1,328995 | 256,9650165 | 256,8831587 | 255,6360218 |
| 150 | 2,0625 | 21,02899 | 28,63878 | -0,06884492 | 28,5699 | -0,126085 | -2,493481 | 84,47756675 | 84,35147172 | 81,98407625 |
| 152 | 0 | 18,1633 | 29,16739 | -0,85711059 | 28,3103 | -0,192821 | -2,564867 | 80,23284433 | 80,04002352 | 77,6679775 |
| 152 | 1,0313 | -141,0873 | -47,54328 | 0,47499371 | -47,0683 | -0,199261 | -3,509242 | -277,5501063 | -277,7493674 | -281,0593484 |
| 152 | 2,0625 | -300,338 | -155,9154 | 1,807098 | -154,108 | -0,205701 | -4,453618 | -698,8617543 | -698,8617543 | -703,1096705 |
| 154 | 0 | -317,696 | -156,3291 | -1,37831244 | -157,707 | -0,213458 | -1,575369 | -728,6329786 | -728,4195205 | -729,9948893 |
| 154 | 1,0313 | -143,6246 | -47,47949 | -1,14537234 | 48,6249 | -0,194308 | -1,199807 | -283,961688 | -284,1559964 | -285,1614954 |
| 154 | 2,0625 | 30,44678 | 29,7086 | -0,91243225 | 28,7962 | -0,175159 | -0,824246 | 97,17314861 | 96,99798967 | 96,34890257 |
| 156 | 0 | 25,87114 | 29,53237 | -0,60634664 | 28,926 | -0,125822 | -0,811516 | 91,48452567 | 91,35870389 | 90,67300962 |
| 156 | 1,0313 | 95,92639 | 73,58573 | -0,38698008 | 73,1987 | -0,075095 | -0,454003 | 271,0267034 | 271,0267034 | 270,6477949 |
| 156 | 2,0625 | 165,9816 | 86,14307 | -0,16761351 | 85,9755 | -0,024368 | -0,09649 | 387,7270489 | 387,7026813 | 387,6305587 |
| 157 | 0 | 162,5262 | 86,1674 | 0,07988922 | 86,2473 | -0,026917 | -0,011056 | 383,7786551 | 383,7517377 | 383,7675996 |
| 157 | 1,0313 | 133,3055 | 66,27723 | 0,70915989 | 66,9864 | 0,074104 | 0,336136 | 307,2699544 | 307,3440587 | 307,6060909 |
| 157 | 2,0625 | 104,0848 | 14,89105 | 1,33843056 | 16,2295 | 0,175126 | 0,683328 | 167,7692322 | 167,9443581 | 168,4525607 |
| 158 | 0 | 102,2047 | 15,28718 | 1,49091289 | 16,7781 | 0,124564 | 0,723065 | 166,4222421 | 166,5468058 | 167,1453075 |
| 158 | 1,0313 | -36,48301 | -53,67417 | 1,97873397 | -51,6954 | 0,255601 | 1,073605 | -150,8187732 | -150,563172 | -149,7451685 |
| 158 | 2,0625 | -175,1707 | -123,3023 | 2,46655506 | -120,836 | 0,386639 | 1,424144 | -469,3934164 | -469,0067776 | -467,9692723 |
| 159 | 0 | -205,9115 | -123,2384 | 2,46655506 | -120,772 | 0,386639 | -1,548652 | -509,2286288 | -508,84199 | -510,7772807 |
| 159 | 1,0313 | -56,22335 | -53,7055 | 1,97873397 | -51,7268 | 0,255601 | -1,197334 | -176,5438792 | -176,288278 | -177,7412132 |
| 159 | 2,0625 | 93,46476 | 15,25925 | 1,49091289 | 16,7502 | 0,124564 | -0,846016 | 155,0045247 | 155,1290884 | 154,1585088 |
| 160 | 0 | 88,18479 | 14,8621 | 1,33843056 | 16,2005 | 0,175126 | -0,793808 | 147,0412963 | 147,2164221 | 146,2474885 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 160 | 1,0313 | 127,3074 | 66,25632 | 0,70915989 | 66,9655 | 0,074104 | -0,43453 | 299,4306009 | 299,5047051 | 298,9960707 |
| 160 | 2,0625 | 166,43 | 86,15452 | 0,07988922 | 86,2344 | -0,026917 | -0,075252 | 388,8278839 | 388,8009665 | 388,7526314 |
| 161 | 0 | 163,0531 | 86,13101 | -0,16761351 | 85,9634 | -0,024368 | 0,0359 | 383,8958606 | 383,8714929 | 383,9317604 |
| 161 | 1,0313 | 103,0209 | 73,58462 | -0,38698008 | 73,1976 | -0,075095 | 0,418589 | 280,3224408 | 280,2473461 | 280,7410301 |
| 161 | 2,0625 | 42,98867 | 29,54221 | -0,60634664 | 28,9359 | -0,125822 | 0,801279 | 113,7569994 | 113,6311776 | 114,5582783 |
| 162 | 0 | 40,43633 | 29,71914 | -0,91243225 | 28,8067 | -0,175159 | 0,856807 | 110,1806407 | 110,0054818 | 111,0374478 |
| 162 | 1,0313 | -122,5328 | -47,45716 | -1,14537234 | -48,6025 | -0,194308 | 1,269166 | -256,4977716 | -256,6920801 | -255,2286054 |
| 162 | 2,0625 | -285,502 | -156,295 | -1,37831244 | -157,673 | -0,213458 | 1,681525 | -686,4991799 | -686,7126379 | -684,8176546 |
| 163 | 0 | -301,8098 | -158,4854 | -6,35671314 | -164,842 | -0,130956 | 0,655316 | -722,0369905 | -722,1679469 | -721,3816748 |
| 163 | 1,0313 | -126,0681 | -45,89998 | -3,81008163 | -49,7101 | -0,1365 | 0,524202 | -263,3086954 | -263,4451955 | -262,7844936 |
| 163 | 2,0625 | 49,67355 | 35,02394 | -1,26345012 | 33,7605 | -0,142044 | 0,393088 | 132,0966036 | 131,9545599 | 132,4896917 |
| 165 | 0 | 50,06732 | 33,98843 | -0,13401538 | 33,8544 | -0,099312 | 0,301672 | 132,7963462 | 132,6970341 | 133,0980185 |
| 165 | 1,0313 | 116,2506 | 78,83839 | 1,34097994 | 80,1794 | -0,064298 | 0,135537 | 311,484502 | 311,4202043 | 311,6200393 |
| 165 | 2,0625 | 182,4339 | 92,19234 | 2,81597526 | 95,0083 | -0,029284 | -0,030598 | 427,1806363 | 427,1513528 | 427,1500384 |
| 166 | 0 | 184,9457 | 91,8528 | 2,9671799 | 94,82 | -0,032661 | -0,111699 | 430,0693482 | 430,0366869 | 429,9576489 |
| 166 | 1,0313 | 143,4655 | 70,85679 | 3,79707555 | 74,6539 | 0,056017 | -0,285551 | 335,8128663 | 335,8688838 | 335,527315 |
| 166 | 2,0625 | 101,9853 | 18,36476 | 4,6269712 | 22,9917 | 0,144696 | -0,459403 | 178,5643628 | 178,709059 | 178,1049596 |
| 168 | 0 | 108,1029 | 19,25273 | 3,9875791 | 23,2403 | 0,09737 | -0,505373 | 187,0144389 | 187,1118091 | 186,5090662 |
| 168 | 1,0313 | -49,4679 | -53,57256 | 3,3512468 | -50,2213 | 0,231129 | -0,650964 | -164,750888 | -164,5197595 | -165,401852 |
| 168 | 2,0625 | -207,0387 | -126,966 | 2,71491449 | -124,251 | 0,364887 | -0,796555 | -517,6525606 | -517,2876735 | -518,4491157 |
| 169 | 0 | -181,5693 | -127,0518 | 2,71491449 | -124,337 | 0,364887 | 0,105408 | -484,7137829 | -484,3488959 | -484,6083752 |
| 169 | 1,0313 | -33,88036 | -53,54339 | 3,3512468 | -50,1921 | 0,231129 | 0,065749 | -144,4287526 | -144,197624 | -144,3630032 |
| 169 | 2,0625 | 113,8086 | 19,29816 | 3,9875791 | 23,2857 | 0,09737 | 0,026091 | 194,5226499 | 194,62002 | 194,548741 |
| 170 | 0 | 114,1778 | 18,41021 | 4,6269712 | 23,0372 | 0,144696 | -0,022234 | 194,505522 | 194,6502182 | 194,4832881 |
| 170 | 1,0313 | 147,5947 | 70,88802 | 3,79707555 | 74,6851 | 0,056017 | -0,059042 | 341,2432803 | 341,2992977 | 341,184238 |
| 170 | 2,0625 | 181,0116 | 91,86981 | 2,9671799 | 94,837 | -0,032661 | -0,095851 | 424,9890169 | 424,9563556 | 424,8931664 |
| 171 | 0 | 184,9319 | 92,20957 | 2,81597526 | 95,0255 | -0,029284 | -0,144177 | 430,4625925 | 430,4333089 | 430,3184156 |
| 171 | 1,0313 | 110,4668 | 78,84174 | 1,34097994 | 80,1827 | -0,064298 | -0,189144 | 303,9723529 | 303,9080551 | 303,7832088 |
| 171 | 2,0625 | 36,00177 | 33,97791 | -0,13401538 | 33,8439 | -0,099312 | -0,234111 | 114,4900917 | 114,3907796 | 114,2559805 |
| 172 | 0 | 42,59395 | 35,01345 | -1,26345012 | 33,75 | -0,142044 | -0,232644 | 122,872142 | 122,7300982 | 122,6394981 |
| 172 | 1,0313 | -143,8482 | -45,92496 | -3,81008163 | -49,735 | -0,1365 | -0,290592 | -286,4727451 | -286,6092452 | -286,7633368 |
| 172 | 2,0625 | -330,2904 | -158,5249 | -6,35671314 | -164,882 | -0,130956 | -0,348539 | -759,1406283 | -759,2715847 | -759,4891678 |
| 173 | 0 | -246,5095 | -127,6302 | -23,9959978 | -151,626 | -0,093312 | 0,309247 | -623,7148013 | -623,8081137 | -623,4055543 |
| 173 | 1,0313 | -89,01459 | -25,8988 | -9,66569352 | -35,5645 | -0,080752 | 0,162979 | -186,8479532 | -186,9287053 | -186,6849746 |
| 173 | 2,0625 | 68,48032 | 44,17113 | 4,66461073 | 48,8357 | -0,068192 | 0,01671 | 186,6958988 | 186,627707 | 186,7126091 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 174 | 0 | 67,74847 | 43,14237 | 5,69997943 | 48,8423 | -0,035085 | -0,073593 | 185,7577055 | 185,7226202 | 185,6841128 |
| 174 | 1,0313 | 126,0949 | 83,23827 | 12,4110247 | 95,6493 | -0,013301 | -0,210561 | 355,221972 | 355,2086705 | 355,0114107 |
| 174 | 2,0625 | 184,4414 | 91,83816 | 19,1220699 | 110,96 | 0,008482 | -0,34753 | 461,6942168 | 461,7026993 | 461,3466872 |
| 175 | 0 | 185,7582 | 91,86766 | 18,7887839 | 110,656 | 0,010432 | -0,374234 | 462,7985908 | 462,809023 | 462,4243569 |
| 175 | 1,0313 | 145,8273 | 70,37127 | 14,8539214 | 85,2252 | 0,055997 | -0,45934 | 360,0258694 | 360,0818668 | 359,5665298 |
| 175 | 2,0625 | 105,8964 | 17,37887 | 10,9190589 | 28,2979 | 0,101562 | -0,544445 | 194,2611265 | 194,3626889 | 193,7166811 |
| 176 | 0 | 109,4198 | 18,00876 | 9,43833964 | 27,4471 | 0,071335 | -0,556399 | 197,1398885 | 197,211223 | 196,5834893 |
| 176 | 1,0313 | -35,2369 | -51,34698 | -2,00217646 | -53,3492 | 0,126387 | -0,5879 | -152,3798909 | -152,3798909 | -153,094177 |
| 176 | 2,0625 | -179,8936 | -121,2709 | -13,4426926 | -134,714 | 0,181439 | -0,6194 | -503,2887891 | -503,1073504 | -503,908189 |
| 177 | 0 | -160,2533 | -121,3403 | -13,4426926 | -134,783 | 0,181439 | -0,456755 | -477,8951949 | -477,7137562 | -478,3519494 |
| 177 | 1,0313 | -22,94177 | -51,30365 | -2,00217646 | -53,3058 | 0,126387 | -0,425936 | -136,435957 | -136,3095704 | -136,8618927 |
| 177 | 2,0625 | 114,3698 | 18,06615 | 9,43833964 | 27,5045 | 0,071335 | -0,395117 | 203,6896531 | 203,7609877 | 203,2945363 |
| 178 | 0 | 115,2933 | 17,43544 | 10,9190589 | 28,3545 | 0,101562 | -0,489685 | 206,5902402 | 206,6918026 | 206,1005556 |
| 178 | 1,0313 | 147,5928 | 70,41126 | 14,8539214 | 85,2652 | 0,055997 | -0,425722 | 362,4009394 | 362,4569367 | 361,9752175 |
| 178 | 2,0625 | 179,8922 | 91,89107 | 18,7887839 | 110,68 | 0,010432 | -0,361759 | 455,219617 | 455,2300493 | 454,8578578 |
| 179 | 0 | 182,5056 | 91,86155 | 19,1220699 | 110,984 | 0,008482 | -0,45828 | 459,2244881 | 459,2329706 | 458,7662085 |
| 179 | 1,0313 | 117,238 | 83,24592 | 12,4110247 | 95,6569 | -0,013301 | -0,332874 | 343,7232857 | 343,7099843 | 343,3904121 |
| 179 | 2,0625 | 51,97041 | 43,13429 | 5,69997943 | 48,8343 | -0,035085 | -0,207468 | 165,2300617 | 165,1949764 | 165,0225941 |
| 180 | 0 | 57,20465 | 44,16333 | 4,66461073 | 48,8279 | -0,068192 | -0,221888 | 172,0219319 | 171,9537401 | 171,8000442 |
| 180 | 1,0313 | -105,5927 | -25,92177 | -9,66569352 | -35,5875 | -0,080752 | -0,044517 | -208,4454249 | -208,526177 | -208,489942 |
| 180 | 2,0625 | -268,39 | -127,6684 | -23,9959978 | -151,664 | -0,093312 | 0,132854 | -652,2357778 | -652,3290902 | -652,1029243 |
| 181 | 0 | -191,913 | -119,0696 | -73,412701 | -192,482 | -0,082868 | -1,004291 | -634,4514718 | -634,5343397 | -635,4557632 |
| 181 | 1,0313 | -56,64817 | -21,81936 | -23,304086 | -45,1234 | -0,041889 | -1,120537 | -163,8895114 | -163,9314 | -165,0100481 |
| 181 | 2,0625 | 78,61668 | 43,76935 | 26,8045289 | 70,5739 | -0,000909 | -1,236782 | 243,3494529 | 243,3485436 | 242,1126709 |
| 182 | 0 | 77,60514 | 43,51272 | 20,5971772 | 64,1099 | 0,021684 | -1,190831 | 229,1064743 | 229,1281581 | 227,9156437 |
| 182 | 1,0313 | 127,5473 | 81,92037 | 35,8589356 | 117,779 | 0,034101 | -1,093418 | 401,3700556 | 401,4041563 | 400,2766371 |
| 182 | 2,0625 | 177,4894 | 88,83202 | 51,120694 | 139,953 | 0,046518 | -0,996006 | 510,6416153 | 510,6881329 | 509,645609 |
| 183 | 0 | 177,5339 | 88,47225 | 50,5122726 | 138,985 | 0,054726 | -0,969636 | 508,818746 | 508,818746 | 507,7935122 |
| 183 | 1,0313 | 140,0737 | 68,26439 | 36,6161338 | 104,881 | 0,05478 | -0,782405 | 391,8568914 | 391,9116711 | 391,0744861 |
| 183 | 2,0625 | 102,6135 | 16,56051 | 22,719995 | 39,2805 | 0,054833 | -0,595175 | 211,9586131 | 212,0134461 | 211,3634386 |
| 184 | 0 | 101,6162 | 15,88456 | 27,2944391 | 43,179 | 0,045348 | -0,612104 | 218,4590376 | 218,504386 | 217,8469339 |
| 184 | 1,0313 | -28,38947 | -47,3106 | -20,944982 | -68,2556 | 0,010281 | -0,42124 | -173,4174672 | -173,4071867 | -173,8387077 |
| 184 | 2,0625 | -158,3951 | -111,0739 | -69,1844032 | -180,258 | -0,024787 | -0,230377 | -566,4303176 | -566,455105 | -566,6606948 |
| 185 | 0 | -122,3049 | -111,1453 | -69,1844032 | -180,33 | -0,024787 | -0,150039 | -519,6556852 | -519,6804726 | -519,8057241 |
| 185 | 1,0313 | -4,301683 | -47,2673 | -20,944982 | -68,2123 | 0,010281 | -0,324901 | -142,0167453 | -142,0064648 | -142,3416464 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 185 | 2,0625 | 113,7015 | 15,94386 | 27,2944391 | 43,2383 | 0,045348 | -0,499763 | 234,2885667 | 234,3339152 | 233,7888035 |
| 186 | 0 | 116,5865 | 16,61866 | 22,719995 | 39,3387 | 0,054833 | -0,581443 | 230,2398042 | 230,2946372 | 229,6583611 |
| 186 | 1,0313 | 143,6052 | 68,30651 | 36,6161338 | 104,923 | 0,05478 | -0,765764 | 396,5320982 | 396,5868779 | 395,7663338 |
| 186 | 2,0625 | 170,6239 | 88,49835 | 50,5122726 | 139,011 | 0,054726 | -0,950086 | 499,8323706 | 499,887097 | 498,8822849 |
| 188 | 0 | 173,0931 | 88,8575 | 51,120694 | 139,978 | 0,046518 | -1,081599 | 504,9774174 | 505,0239351 | 503,8958181 |
| 188 | 1,0313 | 111,389 | 81,92995 | 35,8589356 | 117,789 | 0,034101 | -1,171739 | 380,3834998 | 380,4176005 | 379,2117611 |
| 188 | 2,0625 | 49,68495 | 43,50639 | 20,5971772 | 64,1036 | 0,021684 | -1,261878 | 192,7975605 | 192,8192443 | 191,5356826 |
| 189 | 0 | 51,30918 | 43,76283 | 26,8045289 | 70,5674 | -0,000909 | -1,405384 | 207,836658 | 207,8357487 | 206,431274 |
| 189 | 1,0313 | -99,5204 | -21,84123 | -23,304086 | 45,1453 | -0,041889 | -1,253378 | -219,6671632 | -219,7090518 | -220,9205411 |
| 189 | 2,0625 | -250,35 | -119,1068 | -73,412701 | -192,519 | -0,082868 | -1,101372 | -710,4939804 | -710,5768483 | -711,5953523 |
| 190 | 0 | -247,0741 | -124,2771 | -23,484935 | -147,762 | 0,004945 | -5,135747 | -616,7203596 | -616,7154143 | -621,8561071 |
| 190 | 1,0313 | -91,57029 | -25,13165 | -9,67635423 | -34,808 | 0,003192 | -3,927871 | -188,6573848 | -188,6541925 | -192,5852558 |
| 190 | 2,0625 | 63,93352 | 42,35228 | 4,13222655 | 46,4845 | 0,001439 | -2,719994 | 176,082594 | 176,0840333 | 173,3625996 |
| 191 | 0 | 61,71342 | 42,20752 | 5,31639218 | 47,5239 | 0,023259 | -2,622506 | 175,2752782 | 175,2985377 | 172,6527718 |
| 191 | 1,0313 | 122,2018 | 81,90683 | 12,0457435 | 93,9526 | 0,013122 | -1,873333 | 346,7675377 | 346,7806594 | 344,8942043 |
| 191 | 2,0625 | 182,6902 | 90,11013 | 18,7750948 | 108,885 | 0,002984 | -1,12416 | 455,2677756 | 455,2707595 | 454,1436153 |
| 192 | 0 | 180,398 | 90,11002 | 18,3974313 | 108,507 | 0,010809 | -1,237306 | 451,5322337 | 451,5430423 | 450,2949272 |
| 192 | 1,0313 | 145,068 | 69,30189 | 14,674761 | 83,9767 | 0,008544 | -0,784405 | 356,5417022 | 356,5502458 | 355,7572974 |
| 192 | 2,0625 | 109,738 | 16,99776 | 10,9520908 | 27,9498 | 0,006279 | -0,331503 | 198,5591491 | 198,5654277 | 198,2276461 |
| 193 | 0 | 107,1897 | 16,68893 | 9,20772309 | 25,8967 | -0,002001 | -0,447183 | 191,1398962 | 191,137895 | 190,6927128 |
| 193 | 1,0313 | -26,23734 | -49,5522 | -1,33904171 | -50,8912 | -0,015906 | -0,107154 | -135,8910219 | -135,9069276 | -135,998176 |
| 193 | 2,0625 | -159,6644 | -116,3615 | -11,8858065 | -128,247 | -0,02981 | 0,232875 | -464,0582856 | -464,0880958 | -463,8254104 |
| 194 | 0 | -150,1232 | -116,4309 | -11,8858065 | -128,317 | -0,02981 | 0,426527 | -451,7935456 | -451,8233559 | -451,3670189 |
| 194 | 1,0313 | -18,26634 | -49,50921 | -1,33904171 | -50,8482 | -0,015906 | 0,079089 | -125,4427354 | -125,4586411 | -125,3636466 |
| 194 | 2,0625 | 113,5905 | 16,74566 | 9,20772309 | 25,9534 | -0,002001 | -0,268349 | 199,5744471 | 199,5724459 | 199,306098 |
| 195 | 0 | 113,5795 | 17,05385 | 10,9520908 | 28,0059 | 0,006279 | -0,234388 | 203,6652577 | 203,6715363 | 203,4308692 |
| 195 | 1,0313 | 145,7085 | 69,34162 | 14,674761 | 84,0164 | 0,008544 | -0,716665 | 357,4538445 | 357,4623881 | 356,73718 |
| 195 | 2,0625 | 177,8375 | 90,13338 | 18,3974313 | 108,531 | 0,010809 | -1,198941 | 448,2504097 | 448,2612184 | 447,0514691 |
| 196 | 0 | 177,2506 | 90,13326 | 18,7750948 | 108,908 | 0,002984 | -1,167938 | 448,2454839 | 448,2454839 | 447,0745618 |
| 196 | 1,0313 | 114,4757 | 81,91461 | 12,0457435 | 93,9604 | 0,013122 | -1,959278 | 336,7391607 | 336,7522824 | 334,7798823 |
| 196 | 2,0625 | 51,70088 | 42,19994 | 5,31639218 | 47,5163 | 0,023259 | -2,750619 | 162,2437998 | 162,2670593 | 159,4931813 |
| 197 | 0 | 51,36649 | 42,34454 | 4,13222655 | 46,4768 | 0,001439 | -2,923075 | 159,7299583 | 159,7313976 | 156,806883 |
| 197 | 1,0313 | -102,7396 | -25,15399 | -9,67635423 | -34,8303 | 0,003192 | -4,171345 | -203,2221661 | -203,2189738 | -207,3935116 |
| 197 | 2,0625 | -256,8457 | -124,314 | -23,484935 | -147,799 | 0,004945 | -5,419616 | -629,4972866 | -629,4923413 | -634,9169023 |
| 198 | 0 | -304,445 | -153,2993 | -5,76345009 | -159,063 | 0,067031 | -0,394814 | -713,903959 | -713,8369281 | -714,2987729 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 198 | 1,0313 | -130,634 | -44,18952 | -3,80725306 | -47,9968 | 0,031084 | 0,624932 | -265,8177602 | -265,7866757 | -266,4426925 |
| 198 | 2,0625 | 43,17702 | 33,25871 | -1,85105603 | 31,4077 | -0,004862 | -0,855051 | 118,9454427 | 118,9405808 | 118,090392 |
| 199 | 0 | 41,89213 | 33,51482 | -0,49373847 | 33,0211 | 0,0116 | -0,868232 | 120,5019262 | 120,5135263 | 119,6336941 |
| 199 | 1,0313 | 112,2343 | 77,97735 | 1,04843676 | 79,0258 | -0,011403 | -0,876489 | 303,9561887 | 303,9447853 | 303,0796995 |
| 199 | 2,0625 | 182,5765 | 90,94387 | 2,590612 | 93,5345 | -0,034407 | -0,884746 | 424,4184296 | 424,3840226 | 423,5336834 |
| 200 | 0 | 179,8637 | 90,63417 | 2,70551906 | 93,3397 | -0,02964 | -0,877175 | 420,5022113 | 420,4725715 | 419,6250368 |
| 200 | 1,0313 | 144,9543 | 70,12142 | 3,74637224 | 73,8678 | -0,024014 | -0,747906 | 336,1761632 | 336,1521496 | 335,4282573 |
| 200 | 2,0625 | 110,0449 | 18,11265 | 4,78722542 | 22,8999 | -0,018387 | -0,618637 | 188,8580935 | 188,8397062 | 188,2394563 |
| 201 | 0 | 106,7301 | 17,62796 | 3,80493279 | 21,4329 | -0,025699 | -0,640788 | 181,6149704 | 181,5892717 | 180,9741828 |
| 201 | 1,0313 | -35,20593 | -51,66879 | 4,11736384 | -47,5514 | -0,009503 | -0,472458 | -140,870569 | -140,8800718 | -141,3430268 |
| 201 | 2,0625 | -177,142 | -121,5337 | 4,42979489 | -117,104 | 0,006693 | -0,304128 | -464,4924539 | -464,4857608 | -464,7965821 |
| 202 | 0 | -170,5349 | -121,6234 | 4,42979489 | -117,194 | 0,006693 | 0,094096 | -456,0826243 | -456,0759312 | -455,9885282 |
| 202 | 1,0313 | -28,51136 | -51,64052 | 4,11736384 | -47,5232 | -0,009503 | -0,13707 | -132,1110812 | -132,120584 | -132,2481511 |
| 202 | 2,0625 | 113,5122 | 17,67554 | 3,80493279 | 21,4805 | -0,025699 | -0,368236 | 190,5268342 | 190,5011355 | 190,1585982 |
| 203 | 0 | 112,6223 | 18,16029 | 4,78722542 | 22,9475 | -0,018387 | -0,420925 | 192,3040055 | 192,2856183 | 191,8830805 |
| 203 | 1,0313 | 146,8781 | 70,15527 | 3,74637224 | 73,9016 | -0,024014 | -0,628681 | 338,7448706 | 338,720857 | 338,1161899 |
| 203 | 2,0625 | 181,134 | 90,65423 | 2,70551906 | 93,3598 | -0,02964 | -0,836436 | 422,193714 | 422,1640742 | 421,3572777 |
| 204 | 0 | 179,9037 | 90,96357 | 2,590612 | 93,5542 | -0,034407 | -0,915468 | 420,9831894 | 420,9487824 | 420,0677214 |
| 204 | 1,0313 | 108,8271 | 77,98217 | 1,04843676 | 79,0306 | -0,011403 | -0,999979 | 299,5364497 | 299,5250463 | 298,536471 |
| 204 | 2,0625 | 37,75051 | 33,50475 | -0,49373847 | 33,011 | 0,0116 | -1,084489 | 115,0976885 | 115,1092886 | 114,0131991 |
| 205 | 0 | 35,49213 | 33,24817 | -1,85105603 | 31,3971 | -0,004862 | -1,137561 | 108,9340093 | 108,9291474 | 107,7964487 |
| 205 | 1,0313 | -138,8104 | -44,21545 | -3,80725306 | -48,0227 | 0,031084 | -1,01399 | -276,4988751 | -276,4677906 | -277,5128649 |
| 205 | 2,0625 | -313,1128 | -153,3406 | -5,76345009 | -159,104 | 0,067031 | -0,890419 | -725,2547554 | -725,1877246 | -726,1451745 |
| 206 | 0 | -306,0843 | -154,3995 | -2,05006601 | -156,45 | 0,047481 | 0,756328 | -710,8087309 | -710,76125 | -710,052403 |
| 206 | 1,0313 | -136,738 | -47,32023 | -1,65542295 | -48,9757 | 0,02782 | 0,523897 | -275,7106824 | -275,6828624 | -275,1867849 |
| 206 | 2,0625 | 32,60835 | 28,09754 | -1,26077989 | 26,8368 | 0,008159 | 0,291467 | 96,0643701 | 96,07252919 | 96,35583723 |
| 207 | 0 | 32,80421 | 29,16614 | -0,76777806 | 28,3984 | 0,013275 | 0,193249 | 99,44219589 | 99,45547103 | 99,63544499 |
| 207 | 1,0313 | 102,0267 | 73,56243 | -0,24870292 | 73,3137 | -0,004156 | -0,012846 | 279,2621194 | 279,2579635 | 279,249273 |
| 207 | 2,0625 | 171,2491 | 86,46271 | 0,27037223 | 86,7331 | -0,021587 | -0,218942 | 396,0900212 | 396,0684345 | 395,8710794 |
| 208 | 0 | 168,7449 | 86,45832 | 0,48182685 | 86,9402 | -0,019584 | -0,238563 | 393,2487297 | 393,2291456 | 393,0101669 |
| 208 | 1,0313 | 135,1199 | 66,95745 | 1,11208957 | 68,0695 | -0,0185 | -0,39002 | 311,7949614 | 311,7764616 | 311,4049417 |
| 208 | 2,0625 | 101,4949 | 15,96057 | 1,74235228 | 17,7029 | -0,017416 | -0,541477 | 167,3491716 | 167,331756 | 166,8076949 |
| 209 | 0 | 96,62457 | 15,0437 | 1,62274385 | 16,6664 | -0,018244 | -0,540584 | 158,9448277 | 158,9265833 | 158,4042439 |
| 209 | 1,0313 | -41,58845 | -52,49425 | 2,30104615 | -50,1932 | -0,016256 | -0,645508 | -154,4513875 | -154,467644 | -155,0968955 |
| 209 | 2,0625 | -179,8015 | -120,6004 | 2,97934844 | -117,621 | -0,014269 | -0,750432 | -468,9839483 | -468,9982168 | -469,7343804 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 210 | 0 | -172,52 | -120,6859 | 2,97934844 | -117,707 | -0,014269 | -0,277085 | -459,6891185 | -459,703387 | -459,9662035 |
| 210 | 1,0313 | -33,61538 | -52,46473 | 2,30104615 | -50,1637 | -0,016256 | -0,25255 | -144,027361 | -144,0436174 | -144,279911 |
| 210 | 2,0625 | 105,2893 | 15,08961 | 1,62274385 | 16,7124 | -0,018244 | -0,228015 | 170,3007687 | 170,2825243 | 170,0727536 |
| 211 | 0 | 105,1332 | 16,00687 | 1,74235228 | 17,7492 | -0,017416 | -0,31338 | 172,1716533 | 172,1542377 | 171,8582731 |
| 211 | 1,0313 | 138,0901 | 66,98892 | 1,11208957 | 68,101 | -0,0185 | -0,259296 | 315,7191996 | 315,7006997 | 315,4599038 |
| 211 | 2,0625 | 171,0471 | 86,47495 | 0,48182685 | 86,9568 | -0,019584 | -0,205211 | 396,2747243 | 396,2551402 | 396,0695129 |
| 212 | 0 | 168,6176 | 86,47941 | 0,27037223 | 86,7498 | -0,021587 | -0,273738 | 392,7023901 | 392,6808034 | 392,428652 |
| 212 | 1,0313 | 98,58258 | 73,56433 | -0,24870292 | 73,3156 | -0,004156 | -0,167069 | 274,7886035 | 274,7844476 | 274,6215345 |
| 212 | 2,0625 | 28,5476 | 29,15324 | -0,76777806 | 28,3855 | 0,013275 | -0,0604 | 93,88279522 | 93,89607036 | 93,82239544 |
| 220 | 0 | 23,63133 | 28,08436 | -1,26077989 | 26,8236 | 0,008159 | -0,042296 | 84,36788343 | 84,37604252 | 84,32558724 |
| 220 | 1,0313 | -145,4912 | -47,34809 | -1,65542295 | -49,0035 | 0,02782 | 0,103923 | -287,1455672 | -287,1177472 | -287,0416438 |
| 220 | 2,0625 | -314,6137 | -154,442 | -2,05006601 | -156,492 | 0,047481 | 0,250143 | -721,9820139 | -721,934533 | -721,7318708 |
| 222 | 0 | 155,763 | 81,63109 | -0,6414854 | 80,9896 | 0,038306 | -0,002441 | 364,4711079 | 364,5094143 | 364,4686671 |
| 222 | 1,0313 | 99,51459 | 60,99145 | -0,30345708 | 60,688 | 0,014228 | -0,076007 | 250,7449574 | 250,7591852 | 250,66895 |
| 222 | 2,0625 | 43,26619 | 8,855796 | 0,03457124 | 8,89037 | -0,009851 | -0,149574 | 74,02678531 | 74,01693443 | 73,87721128 |
| 223 | 0 | 39,22464 | 8,391135 | -1,10769752 | 7,28344 | 0,00055 | -0,220025 | 65,55890189 | 65,55945225 | 65,33887705 |
| 223 | 1,0313 | -119,9441 | -59,49371 | -0,20892288 | -59,7026 | -0,032304 | -0,305728 | -275,3325602 | -275,3648639 | -275,6382883 |
| 223 | 2,0625 | -279,1128 | -127,9467 | 0,68985176 | -127,257 | -0,065158 | -0,391431 | -617,3603679 | -617,4255257 | -617,7517993 |
| 225 | 0 | -157,0571 | -128,0243 | 0,68985176 | -127,334 | -0,065158 | 0,700689 | -458,8431823 | -458,9083401 | -458,1424937 |
| 225 | 1,0313 | -27,54074 | -59,4576 | -0,20892288 | -59,6665 | -0,032304 | 0,532475 | -155,1360094 | -155,1683132 | -154,603534 |
| 225 | 2,0625 | 101,9756 | 8,442314 | -1,10769752 | 7,33462 | 0,00055 | 0,364262 | 147,2375356 | 147,238086 | 147,6017978 |
| 226 | 0 | 101,5621 | 8,90704 | 0,03457124 | 8,94161 | -0,009851 | 0,368578 | 149,913995 | 149,9041441 | 150,2825732 |
| 226 | 1,0313 | 128,0396 | 61,02613 | -0,30345708 | 60,7227 | 0,014228 | 0,190459 | 287,8967873 | 287,9110151 | 288,0872461 |
| 226 | 2,0625 | 154,517 | 81,64921 | -0,6414854 | 81,0077 | 0,038306 | 0,012339 | 362,887558 | 362,9258645 | 362,8998975 |
| 228 | 0 | 152,6176 | 81,59352 | -0,63567902 | 80,9578 | 0,03874 | 0,015609 | 360,3186009 | 360,3573412 | 360,3342096 |
| 228 | 1,0313 | 82,46397 | 72,15221 | -0,02570159 | 72,1265 | 0,023367 | -0,183899 | 251,4561828 | 251,47955 | 251,2722839 |
| 228 | 2,0625 | 12,31032 | 31,21489 | 0,58427584 | 31,7992 | 0,007994 | -0,383407 | 79,60174313 | 79,60973724 | 79,21833652 |
| 229 | 0 | 9,544435 | 30,68522 | -0,63443596 | 30,0508 | 0,019638 | -0,425143 | 72,50934198 | 72,52898031 | 72,08419913 |
| 229 | 1,0313 | -158,1675 | -40,89743 | 0,6086169 | -40,2888 | -0,003965 | -0,634696 | -286,1954131 | -286,1993776 | -286,8301092 |
| 229 | 2,0625 | -325,8795 | -144,1416 | 1,85166975 | -142,29 | -0,027567 | -0,844249 | -708,2231642 | -708,2507316 | -709,0674136 |
| 232 | 0 | -135,1885 | -139,4842 | -19,0595887 | -158,544 | 0,002264 | 0,634538 | -492,8326127 | -492,8303484 | -492,198075 |
| 232 | 1,0313 | -11,63889 | -38,36191 | -7,53234463 | -45,8943 | 0,031682 | 0,695178 | -106,9190601 | -106,887378 | -106,2238825 |
| 232 | 2,0625 | 111,9107 | 31,09888 | 3,99489943 | 35,0938 | 0,0611 | 0,755818 | 215,6714965 | 215,7325963 | 216,4273141 |
| 233 | 0 | 114,1773 | 32,69944 | 5,66980127 | 38,3692 | -0,010585 | 0,708725 | 225,1689408 | 225,1583558 | 225,877666 |
| 233 | 1,0313 | 137,3155 | 73,3806 | 10,4266831 | 83,8073 | -0,036554 | 0,537701 | 346,1247569 | 346,0882031 | 346,6624575 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 233 | 2,0625 | 160,4538 | 82,56575 | 15,1835649 | 97,7493 | -0,062523 | 0,366676 | 404,0885515 | 404,0260288 | 404,4552274 |
| 277 | 0 | 160,3517 | 82,79106 | 15,096013 | 97,8871 | -0,065867 | 0,309899 | 404,2314126 | 404,1655453 | 404,5413116 |
| 277 | 1,0313 | 84,11523 | 60,88473 | 9,51992425 | 70,4047 | -0,033685 | 0,042352 | 250,159116 | 250,1254315 | 250,2014678 |
| 277 | 2,0625 | 7,87872 | 7,482396 | 3,94383548 | 11,4262 | -0,001502 | -0,225196 | 33,09479793 | 33,09329608 | 32,8696024 |
| 322 | 0 | 4,265815 | 6,086009 | 2,11344191 | 8,19945 | 0,065775 | -0,264264 | 21,94446223 | 22,01023719 | 21,6801985 |
| 322 | 1,0313 | -167,9747 | -61,58408 | -9,77417015 | -71,3583 | 0,028332 | -0,530953 | -361,0835926 | -361,0552611 | -361,6145458 |
| 322 | 2,0625 | -340,2152 | -129,8223 | -21,6617822 | -151,484 | -0,009112 | -0,797643 | -745,2479931 | -745,2571049 | -746,0456357 |
| 327 | 0 | -136,7251 | -129,8971 | -21,6617822 | -151,559 | -0,009112 | 0,08996 | -480,8603218 | -480,8694336 | -480,7703623 |
| 327 | 1,0313 | -14,32073 | -61,54631 | -9,77417015 | -71,3205 | 0,028332 | 0,131579 | -161,2579141 | -161,2295825 | -161,1263351 |
| 327 | 2,0625 | 108,0836 | 6,137629 | 2,11344191 | 8,25107 | 0,065775 | 0,173198 | 157,0108658 | 157,0766408 | 157,1840642 |
| 328 | 0 | 110,455 | 7,534332 | 3,94383548 | 11,4782 | -0,001502 | 0,172968 | 166,5478028 | 166,546301 | 166,720771 |
| 328 | 1,0313 | 132,5013 | 60,91963 | 9,51992425 | 70,4396 | -0,033685 | 0,235592 | 313,1307613 | 313,0970768 | 313,3663534 |
| 328 | 2,0625 | 154,5476 | 82,80892 | 15,096013 | 97,9049 | -0,065867 | 0,298216 | 396,7216983 | 396,655831 | 397,0199142 |
| 329 | 0 | 153,0671 | 82,58397 | 15,1835649 | 97,7675 | -0,062523 | 0,316727 | 394,522309 | 394,4597864 | 394,8390357 |
| 329 | 1,0313 | 76,70221 | 73,38233 | 10,4266831 | 83,809 | -0,036554 | 0,285175 | 267,3308895 | 267,2943357 | 267,6160644 |
| 329 | 2,0625 | 0,337314 | 32,68467 | 5,66980127 | 38,3545 | -0,010585 | 0,253623 | 77,14744854 | 77,13686354 | 77,40107155 |
| 330 | 0 | -4,176834 | 31,08426 | 3,99489943 | 35,0792 | 0,0611 | 0,254232 | 64,72842864 | 64,78952839 | 64,9826609 |
| 330 | 1,0313 | -173,2419 | -38,39213 | -7,53234463 | -45,9245 | 0,031682 | 0,005641 | -317,0633839 | -317,0317019 | -317,0577426 |
| 330 | 2,0625 | -342,3069 | -139,53 | -19,0595887 | -158,59 | 0,002264 | -0,24295 | -762,1781924 | -762,1759281 | -762,4211421 |
| 331 | 0 | -101,8758 | -179,6692 | -84,248176 | -263,917 | 1,575278 | 3,843709 | -660,2733752 | -658,6980977 | -656,4296661 |
| 331 | 1,0313 | 28,10785 | -53,42376 | -29,0540508 | -82,4778 | 0,547447 | 2,74973 | -128,4154162 | -127,8679693 | -125,6656863 |
| 331 | 2,0625 | 158,0915 | 41,16023 | 26,1400744 | 67,3003 | -0,480384 | 1,655751 | 340,1195468 | 339,6391631 | 341,7752976 |
| 332 | 0 | 159,4297 | 38,79821 | 20,2460099 | 59,0442 | -0,354739 | 1,639525 | 325,3470452 | 324,9923059 | 326,9865704 |
| 332 | 1,0313 | 172,584 | 84,74151 | 35,9400252 | 120,682 | -0,65626 | 0,994805 | 465,7223194 | 465,0660591 | 466,717124 |
| 332 | 2,0625 | 185,7384 | 99,1888 | 51,6340405 | 150,823 | -0,957781 | 0,350084 | 543,1055721 | 542,1477907 | 543,455656 |
| 333 | 0 | 194,8893 | 99,36156 | 51,7723999 | 151,134 | -0,968982 | 0,473237 | 555,6240432 | 554,655061 | 556,0972804 |
| 333 | 1,0313 | 93,46 | 72,94595 | 34,2442678 | 107,19 | -0,65359 | 0,045242 | 335,878425 | 335,2248355 | 335,9236674 |
| 333 | 2,0625 | -7,969329 | 15,03432 | 16,7161357 | 31,7505 | -0,338197 | -0,382752 | 53,14078522 | 52,80258836 | 52,75803288 |
| 334 | 0 | 3,030058 | 17,8786 | 22,6976101 | 40,5762 | -0,481792 | -0,275961 | 85,09149085 | 84,60969865 | 84,81553019 |
| 334 | 1,0313 | -251,3732 | -74,08499 | -35,0275957 | -109,113 | 0,650628 | -0,706204 | -545,0103678 | -544,3597394 | -545,7165719 |
| 334 | 2,0625 | -505,7765 | -166,6168 | -92,7528014 | -259,37 | 1,783049 | -1,136447 | -1176,248572 | -1174,465523 | -1177,38502 |
| 335 | 0 | -168,9063 | -166,7007 | -92,7528014 | -259,454 | 1,783049 | -1,084811 | -738,4851612 | -736,7021122 | -739,5699722 |
| 335 | 1,0313 | -8,967746 | -74,05276 | -35,0275957 | -109,08 | 0,650628 | -0,652638 | -229,8187773 | -229,1681489 | -230,471415 |
| 335 | 2,0625 | 150,9708 | 17,92838 | 22,6976101 | 40,626 | -0,481792 | -0,220464 | 277,5139787 | 277,0321865 | 277,2935144 |
| 336 | 0 | 143,8826 | 15,08452 | 16,7161357 | 31,8007 | -0,338197 | -0,323693 | 250,648722 | 250,3105252 | 250,3250293 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 336 | 1,0313 | 165,7644 | 72,98083 | 34,2442678 | 107,225 | -0,65359 | 0,098406 | 429,9439471 | 429,2903576 | 430,0423531 |
| 336 | 2,0625 | 187,6462 | 99,38113 | 51,7723999 | 151,154 | -0,968982 | 0,520505 | 546,2471506 | 545,2781684 | 546,7676554 |
| 337 | 0 | 187,9795 | 99,20885 | 51,6340405 | 150,843 | -0,957781 | 0,40969 | 546,0591218 | 545,1013405 | 546,4688119 |
| 337 | 1,0313 | 92,59662 | 84,74455 | 35,9400252 | 120,685 | -0,65626 | 1,016323 | 361,7447467 | 361,0884864 | 362,7610692 |
| 337 | 2,0625 | -2,786259 | 38,78423 | 20,2460099 | 59,0302 | -0,354739 | 1,622955 | 114,43635 | 114,0836107 | 116,061305 |
| 338 | 0 | 1,101159 | 41,14695 | 26,1400744 | 67,287 | -0,480384 | 1,658803 | 136,0055574 | 135,5251737 | 137,66436 |
| 338 | 1,0313 | -233,8382 | -53,45765 | -29,0540508 | -82,5117 | 0,547447 | 2,630745 | -469,0130967 | -468,4656498 | -466,3823519 |
| 338 | 2,0625 | -468,7776 | -179,7238 | -84,248176 | -263,972 | 1,575278 | 3,602687 | -1137,354747 | -1135,779469 | -1133,75206 |
| 339 | 0 | -134,7206 | -142,2459 | -19,3971225 | -161,643 | 0,347343 | -0,110883 | -498,4229245 | -498,0755817 | -498,5338078 |
| 339 | 1,0313 | -10,00222 | -39,4076 | -7,66423671 | -47,0718 | 0,174408 | 0,105076 | -107,1465486 | -106,9721403 | -107,0414726 |
| 339 | 2,0625 | 114,7162 | 31,76923 | 4,06864906 | 35,8379 | 0,001474 | 0,321035 | 220,8068313 | 220,8083051 | 221,1278665 |
| 340 | 0 | 116,4822 | 33,00698 | 5,69971602 | 38,7067 | -0,026832 | 0,31958 | 228,840254 | 228,8134218 | 229,1598336 |
| 340 | 1,0313 | 139,2797 | 74,19126 | 10,5195063 | 84,7108 | -0,119561 | 0,312894 | 350,4851022 | 350,3655408 | 350,7979962 |
| 340 | 2,0625 | 162,0771 | 83,87953 | 15,3392966 | 99,2188 | -0,212291 | 0,306208 | 409,1379288 | 408,9256382 | 409,4441373 |
| 341 | 0 | 161,9506 | 84,05977 | 15,2453166 | 99,3051 | -0,207669 | 0,292167 | 409,1459904 | 408,9383211 | 409,4381579 |
| 341 | 1,0313 | 84,44203 | 61,87886 | 9,64032678 | 71,5192 | -0,15468 | 0,196791 | 252,8130243 | 252,6583448 | 253,0098151 |
| 341 | 2,0625 | 6,933444 | 8,201943 | 4,03533694 | 12,2373 | -0,10169 | 0,101414 | 33,48803671 | 33,38634689 | 33,5894507 |
| 353 | 0 | 3,639513 | 7,075205 | 2,23611137 | 9,31132 | -0,062927 | 0,106674 | 23,35399961 | 23,29107218 | 23,46067373 |
| 353 | 1,0313 | -171,2375 | -62,07309 | -9,82277704 | -71,8959 | 0,056613 | 0,037914 | -366,4004518 | -366,3438386 | -366,3625375 |
| 353 | 2,0625 | -346,1145 | -131,7896 | -21,8816654 | -153,671 | 0,176154 | -0,030845 | -757,2912488 | -757,1150951 | -757,3220943 |
| 355 | 0 | -134,6341 | -131,8663 | -21,8816654 | -153,748 | 0,176154 | -0,843596 | -482,5202642 | -482,3441104 | -483,3638598 |
| 355 | 1,0313 | -11,83917 | -62,03667 | -9,82277704 | -71,8595 | 0,056613 | -0,562179 | -159,1098188 | -159,0532056 | -159,6719975 |
| 355 | 2,0625 | 110,9557 | 7,126155 | 2,23611137 | 9,36227 | -0,062927 | -0,280762 | 162,9669988 | 162,9040714 | 162,686237 |
| 356 | 0 | 113,0974 | 8,252969 | 4,03533694 | 12,2883 | -0,10169 | -0,241796 | 171,6032482 | 171,5015584 | 171,3614526 |
| 356 | 1,0313 | 134,3532 | 61,91347 | 9,64032678 | 71,5538 | -0,15468 | 0,036141 | 317,7667148 | 317,6120353 | 317,8028562 |
| 356 | 2,0625 | 155,6089 | 84,07796 | 15,2453166 | 99,3233 | -0,207669 | 0,314078 | 400,9381599 | 400,7304905 | 401,2522381 |
| 357 | 0 | 154,2273 | 83,89785 | 15,3392966 | 99,2371 | -0,212291 | 0,367234 | 398,9698218 | 398,7575312 | 399,3370557 |
| 357 | 1,0313 | 76,36618 | 74,1936 | 10,5195063 | 84,7131 | -0,119561 | 0,544899 | 268,7022441 | 268,5826827 | 269,2471436 |
| 357 | 2,0625 | -1,494963 | 32,99333 | 5,69971602 | 38,693 | -0,026832 | 0,722565 | 75,44264492 | 75,41581265 | 76,16520991 |
| 358 | 0 | -5,72027 | 31,7556 | 4,06864906 | 35,8242 | 0,001474 | 0,76176 | 64,21154699 | 64,21302079 | 64,97330746 |
| 358 | 1,0313 | -177,3128 | -39,4366 | -7,66423671 | -47,1008 | 0,174408 | 0,716214 | -324,7083152 | -324,5339069 | -323,9921015 |
| 358 | 2,0625 | -348,9049 | -142,2903 | -19,3971225 | -161,687 | 0,347343 | 0,670667 | -776,9511734 | -776,6038306 | -776,2805066 |
| 359 | 0 | -197,9303 | -143,8011 | 1,86313706 | -141,938 | 0,004198 | -0,733027 | -541,1852651 | -541,181067 | -541,9182921 |
| 359 | 1,0313 | -59,20646 | -41,14974 | 0,55857971 | -40,5912 | 0,074569 | -0,548038 | -158,1507133 | -158,0761448 | -158,698751 |
| 359 | 2,0625 | 79,51739 | 29,8401 | -0,74597764 | 29,0941 | 0,144939 | -0,363048 | 161,5608424 | 161,7057814 | 161,197794 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 360 | 0 | 78,15674 | 30,46651 | 0,48287766 | 30,9494 | 0,12576 | -0,321227 | 163,5025386 | 163,6282986 | 163,1813115 |
| 360 | 1,0313 | 118,3933 | 71,51221 | -0,10609054 | 71,4061 | 0,109543 | -0,15158 | 296,7234724 | 296,8330151 | 296,5718921 |
| 360 | 2,0625 | 158,6298 | 81,0619 | -0,69505873 | 80,3668 | 0,093325 | 0,018067 | 366,9523846 | 367,0457099 | 366,9704512 |
| 361 | 0 | 155,2313 | 81,06728 | -0,70812028 | 80,3592 | 0,102288 | 0,017936 | 362,5189813 | 362,6212689 | 362,536917 |
| 361 | 1,0313 | 98,13154 | 60,79475 | -0,32066413 | 60,4741 | 0,019623 | 0,162028 | 248,5191703 | 248,538793 | 248,6811983 |
| 361 | 2,0625 | 41,03179 | 9,026211 | 0,06679203 | 9,093 | -0,063042 | 0,30612 | 71,52733774 | 71,46429563 | 71,83345796 |
| 362 | 0 | 36,81278 | 8,388396 | -1,09668818 | 7,29171 | -0,030684 | 0,304857 | 62,44002417 | 62,40933967 | 62,74488124 |
| 362 | 1,0313 | -122,4269 | -58,40787 | -0,06342644 | -58,4713 | -0,2035 | 0,434674 | -276,0976182 | -276,3011186 | -275,6629441 |
| 362 | 2,0625 | -281,6667 | -125,7723 | 0,96983531 | -124,802 | -0,376316 | 0,564491 | -615,7716062 | -616,1479225 | -615,2071151 |
| 363 | 0 | -149,2277 | -125,8529 | 0,96983531 | -124,883 | -0,376316 | -0,520715 | -443,7621099 | -444,1384261 | -444,2828245 |
| 363 | 1,0313 | -22,25334 | -58,37391 | -0,06342644 | -58,4373 | -0,2035 | -0,399291 | -145,8040037 | -146,0075041 | -146,2032951 |
| 363 | 2,0625 | 104,721 | 8,438286 | -1,09668818 | 7,3416 | -0,030684 | -0,277868 | 150,8204746 | 150,7897901 | 150,5426065 |
| 364 | 0 | 104,515 | 9,075891 | 0,06679203 | 9,14268 | -0,063042 | -0,217206 | 154,1548507 | 154,0918086 | 153,937645 |
| 364 | 1,0313 | 129,1878 | 60,82871 | -0,32066413 | 60,508 | 0,019623 | -0,109873 | 288,9602101 | 288,9798328 | 288,8503373 |
| 364 | 2,0625 | 153,8606 | 81,08552 | -0,70812028 | 80,3774 | 0,102288 | -0,00254 | 360,7735479 | 360,8758354 | 360,771008 |
| 373 | 0 | 152,0913 | 81,07999 | -0,69505873 | 80,3849 | 0,093325 | 0,046258 | 358,4885332 | 358,5818585 | 358,5347907 |
| 373 | 1,0313 | 80,38288 | 71,51472 | -0,10609054 | 71,4086 | 0,109543 | 0,139762 | 247,3150082 | 247,4245508 | 247,4547701 |
| 373 | 2,0625 | 8,67484 | 30,45344 | 0,48287766 | 30,9363 | 0,12576 | 0,233266 | 73,14946164 | 73,27522166 | 73,38272784 |
| 374 | 0 | 5,809481 | 29,8269 | -0,74597764 | 29,0809 | 0,144939 | 0,230983 | 65,71417518 | 65,8591142 | 65,94515862 |
| 374 | 1,0313 | -162,8523 | -41,17826 | 0,55857971 | -40,6197 | 0,074569 | 0,346534 | -292,9473057 | -292,8727372 | -292,6007713 |
| 374 | 2,0625 | -331,514 | -143,8449 | 1,86313706 | -141,982 | 0,004198 | 0,462085 | -714,9317827 | -714,9275846 | -714,4696973 |
| 375 | 0 | -248,8609 | -150,4876 | 1,31776253 | -149,17 | 0,204069 | -0,581263 | -621,8588672 | -621,6547979 | -622,4401299 |
| 375 | 1,0313 | -96,30136 | -45,33112 | 0,72249687 | -44,6086 | 0,153646 | -0,465508 | -214,40902 | -214,2553735 | -214,8745276 |
| 375 | 2,0625 | 56,25814 | 28,1639 | 0,1272312 | 28,2911 | 0,103223 | -0,349753 | 129,7178313 | 129,8210548 | 129,3680786 |
| 376 | 0 | 54,58584 | 28,63218 | 0,24458934 | 28,8768 | 0,122254 | -0,311218 | 128,7151418 | 128,8373958 | 128,4039242 |
| 376 | 1,0313 | 107,5794 | 71,30431 | -0,15289232 | 71,1514 | 0,061462 | -0,182319 | 282,1560179 | 282,2174803 | 281,9736994 |
| 376 | 2,0625 | 160,5729 | 82,48043 | -0,55037397 | 81,9301 | 0,000671 | -0,05342 | 372,6048725 | 372,6055432 | 372,551453 |
| 377 | 0 | 157,1696 | 82,48382 | -0,47653693 | 82,0073 | 0,008524 | -0,017754 | 368,3350524 | 368,3435762 | 368,3172987 |
| 377 | 1,0313 | 110,4193 | 62,41252 | -0,44562463 | 61,9669 | -0,049462 | 0,120976 | 267,4789357 | 267,429474 | 267,5999121 |
| 377 | 2,0625 | 63,66909 | 10,8452 | -0,41471233 | 10,4305 | -0,107447 | 0,259707 | 103,6307974 | 103,5233504 | 103,890504 |
| 378 | 0 | 59,22853 | 10,41912 | -0,40784533 | 10,0113 | -0,112993 | 0,291363 | 97,01964453 | 96,90665112 | 97,31100752 |
| 378 | 1,0313 | -90,89309 | -57,22518 | -0,22775765 | -57,4529 | -0,181074 | 0,429777 | -233,0668868 | -233,2479611 | -232,6371103 |
| 378 | 2,0625 | -241,0147 | -125,4376 | -0,04766997 | -125,485 | -0,249155 | 0,56819 | -564,2897637 | -564,538919 | -563,7215737 |
| 379 | 0 | -166,237 | -125,5207 | -0,04766997 | -125,568 | -0,249155 | -0,452047 | -467,2447061 | -467,4938614 | -467,6967533 |
| 379 | 1,0313 | -32,25654 | -57,19326 | -0,22775765 | -57,421 | -0,181074 | -0,362797 | -156,7755277 | -156,9566602 | -157,1383247 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 379 | 2,0625 | 101,7239 | 10,46734 | -0,40784533 | 10,0595 | -0,112993 | -0,273547 | 152,3600229 | 152,2470295 | 152,0864761 |
| 383 | 0 | 100,5461 | 10,89331 | -0,41471233 | 10,4786 | -0,107447 | -0,232426 | 151,6671654 | 151,5597184 | 151,4347399 |
| 383 | 1,0313 | 129,6699 | 62,44533 | -0,44562463 | 61,9997 | -0,049462 | -0,136232 | 292,5702851 | 292,5208235 | 292,4340531 |
| 383 | 2,0625 | 158,7937 | 82,50134 | -0,47653693 | 82,0248 | 0,008524 | -0,040038 | 370,4813832 | 370,489907 | 370,4413448 |
| 384 | 0 | 156,2831 | 82,49783 | -0,55037397 | 81,9475 | 0,000671 | -0,003574 | 367,0629838 | 367,0636545 | 367,0594097 |
| 384 | 1,0313 | 85,67688 | 71,3064 | -0,15289232 | 71,1535 | 0,061462 | 0,106572 | 253,6869513 | 253,7484137 | 253,7935232 |
| 384 | 2,0625 | 15,07063 | 28,61895 | 0,24458934 | 28,8635 | 0,122254 | 0,216718 | 77,31889726 | 77,44115123 | 77,53561504 |
| 387 | 0 | 11,47866 | 28,15047 | 0,1272312 | 28,2777 | 0,103223 | 0,240447 | 71,47767103 | 71,58089445 | 71,71811782 |
| 387 | 1,0313 | -157,3164 | -45,35979 | 0,72249687 | -44,6373 | 0,153646 | 0,365361 | -293,7859231 | -293,6322767 | -293,4205625 |
| 387 | 2,0625 | -326,1115 | -150,5316 | 1,31776253 | -149,214 | 0,204069 | 0,490274 | -722,3725132 | -722,1684438 | -721,8822389 |
| 388 | 0 | -281,5407 | -154,634 | 0,30833105 | -154,326 | 0,268487 | -0,423667 | -674,6543787 | -674,3858921 | -675,078046 |
| 388 | 1,0313 | -120,5112 | -48,24624 | 0,20641744 | -48,0398 | 0,184165 | -0,338247 | -252,7442301 | -252,5600656 | -253,0824775 |
| 388 | 2,0625 | 40,51827 | 26,48008 | 0,10450384 | 26,5846 | 0,099843 | -0,252828 | 105,8429224 | 105,9427649 | 105,5900949 |
| 390 | 0 | 39,57745 | 27,20214 | 0,19684662 | 27,399 | 0,122602 | -0,217906 | 106,248657 | 106,3712587 | 106,0307506 |
| 390 | 1,0313 | 100,7564 | 70,91331 | 0,08101266 | 70,9943 | 0,042439 | -0,127342 | 272,9719985 | 273,0144372 | 272,8446567 |
| 390 | 2,0625 | 161,9354 | 83,12848 | -0,03482131 | 83,0937 | -0,037724 | -0,036777 | 376,7033185 | 376,6655941 | 376,6665413 |
| 391 | 0 | 158,8229 | 83,14982 | 0,06711984 | 83,2169 | -0,029402 | 0,008106 | 372,9036181 | 372,874216 | 372,911724 |
| 391 | 1,0313 | 119,2386 | 63,59676 | -0,05346159 | 63,5433 | -0,076864 | 0,10248 | 282,0968284 | 282,0199645 | 282,1993084 |
| 391 | 2,0625 | 79,6544 | 12,54769 | -0,17404301 | 12,3736 | -0,124326 | 0,196854 | 128,2980172 | 128,1736914 | 128,4948712 |
| 392 | 0 | 74,87318 | 11,93488 | -0,10783862 | 11,827 | -0,132407 | 0,240433 | 120,9892247 | 120,8568181 | 121,2296582 |
| 392 | 1,0313 | -68,40852 | -55,37312 | -0,24515039 | -55,6183 | -0,177142 | 0,331702 | -200,1676089 | -200,3447507 | -199,8359072 |
| 392 | 2,0625 | -211,6902 | -123,2493 | -0,38246216 | -123,632 | -0,221877 | 0,42297 | -522,6826652 | -522,0378182 | -522,0378182 |
| 397 | 0 | -172,0779 | -123,3342 | -0,38246216 | -123,717 | -0,221877 | -0,399523 | -471,1347025 | -471,3565796 | -471,534226 |
| 397 | 1,0313 | -35,92467 | -55,34285 | -0,24515039 | -55,588 | -0,177142 | -0,317743 | -157,8780796 | -158,0552215 | -158,1958231 |
| 397 | 2,0625 | 100,2286 | 11,98171 | -0,10783862 | 11,8739 | -0,132407 | -0,235963 | 154,0449154 | 153,9125089 | 153,8089521 |
| 399 | 0 | 99,32488 | 12,59449 | -0,17404301 | 12,4204 | -0,124326 | -0,196659 | 153,9632256 | 153,8388999 | 153,7665666 |
| 399 | 1,0313 | 130,2591 | 63,62854 | -0,05346159 | 63,5751 | -0,076864 | -0,108254 | 296,4869502 | 296,4100863 | 296,3786965 |
| 399 | 2,0625 | 161,1933 | 83,16659 | 0,06711984 | 83,2337 | -0,029402 | -0,019848 | 376,0186532 | 375,9892512 | 375,9988049 |
| 400 | 0 | 158,3191 | 83,14516 | -0,03482131 | 83,1103 | -0,037724 | 0,021632 | 372,0354634 | 371,997739 | 372,0570957 |
| 400 | 1,0313 | 88,46076 | 70,91495 | 0,08101266 | 70,996 | 0,042439 | 0,11365 | 256,9909182 | 257,0333568 | 257,1045685 |
| 400 | 2,0625 | 18,60246 | 27,18873 | 0,19684662 | 27,3856 | 0,122602 | 0,205668 | 78,95435138 | 79,07695309 | 79,16001967 |
| 402 | 0 | 13,96588 | 26,46645 | 0,10450384 | 26,571 | 0,099843 | 0,242356 | 71,29754972 | 71,39739223 | 71,53990567 |
| 402 | 1,0313 | -154,4612 | -48,27484 | 0,20641744 | -48,0684 | 0,184165 | 0,336789 | -296,9363837 | -296,7522191 | -296,5995947 |
| 402 | 2,0625 | -322,8882 | -154,6776 | 0,30833105 | -154,369 | 0,268487 | 0,431222 | -728,4933131 | -728,2248265 | -728,0620911 |
| 403 | 0 | -300,5485 | -156,937 | -0,85404069 | -157,791 | 0,281344 | -0,3382 | -706,2951225 | -706,013778 | -706,6333226 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 403 | 1,0313 | -133,7814 | -49,52484 | -0,62864668 | 50,1535 | 0,183018 | -0,27043 | -274,2227636 | -274,0397458 | -274,4931938 |
| 403 | 2,0625 | 32,98575 | 26,22582 | -0,40325267 | 25,8226 | 0,084691 | -0,20266 | 94,52659926 | 94,61129049 | 94,32393904 |
| 420 | 0 | 32,67913 | 27,02308 | -0,2115519 | 26,8115 | 0,116921 | -0,167505 | 96,10591736 | 96,2228388 | 95,93841237 |
| 420 | 1,0313 | 99,00821 | 71,47316 | -0,03869237 | 71,4345 | 0,0321 | -0,097717 | 271,5796018 | 271,6117017 | 271,4818846 |
| 420 | 2,0625 | 165,3373 | 84,42723 | 0,13416717 | 84,5614 | -0,052722 | -0,027929 | 384,0612646 | 384,008543 | 384,0333353 |
| 421 | 0 | 162,6547 | 84,44733 | 0,28355824 | 84,7309 | -0,043242 | 0,015608 | 380,9128762 | 380,8696343 | 380,9284846 |
| 421 | 1,0313 | 127,1013 | 65,17931 | 0,39235239 | 65,5717 | -0,084945 | 0,085322 | 296,3749565 | 296,2900119 | 296,4602783 |
| 421 | 2,0625 | 91,54783 | 14,41527 | 0,50114653 | 14,9164 | -0,126647 | 0,155035 | 148,8450153 | 148,7183679 | 149,0000504 |
| 463 | 0 | 86,86397 | 13,75242 | 0,55328111 | 14,3057 | -0,142089 | 0,196842 | 141,5345508 | 141,3924617 | 141,7313927 |
| 463 | 1,0313 | -52,93894 | -53,49769 | 0,59662167 | -52,9011 | -0,171589 | 0,261005 | -174,6227593 | -174,7943487 | -174,3617547 |
| 463 | 2,0625 | -192,7419 | -121,316 | 0,63996223 | -120,676 | -0,20109 | 0,325167 | -491,9164149 | -492,1175047 | -491,5912478 |
| 517 | 0 | -171,6806 | -121,4028 | 0,63996223 | -120,763 | -0,20109 | -0,332593 | -464,7103916 | -464,9114813 | -465,0429848 |
| 517 | 1,0313 | -34,54407 | -53,46892 | 0,59662167 | -52,8723 | -0,171589 | -0,265267 | -150,6518798 | -150,8234692 | -150,9171467 |
| 517 | 2,0625 | 102,5924 | 13,79814 | 0,55328111 | 14,3514 | -0,142089 | -0,197941 | 162,0730043 | 161,9309152 | 161,8750637 |
| 518 | 0 | 102,0514 | 14,46098 | 0,50114653 | 14,9621 | -0,126647 | -0,157826 | 162,591029 | 162,4643816 | 162,4332028 |
| 518 | 1,0313 | 133,5042 | 65,21038 | 0,39235239 | 65,6027 | -0,084945 | -0,085355 | 304,7608603 | 304,6759157 | 304,6755057 |
| 518 | 2,0625 | 164,9569 | 84,46376 | 0,28355824 | 84,7473 | -0,043242 | -0,012883 | 383,9386701 | 383,8954281 | 383,9257871 |
| 527 | 0 | 162,2392 | 84,44357 | 0,13416717 | 84,5777 | -0,052722 | 0,030229 | 380,0664296 | 380,0137079 | 380,0966583 |
| 527 | 1,0313 | 91,77031 | 71,47485 | -0,03869237 | 71,4392 | 0,0321 | 0,10168 | 262,1737186 | 262,2058185 | 262,2753986 |
| 527 | 2,0625 | 21,30142 | 27,01012 | -0,2115519 | 26,7986 | 0,116921 | 0,173131 | 81,2889861 | 81,40590754 | 81,46211739 |
| 530 | 0 | 16,43832 | 26,21258 | -0,40325267 | 25,8093 | 0,084691 | 0,20991 | 72,988464 | 73,07315523 | 73,19837372 |
| 530 | 1,0313 | -153,2399 | -49,55265 | -0,62864668 | -50,1813 | 0,183018 | 0,278094 | -299,5744952 | -299,3914774 | -299,2964016 |
| 530 | 2,0625 | -322,9182 | -156,9794 | -0,85404069 | -157,833 | 0,281344 | 0,346278 | -735,4604505 | -735,1791061 | -735,1141729 |
| 531 | 0 | -304,3501 | -155,7156 | -2,25759089 | -157,973 | 0,253896 | -0,29565 | -711,6015274 | -711,3476317 | -711,8971777 |
| 531 | 1,0313 | -135,1658 | -48,00745 | -1,76982293 | -49,7773 | 0,152587 | -0,239212 | -275,2700429 | -275,1174561 | -275,5092545 |
| 531 | 2,0625 | 34,01858 | 28,0392 | -1,28205497 | 26,7571 | 0,051278 | -0,182773 | 97,73844563 | 97,78972342 | 97,55567266 |
| 534 | 0 | 34,16973 | 28,69897 | -0,83848073 | 27,8605 | 0,105184 | -0,149785 | 100,1416191 | 100,2468028 | 99,99183402 |
| 534 | 1,0313 | 103,1409 | 73,46932 | -0,26041441 | 73,2089 | 0,027614 | -0,087679 | 280,5010085 | 280,5286226 | 280,4133299 |
| 534 | 2,0625 | 172,1121 | 86,74366 | 0,3176519 | 87,0613 | -0,049956 | -0,025572 | 397,8683763 | 397,8184207 | 397,8428042 |
| 536 | 0 | 169,74 | 86,69169 | 0,52161091 | 87,2133 | -0,038645 | 0,011473 | 395,0885939 | 395,0499488 | 395,1000669 |
| 536 | 1,0313 | 135,4429 | 67,3306 | 1,17918909 | 68,5098 | -0,075056 | 0,072817 | 313,0952997 | 313,0202435 | 313,1681163 |
| 536 | 2,0625 | 101,1457 | 16,47349 | 1,83676727 | 18,3103 | -0,111467 | 0,13416 | 168,1099839 | 167,9985167 | 168,2441442 |
| 537 | 0 | 96,87669 | 15,87824 | 1,75479474 | 17,633 | -0,144854 | 0,169262 | 161,2057708 | 161,0609167 | 161,3750332 |
| 537 | 1,0313 | -42,54209 | -51,7561 | 2,42567564 | -49,3304 | -0,159263 | 0,222981 | -153,9656671 | -154,1248305 | -153,7425858 |
| 537 | 2,0625 | -181,9609 | -119,9586 | 3,09655653 | -116,862 | -0,173673 | 0,2767 | -470,2732505 | -470,4469234 | -469,9965505 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 538 | 0 | -167,189 | -120,0469 | 3,096,55653 | -116,95 | -0,173673 | -0,289474 | -451,246468 | -451,4201409 | -451,5359418 |
| 538 | 1,0313 | -29,39959 | -51,72851 | 2,42567564 | -49,3028 | -0,159263 | -0,232141 | -136,8251366 | -136,9844001 | -137,0572775 |
| 538 | 2,0625 | 108,3898 | 15,92309 | 1,75479474 | 17,6779 | -0,144854 | -0,174808 | 176,262567 | 176,117713 | 176,087759 |
| 539 | 0 | 108,3414 | 16,51838 | 1,83676727 | 18,3551 | -0,111467 | -0,139644 | 177,554084 | 177,4426168 | 177,4144398 |
| 539 | 1,0313 | 139,8019 | 67,36151 | 1,17918909 | 68,5407 | -0,075056 | -0,075327 | 318,8238975 | 318,7488414 | 318,748571 |
| 539 | 2,0625 | 171,2625 | 86,70862 | 0,52161091 | 87,2302 | -0,038645 | -0,011009 | 397,0630444 | 397,0630444 | 397,0906806 |
| 540 | 0 | 169,2494 | 86,7603 | 0,3176519 | 87,078 | -0,049956 | 0,026416 | 394,1801472 | 394,1301916 | 394,2065629 |
| 540 | 1,0313 | 97,43338 | 73,47199 | -0,26041441 | 73,2116 | 0,027614 | 0,090689 | 273,0865364 | 273,1141504 | 273,172251 |
| 540 | 2,0625 | 25,61735 | 28,68766 | -0,83848073 | 27,8492 | 0,105184 | 0,154962 | 89,00090401 | 89,10608771 | 89,1558657 |
| 610 | 0 | 21,44155 | 28,0273 | -1,28205497 | 26,7452 | 0,051278 | 0,187905 | 81,36450885 | 81,41578663 | 81,55241353 |
| 610 | 1,0313 | -149,7046 | -48,03327 | -1,76982293 | -49,8031 | 0,152587 | 0,246504 | -294,2221214 | -294,0695347 | -293,975617 |
| 610 | 2,0625 | -320,8507 | -155,7553 | -2,25759089 | -158,013 | 0,253896 | 0,305104 | -733,1317476 | -732,877852 | -732,8266435 |
| 677 | 0 | -298,1586 | -152,0665 | -5,6233797 | -157,69 | 0,01359 | -0,301144 | -702,9858946 | -702,9723045 | -703,287039 |
| 677 | 1,0313 | -124,4648 | -43,73922 | -3,75282916 | -47,4921 | 0,039134 | -0,229674 | -256,7883838 | -256,7492497 | -257,0180574 |
| 677 | 2,0625 | 49,22895 | 32,92653 | -1,88227862 | 31,0442 | 0,064678 | -0,158203 | 126,0861309 | 126,1508092 | 125,9279283 |
| 685 | 0 | 47,83638 | 32,87596 | -0,56363874 | 32,3123 | 0,121964 | -0,134194 | 126,8119437 | 126,9339082 | 126,6777494 |
| 685 | 1,0313 | 115,9768 | 77,17691 | 0,96671367 | 78,1436 | 0,096461 | -0,072799 | 307,0571495 | 307,1536105 | 306,9843507 |
| 685 | 2,0625 | 184,1173 | 89,98186 | 2,49706608 | 92,4789 | 0,070958 | -0,011403 | 424,3103337 | 424,3812912 | 424,2989304 |
| 686 | 0 | 181,7504 | 89,62829 | 2,60280809 | 92,2311 | 0,085226 | 0,014363 | 420,7377759 | 420,8230022 | 420,7521391 |
| 686 | 1,0313 | 144,355 | 69,60944 | 3,71012054 | 73,3196 | 0,019015 | 0,067274 | 334,3006007 | 334,3196162 | 334,3678745 |
| 686 | 2,0625 | 106,9595 | 18,09457 | 4,817433 | 22,912 | -0,047195 | 0,120184 | 184,871404 | 184,8242085 | 184,9915883 |
| 687 | 0 | 104,6729 | 17,83054 | 3,85782445 | 21,6884 | -0,078784 | 0,147537 | 179,45154 | 179,3727564 | 179,599077 |
| 687 | 1,0313 | -38,65234 | -50,33125 | 4,31697789 | -46,0143 | -0,196507 | 0,193647 | -142,276599 | -142,4731058 | -142,0829519 |
| 687 | 2,0625 | -181,9776 | -119,0612 | 4,77613133 | -114,285 | -0,31423 | 0,239757 | -465,1410835 | -465,4553137 | -464,9013263 |
| 688 | 0 | -160,5695 | -119,1536 | 4,77613133 | -114,377 | -0,31423 | -0,259747 | -437,4953215 | -437,8095516 | -437,7550689 |
| 688 | 1,0313 | -21,74163 | -50,30481 | 4,31697789 | -45,9878 | -0,196507 | -0,209064 | -120,2397919 | -120,4362987 | -120,4488557 |
| 688 | 2,0625 | 117,0862 | 17,87719 | 3,85782445 | 21,735 | -0,078784 | -0,15838 | 195,6821099 | 195,6033264 | 195,5237298 |
| 689 | 0 | 116,9726 | 18,1408 | 4,817433 | 22,9582 | -0,047195 | -0,130877 | 197,9808242 | 197,938288 | 197,8499475 |
| 689 | 1,0313 | 148,3979 | 69,64276 | 3,71012054 | 73,3529 | 0,019015 | -0,073594 | 339,6229652 | 339,6419807 | 339,5493709 |
| 689 | 2,0625 | 179,8231 | 89,6487 | 2,60280809 | 92,2515 | 0,085226 | -0,016312 | 418,2730846 | 418,358311 | 418,2567728 |
| 690 | 0 | 179,6262 | 90,00142 | 2,49706608 | 92,4985 | 0,070958 | 0,009665 | 418,5109879 | 418,5819454 | 418,5206526 |
| 690 | 1,0313 | 106,312 | 77,1825 | 0,96671367 | 78,1492 | 0,096461 | 0,075283 | 294,5040578 | 294,6005188 | 294,5793408 |
| 690 | 2,0625 | 32,99788 | 32,86757 | -0,56363874 | 32,3039 | 0,121964 | 0,140901 | 107,505106 | 107,6270705 | 107,6460074 |
| 691 | 0 | 31,87494 | 32,91726 | -1,88227862 | 31,035 | 0,064678 | 0,16445 | 103,5073858 | 103,5720641 | 103,6718359 |
| 691 | 1,0313 | -143,8036 | -43,76291 | -3,75282916 | -47,5157 | 0,039134 | 0,240564 | -281,9761267 | -281,9369925 | -281,7355629 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 691 | 2,0625 | -319,4821 | -152,1046 | -5,6233797 | -157,728 | 0,01359 | 0,316677 | -730,7826352 | -730,7690452 | -730,4659577 |
| 692 | 0 | -200,3216 | -122,5744 | -23,2022111 | -145,777 | -0,102372 | -0,189017 | -551,9712953 | -552,0736674 | -552,1603124 |
| 692 | 1,0313 | -60,88278 | -24,29213 | -9,51108925 | -33,8032 | -0,02503 | -0,149389 | -146,754043 | -146,7790726 | -146,9034316 |
| 692 | 2,0625 | 78,55601 | 42,32867 | 4,18003263 | 46,5087 | 0,052313 | -0,10976 | 195,1402133 | 195,1925261 | 195,0304532 |
| 693 | 0 | 77,23223 | 41,83243 | 5,31658292 | 47,149 | 0,116199 | -0,081956 | 194,69993 | 194,8161292 | 194,617974 |
| 693 | 1,0313 | 129,1614 | 81,20818 | 12,0002394 | 93,2084 | 0,124667 | -0,047967 | 354,3266128 | 354,4512798 | 354,2786459 |
| 693 | 2,0625 | 181,0905 | 89,08793 | 18,6838959 | 107,772 | 0,133135 | -0,013978 | 450,961274 | 451,0944089 | 450,9472962 |
| 694 | 0 | 182,0379 | 89,05646 | 18,3001693 | 107,357 | 0,15143 | 0,016671 | 451,3625879 | 451,5140176 | 451,379259 |
| 694 | 1,0313 | 141,9546 | 68,67414 | 14,6259572 | 83,3001 | 0,085437 | 0,039878 | 351,1411939 | 351,2266311 | 351,1810717 |
| 694 | 2,0625 | 101,8713 | 16,79582 | 10,9517451 | 27,7476 | 0,019445 | 0,063084 | 187,9277784 | 187,947223 | 187,9908629 |
| 695 | 0 | 102,2015 | 16,77138 | 9,24049786 | 26,0119 | -0,015393 | 0,093573 | 184,8856925 | 184,8703 | 184,9792659 |
| 695 | 1,0313 | -36,44444 | -48,52456 | -1,19496571 | -49,7195 | -0,152134 | 0,105162 | -146,816817 | -146,9689508 | -146,7116555 |
| 695 | 2,0625 | -175,0904 | -114,3887 | -11,6304293 | -126,019 | -0,288875 | 0,11675 | -479,6556721 | -479,9445471 | -479,5389224 |
| 696 | 0 | -133,2584 | -114,4599 | -11,6304293 | -126,09 | -0,288875 | -0,147154 | -425,4165777 | -425,7054527 | -425,5637313 |
| 696 | 1,0313 | -7,78436 | -48,48279 | -1,19496571 | -49,6778 | -0,152134 | -0,128588 | -109,4751804 | -109,6273142 | -109,6037685 |
| 696 | 2,0625 | 117,6897 | 16,82749 | 9,24049786 | 26,068 | -0,015393 | -0,110023 | 205,1325891 | 205,1171966 | 205,0225666 |
| 697 | 0 | 119,1993 | 16,8508 | 10,9517451 | 27,8025 | 0,019445 | -0,079995 | 210,5641499 | 210,5835945 | 210,4841546 |
| 697 | 1,0313 | 147,5253 | 68,71347 | 14,6259572 | 83,3394 | 0,085437 | -0,050012 | 358,4617449 | 358,547182 | 358,4117327 |
| 697 | 2,0625 | 175,8513 | 89,08012 | 18,3001693 | 107,38 | 0,15143 | -0,020029 | 443,3673183 | 443,518748 | 443,3472892 |
| 698 | 0 | 177,4644 | 89,11087 | 18,6838959 | 107,795 | 0,133135 | 0,009883 | 446,2932613 | 446,4263962 | 446,3031443 |
| 698 | 1,0313 | 112,0831 | 81,21659 | 12,0002394 | 93,2168 | 0,124667 | 0,050616 | 332,1416659 | 332,266333 | 332,1922823 |
| 698 | 2,0625 | 46,70177 | 41,82629 | 5,31658292 | 47,1429 | 0,116199 | 0,09135 | 154,998049 | 155,1142482 | 155,0893988 |
| 699 | 0 | 48,41541 | 42,32197 | 4,18003263 | 46,502 | 0,052313 | 0,117601 | 155,9440376 | 155,9963503 | 156,061639 |
| 699 | 1,0313 | -108,7745 | -24,3125 | -9,51108925 | -33,8236 | -0,02503 | 0,164775 | -209,0540178 | -209,0790474 | -208,8892429 |
| 699 | 2,0625 | -265,9644 | -122,6085 | -23,2022111 | -145,811 | -0,102372 | 0,211948 | -637,3750691 | -637,4774412 | -637,1631208 |
| 700 | 0 | -228,5095 | -119,4316 | -73,4287473 | -192,86 | -0,041376 | -0,058406 | -682,783007 | -682,8243832 | -682,8414126 |
| 700 | 1,0313 | -81,20139 | -21,64219 | -23,2535606 | -44,8958 | -0,05628 | -0,068585 | -195,3533054 | -195,4095858 | -195,4218908 |
| 700 | 2,0625 | 66,10675 | 44,48569 | 26,9216261 | 71,4073 | -0,071185 | -0,078765 | 228,7534001 | 228,6822156 | 228,674635 |
| 701 | 0 | 66,06289 | 43,75716 | 20,6542159 | 64,4114 | 0,008575 | -0,034221 | 214,7045112 | 214,713086 | 214,6702901 |
| 701 | 1,0313 | 121,6915 | 82,19524 | 35,9180348 | 118,113 | 0,019626 | -0,035693 | 394,425509 | 394,4451346 | 394,3898164 |
| 701 | 2,0625 | 177,3201 | 89,1373 | 51,1818536 | 140,319 | 0,030676 | -0,037164 | 511,1544853 | 511,1851616 | 511,1173212 |
| 702 | 0 | 176,9733 | 88,74969 | 50,5657633 | 139,315 | 0,047889 | 0,010808 | 508,696203 | 508,7440916 | 508,7070109 |
| 702 | 1,0313 | 142,2303 | 68,40652 | 36,6495879 | 105,056 | 0,063501 | 0,007699 | 395,0116191 | 395,0751204 | 395,0193177 |
| 702 | 2,0625 | 107,4873 | 16,56735 | 22,7334125 | 39,3008 | 0,079114 | 0,004589 | 218,3350137 | 218,4141276 | 218,3396029 |
| 703 | 0 | 107,4792 | 16,30697 | 27,3547508 | 43,6617 | 0,026562 | 0,049109 | 227,0464002 | 227,0729619 | 227,0955092 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 703 | 1,0313 | -20,06555 | -47,51671 | -20,9636251 | -68,4803 | 0,062205 | 0,040337 | -163,0458911 | -162,9836861 | -163,0055538 |
| 703 | 2,0625 | -147,6103 | -111,9086 | -69,282001 | -181,191 | 0,097848 | 0,031565 | -554,2745279 | -554,1766796 | -554,2429625 |
| 704 | 0 | -132,56 | -111,9811 | -69,282001 | -181,263 | 0,097848 | -0,067766 | -534,8542159 | -534,7563676 | -534,9219824 |
| 704 | 1,0313 | -11,1563 | -47,47421 | -20,9636251 | -68,4378 | 0,062205 | -0,06784 | -151,3788642 | -151,3166592 | -151,4467039 |
| 704 | 2,0625 | 110,2474 | 16,36586 | 27,3547508 | 43,7206 | 0,026562 | -0,067913 | 230,7628597 | 230,7894214 | 230,6949468 |
| 705 | 0 | 113,9135 | 16,62476 | 22,7334125 | 39,3582 | 0,079114 | -0,024773 | 226,8039604 | 226,8830743 | 226,7791875 |
| 705 | 1,0313 | 142,5088 | 68,44833 | 36,6495879 | 105,098 | 0,063501 | -0,019425 | 395,4572217 | 395,520723 | 395,4377963 |
| 705 | 2,0625 | 171,104 | 88,77589 | 50,5657633 | 139,342 | 0,047889 | -0,014078 | 501,1184614 | 501,16635 | 501,1043835 |
| 706 | 0 | 174,2827 | 89,16255 | 51,1818536 | 140,344 | 0,030676 | 0,031596 | 507,2563155 | 507,2869918 | 507,287911 |
| 706 | 1,0313 | 113,481 | 82,20515 | 35,9180348 | 118,123 | 0,019626 | 0,038801 | 383,7716912 | 383,7913168 | 383,8104926 |
| 706 | 2,0625 | 52,67934 | 43,75174 | 20,6542159 | 64,406 | 0,008575 | 0,046007 | 197,2950453 | 197,3036202 | 197,3410526 |
| 707 | 0 | 55,82935 | 44,4798 | 26,9216261 | 71,4014 | -0,071185 | 0,087232 | 215,3810131 | 215,3098285 | 215,4682453 |
| 707 | 1,0313 | -94,37056 | -21,66277 | -23,2535606 | -44,9163 | -0,05628 | 0,087661 | -212,5143832 | -212,5706636 | -212,4267222 |
| 707 | 2,0625 | -244,5705 | -119,4668 | -73,4287473 | -192,896 | -0,041376 | 0,08809 | -703,7327755 | -703,7741517 | -703,6446858 |
| 708 | 0 | -253,4988 | -129,8422 | -24,2262618 | -154,069 | 0,072245 | -0,029955 | -637,6854918 | -637,6132472 | -637,7154466 |
| 708 | 1,0313 | -94,95661 | -26,27587 | -9,6852229 | -35,9611 | -0,096538 | -0,065163 | -195,3657804 | -195,4623184 | -195,4309434 |
| 708 | 2,0625 | 63,58562 | 45,629 | 4,855816 | 50,4848 | -0,265321 | -0,100371 | 183,6309335 | 183,3656144 | 183,5305637 |
| 709 | 0 | 62,72262 | 44,03866 | 5,82472915 | 49,8634 | -0,16635 | -0,040703 | 181,2661871 | 181,0998371 | 181,2254841 |
| 709 | 1,0313 | 122,983 | 84,50966 | 12,57437 | 97,084 | -0,163466 | -0,050658 | 354,0459372 | 353,8824707 | 353,9952792 |
| 709 | 2,0625 | 183,2434 | 93,48464 | 19,3240107 | 112,809 | -0,160583 | -0,060613 | 463,8336656 | 463,6730827 | 463,7730527 |
| 710 | 0 | 184,9978 | 93,50651 | 18,9875889 | 112,494 | -0,154266 | 0,008318 | 465,4853808 | 465,3311149 | 465,4936987 |
| 710 | 1,0313 | 146,5765 | 71,28972 | 14,9597079 | 86,2494 | -0,003541 | 0,004308 | 363,0482731 | 363,0447317 | 363,0525807 |
| 710 | 2,0625 | 108,1551 | 17,57691 | 10,9318268 | 28,5087 | 0,147183 | 0,000297 | 197,6191439 | 197,7663269 | 197,6194411 |
| 711 | 0 | 112,5048 | 18,72832 | 9,51191284 | 28,2402 | 0,058773 | 0,058873 | 202,7366488 | 202,7954219 | 202,7955217 |
| 711 | 1,0313 | -32,96478 | -52,80623 | -2,19778487 | -55,004 | 0,386686 | 0,048469 | -152,8622426 | -152,4755571 | -152,8137731 |
| 711 | 2,0625 | -178,4343 | -124,9089 | -13,9074826 | -138,816 | 0,714598 | 0,038066 | -509,5974797 | -508,8828817 | -509,5594135 |
| 712 | 0 | -168,7135 | -124,9781 | -13,9074826 | -138,886 | 0,714598 | -0,065843 | -497,0988115 | -496,3842135 | -497,1646549 |
| 712 | 1,0313 | -28,49544 | -52,76306 | -2,19778487 | -54,9608 | 0,386686 | -0,067718 | -146,9657558 | -146,5790702 | -147,0334742 |
| 712 | 2,0625 | 111,7226 | 18,78522 | 9,51191284 | 28,2971 | 0,058773 | -0,069594 | 201,8336722 | 201,8924453 | 201,7640787 |
| 713 | 0 | 112,4457 | 17,63314 | 10,9318268 | 28,565 | 0,147183 | -0,013621 | 203,3093113 | 203,4564943 | 203,2956906 |
| 713 | 1,0313 | 146,8975 | 71,32959 | 14,9597079 | 86,2893 | -0,003541 | -0,010329 | 363,5453367 | 363,5417952 | 363,5350073 |
| 713 | 2,0625 | 181,3493 | 93,53002 | 18,9875889 | 112,518 | -0,154266 | -0,007038 | 460,7893405 | 460,6350745 | 460,7823025 |
| 714 | 0 | 184,1977 | 93,50794 | 19,3240107 | 112,832 | -0,160583 | 0,058357 | 465,1208712 | 464,9602882 | 465,1792282 |
| 714 | 1,0313 | 120,1827 | 84,5175 | 12,57437 | 97,0919 | -0,163466 | 0,054616 | 350,421229 | 350,2577625 | 350,4758449 |
| 714 | 2,0625 | 56,1677 | 44,03105 | 5,82472915 | 49,8558 | -0,16635 | 0,050875 | 172,7295652 | 172,5632152 | 172,7804401 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 726 | 2,0625 | 89,71423 | 14,84636 | 1,22529562 | 16,0717 | 0,362592 | 0,714494 | 148,77181 | 149,1344017 | 149,4863043 |
| 727 | 0 | 94,68282 | 15,38529 | 1,39239409 | 16,7777 | 0,297526 | 0,774649 | 156,6430305 | 156,9405565 | 157,4176792 |
| 727 | 1,0313 | -54,40417 | -54,72689 | 1,79991561 | -52,927 | 0,542839 | 1,125444 | -176,5793792 | -176,0365397 | -175,4539356 |
| 727 | 2,0625 | -203,4912 | -125,4073 | 2,20743712 | -123,2 | 0,788153 | 1,476239 | -510,9381346 | -510,1499815 | -509,4618959 |
| 728 | 0 | -183,9944 | -125,4911 | 2,20743712 | -123,284 | 0,788153 | -1,332177 | -485,7599687 | -484,9718157 | -487,0921457 |
| 728 | 1,0313 | -42,85069 | -54,69614 | 1,79991561 | -52,8962 | 0,542839 | -1,028749 | -161,4983316 | -160,9554921 | -162,5270808 |
| 728 | 2,0625 | 98,293 | 15,43199 | 1,39239409 | 16,8244 | 0,297526 | -0,725321 | 161,4296777 | 161,7272036 | 160,7043564 |
| 729 | 0 | 99,58319 | 14,89339 | 1,22529562 | 16,1187 | 0,362592 | -0,670872 | 161,6955209 | 162,0581126 | 161,0246492 |
| 729 | 1,0313 | 131,2255 | 66,3577 | 0,65517319 | 67,0129 | 0,169647 | -0,362128 | 304,6189282 | 304,7885754 | 304,2568006 |
| 729 | 2,0625 | 162,8678 | 86,32601 | 0,08505076 | 86,4111 | -0,023297 | -0,053383 | 384,5503139 | 384,5270167 | 384,4969305 |
| 730 | 0 | 165,7492 | 86,33465 | -0,16219135 | 86,1725 | -0,021792 | 0,054653 | 387,8188588 | 387,7970663 | 387,8735117 |
| 730 | 1,0313 | 98,02705 | 73,80026 | -0,33575614 | 73,4645 | -0,151357 | 0,393327 | 274,3641723 | 274,212815 | 274,7574995 |
| 730 | 2,0625 | 30,30492 | 29,76985 | -0,50932093 | 29,2605 | -0,280922 | 0,732001 | 97,91746417 | 97,63654212 | 98,64946565 |
| 731 | 0 | 34,44652 | 30,08794 | -0,80052451 | 29,2874 | -0,34543 | 0,771364 | 103,3553075 | 103,0098779 | 104,1266713 |
| 731 | 1,0313 | -137,4288 | -46,96383 | -1,00577871 | -47,9696 | -0,427416 | 1,148064 | -274,5966161 | -275,0240316 | -273,4485518 |
| 731 | 2,0625 | -309,304 | -155,6771 | -1,2110329 | -156,888 | -0,509401 | 1,524765 | -715,8715357 | -716,3809371 | -714,3467709 |
| 732 | 0 | -257,5639 | -155,8665 | 1,92140377 | -153,945 | -0,456046 | -4,426151 | -642,7232057 | -643,1792512 | -647,1493562 |
| 732 | 1,0313 | -111,0839 | -47,05534 | 0,61080782 | -46,4445 | -0,432751 | -3,485922 | -237,2981216 | -237,7308725 | -240,7840439 |
| 732 | 2,0625 | 35,3961 | 30,09431 | -0,69978813 | 29,3945 | -0,409456 | -2,545694 | 104,8039664 | 104,3945102 | 102,2582724 |
| 733 | 0 | 44,32539 | 29,27174 | 0,05262239 | 29,3244 | -0,307431 | -2,45291 | 116,2717342 | 115,9643036 | 113,8188242 |
| 733 | 1,0313 | 98,66121 | 72,49881 | -0,63144153 | 71,8674 | -0,188764 | -1,317183 | 271,9943068 | 271,8055424 | 270,6771236 |
| 733 | 2,0625 | 152,997 | 84,22987 | -1,31550545 | 82,9144 | -0,070098 | -0,181456 | 364,7248579 | 364,6547597 | 364,5434014 |
| 734 | 0 | 155,5176 | 84,30865 | -1,14606159 | 83,1626 | -0,070628 | -0,0064 | 368,4980848 | 368,4274565 | 368,4916845 |
| 734 | 1,0313 | 114,4021 | 64,15019 | -0,56599598 | 63,5842 | 0,137721 | 1,140661 | 275,8910856 | 276,0288069 | 277,0317467 |
| 734 | 2,0625 | 73,28654 | 12,49571 | 0,01406963 | 12,5098 | 0,346071 | 2,287722 | 120,2920649 | 120,6381358 | 122,5797873 |
| 735 | 0 | 70,75896 | 13,57836 | -0,41676595 | 13,1616 | 0,247683 | 2,38371 | 118,3098414 | 118,557524 | 120,6935511 |
| 735 | 1,0313 | -68,69806 | -57,39306 | 0,62448341 | -56,7686 | 0,560669 | 3,333217 | -202,8446413 | -202,2839726 | -199,5114247 |
| 735 | 2,0625 | -208,1551 | -128,9327 | 1,66573276 | -127,267 | 0,873655 | 4,282723 | -525,1354696 | -524,2618149 | -520,8527462 |
| 736 | 0 | -173,815 | -129,0108 | 1,66573276 | -127,345 | 0,873655 | -3,951303 | -480,6495672 | -479,7759125 | -484,6008703 |
| 736 | 1,0313 | -45,98756 | -57,35966 | 0,62448341 | -56,7352 | 0,560669 | -3,103133 | -173,2541895 | -172,6935208 | -176,3573223 |
| 736 | 2,0625 | 81,83988 | 13,62462 | -0,41676595 | 13,2079 | 0,247683 | -2,254963 | 132,8075604 | 133,055243 | 130,5525978 |
| 737 | 0 | 90,53321 | 12,54293 | 0,01406963 | 12,557 | 0,346071 | -2,115438 | 142,807166 | 143,1532369 | 140,6917278 |
| 737 | 1,0313 | 121,3426 | 64,18025 | -0,56599598 | 63,6143 | 0,137721 | -1,092506 | 284,9738508 | 285,1115721 | 283,881345 |
| 737 | 2,0625 | 152,1519 | 84,32156 | -1,14606159 | 83,1755 | -0,070628 | -0,069573 | 364,1485141 | 364,0778858 | 364,0789408 |
| 738 | 0 | 155,024 | 84,24348 | -1,31550545 | 82,928 | -0,070098 | 0,130698 | 367,3871698 | 367,3170716 | 367,5178681 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 738 | 1,0313 | 90,46364 | 72,49714 | -0,63144153 | 71,8657 | -0,188764 | 1,174298 | 261,3341229 | 261,1453586 | 262,5084205 |
| 738 | 2,0625 | 25,90326 | 29,25478 | 0,05262239 | 29,3074 | -0,307431 | 2,217897 | 92,28905447 | 91,9816239 | 94,50695144 |
| 739 | 0 | 22,82651 | 30,07737 | -0,69978813 | 29,3776 | -0,409456 | 2,271419 | 88,42962269 | 88,02016646 | 90,70104163 |
| 739 | 1,0313 | -134,6841 | -47,08483 | 0,61080782 | -46,474 | -0,432751 | 3,227257 | -268,0373053 | -268,4700561 | -264,8100482 |
| 739 | 2,0625 | -292,1946 | -155,9085 | 1,92140377 | -153,987 | -0,456046 | 4,183095 | -687,8272292 | -688,2832747 | -683,6441341 |
| 740 | 0 | -374,5672 | -142,5138 | -7,6157158 | -150,13 | -0,660123 | -11,83496 | -787,1963482 | -787,8564708 | -799,0313116 |
| 740 | 1,0313 | -139,8394 | -42,34805 | -3,25075725 | -45,5988 | -0,442445 | -8,808998 | -272,9888053 | -273,4312505 | -281,7978029 |
| 740 | 2,0625 | 94,88841 | 26,1562 | 1,11420131 | 27,2704 | -0,224768 | -5,783032 | 177,8957416 | 177,6709738 | 172,1127098 |
| 741 | 0 | 90,09808 | 28,71305 | 2,93097755 | 31,644 | -0,18021 | -5,749853 | 180,4155719 | 180,235362 | 174,6657192 |
| 741 | 1,0313 | 165,5697 | 69,32562 | 4,70657205 | 74,0322 | -0,037569 | -2,87289 | 363,3049422 | 363,2673737 | 360,4320522 |
| 741 | 2,0625 | 241,0412 | 78,44217 | 6,48216655 | 84,9243 | 0,105073 | 0,004073 | 483,202291 | 483,3073638 | 483,2063637 |
| 742 | 0 | 243,2428 | 78,61577 | 6,5885089 | 85,2043 | 0,100827 | -0,253466 | 486,6241444 | 486,7249717 | 486,3706788 |
| 742 | 1,0313 | 164,2957 | 59,49196 | 4,06176256 | 63,5537 | 0,220199 | 2,620915 | 340,6919102 | 340,9121094 | 343,3128249 |
| 742 | 2,0625 | 85,34872 | 8,872142 | 1,53501622 | 10,4072 | 0,339571 | 5,495295 | 131,7676544 | 132,1072256 | 137,2629494 |
| 743 | 0 | 94,42538 | 6,772475 | -0,0987915 | 6,67368 | 0,290382 | 5,398793 | 136,1003574 | 136,3907391 | 141,4991508 |
| 743 | 1,0313 | -153,7999 | -56,83577 | -4,91020387 | -61,746 | 0,339622 | 8,466634 | -323,4317549 | -323,0921332 | -314,9651213 |
| 743 | 2,0625 | -402,0251 | -121,0122 | -9,72161623 | -130,734 | 0,388862 | 11,53447 | -784,1002127 | -783,7113511 | -772,5657389 |
| 744 | 0 | -339,0541 | -121,1085 | -9,72161623 | -130,83 | 0,388862 | -11,5906 | -702,4305773 | -702,0417156 | -714,0211754 |
| 744 | 1,0313 | -109,835 | -56,81383 | -4,91020387 | -61,724 | 0,339622 | -8,45431 | -266,2335312 | -265,8939096 | -274,6878413 |
| 744 | 2,0625 | 119,3841 | 6,814045 | -0,0987915 | 6,71525 | 0,290382 | -5,318022 | 168,629887 | 168,9202687 | 163,311865 |
| 745 | 0 | 114,6396 | 8,916412 | 1,53501622 | 10,4514 | 0,339571 | -5,300525 | 169,9342998 | 170,273871 | 164,6337748 |
| 745 | 1,0313 | 177,4519 | 59,52239 | 4,06176256 | 63,5841 | 0,220199 | -2,36331 | 357,8557783 | 358,0759775 | 355,492468 |
| 745 | 2,0625 | 240,2642 | 78,63235 | 6,5885089 | 85,2209 | 0,100827 | 0,573904 | 482,7852352 | 482,8860624 | 483,3591397 |
| 746 | 0 | 242,1428 | 78,46117 | 6,48216655 | 84,9433 | 0,105073 | 0,450558 | 484,6722939 | 484,7773668 | 485,1228515 |
| 746 | 1,0313 | 150,6504 | 69,32756 | 4,70657205 | 74,0341 | -0,037569 | 3,201805 | 343,9137624 | 343,8761939 | 347,115567 |
| 746 | 2,0625 | 59,15799 | 28,69794 | 2,93097755 | 31,6289 | -0,18021 | 5,953052 | 140,1632093 | 139,9829994 | 146,1162609 |
| 747 | 0 | 68,03795 | 26,14384 | 1,11420131 | 27,258 | -0,224768 | 5,993362 | 142,9654243 | 142,7406565 | 148,9587858 |
| 747 | 1,0313 | -185,1649 | -42,38261 | -3,25075725 | -45,6334 | -0,442445 | 8,535915 | -331,9810352 | -332,4234803 | -323,4451205 |
| 747 | 2,0625 | -438,3677 | -142,5706 | -7,6157158 | -150,186 | -0,660123 | 11,07847 | -870,2504906 | -870,9106131 | -859,1720227 |
| 748 | 0 | 20,61094 | -147,4677 | 1,03832686 | -146,429 | -0,285603 | -18,88611 | -266,0646232 | -266,350226 | -284,9507286 |
| 748 | 1,0313 | 15,90598 | -42,36462 | 0,80270013 | -41,5619 | -0,212892 | -14,09483 | -62,44606248 | -62,65895431 | -76,54089706 |
| 748 | 2,0625 | 11,20103 | 31,07701 | 0,5670734 | 31,6441 | -0,140181 | -9,303564 | 77,84950227 | 77,70932133 | 68,54593847 |
| 749 | 0 | 11,20103 | 31,07701 | 0,5670734 | 31,6441 | -0,140181 | -9,303564 | 77,84950227 | 77,70932133 | 68,54593847 |
| 749 | 1,0313 | 6,496066 | 73,02264 | 0,33144655 | 73,3541 | -0,06747 | -4,512291 | 155,1530687 | 155,0855987 | 150,6407781 |
| 749 | 2,0625 | 1,791107 | 83,47224 | 0,0958197 | 83,5681 | 0,005241 | 0,278983 | 169,4645496 | 169,4697905 | 169,7435322 |

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|-----|--------|------------|------------|--------------|----------|------------|------------|---------------|---------------|---------------|
| 750 | 0 | 1,791,107 | 83,472,224 | 0,095,8197 | 83,5681 | 0,005,241 | 0,278,983 | 169,464,5496 | 169,469,7905 | 169,743,5322 |
| 750 | 1,0312 | -2,913,849 | 62,107,72 | -0,139,80699 | 61,9679 | 0,077,952 | 5,070,253 | 120,147,8218 | 120,225,7736 | 125,218,0744 |
| 750 | 2,0625 | -7,618,805 | 8,611,027 | -0,375,43369 | 8,23559 | 0,150,663 | 9,861,523 | 6,566,738,803 | 6,717,401,486 | 16,428,261,37 |
| 751 | 0 | -7,618,805 | 8,611,027 | -0,375,43369 | 8,23559 | 0,150,663 | 9,861,523 | 6,566,738,803 | 6,717,401,486 | 16,428,261,37 |
| 751 | 1,0312 | -12,323,76 | -61,946,05 | -0,611,06034 | -62,5571 | 0,223,374 | 14,652,79 | -141,135,1009 | -140,911,7274 | -126,482,3092 |
| 751 | 2,0625 | -17,028,72 | -133,0713 | -0,846,68699 | -133,918 | 0,296,084 | 19,444,06 | -289,973,2863 | -289,677,2019 | -270,529,2254 |
| 752 | 0 | 39,963,99 | -131,8787 | -0,846,68699 | -132,725 | 0,296,084 | -22,006,89 | -213,497,5624 | -213,201,478 | -235,504,449 |
| 752 | 1,0313 | 30,169,36 | -61,47854 | -0,611,06026 | -62,0896 | 0,223,374 | -16,173,28 | -84,959,03527 | -84,735,66174 | -101,132,3181 |
| 752 | 2,0625 | 20,374,73 | 8,254,794 | -0,375,43353 | 7,87936 | 0,150,663 | -10,339,68 | 42,245,864,06 | 42,396,526,69 | 31,906,185 |
| 753 | 0 | 20,374,73 | 8,254,794 | -0,375,43353 | 7,87936 | 0,150,663 | -10,339,68 | 42,245,864,06 | 42,396,526,69 | 31,906,185 |
| 753 | 1,0313 | 10,580,09 | 61,214,27 | -0,139,80668 | 61,0745 | 0,077,952 | -4,506,072 | 135,903,049 | 135,981,0007 | 131,396,9767 |
| 753 | 2,0625 | 0,785,452 | 82,677,71 | 0,095,82017 | 82,7735 | 0,005,241 | 1,327,534 | 166,568,1485 | 166,573,3893 | 167,895,6683 |
| 754 | 0 | 0,785,452 | 82,677,71 | 0,095,82017 | 82,7735 | 0,005,241 | 1,327,534 | 166,568,1485 | 166,573,3893 | 167,895,6683 |
| 754 | 1,0312 | -9,009,178 | 72,645,12 | 0,331,44686 | 72,9766 | -0,067,47 | 7,161,137 | 134,241,2058 | 134,173,7356 | 141,402,343 |
| 754 | 2,0625 | -18,803,81 | 31,116,53 | 0,567,07356 | 31,6836 | -0,140,181 | 12,994,74 | 38,922,262,69 | 38,782,0817 | 51,917,002,69 |
| 755 | 0 | -18,803,81 | 31,116,53 | 0,567,07356 | 31,6836 | -0,140,181 | 12,994,74 | 38,922,262,69 | 38,782,0817 | 51,917,002,69 |
| 755 | 1,0312 | -28,598,44 | -41,908,04 | 0,802,70021 | -41,1053 | -0,212,892 | 18,828,34 | -119,388,6486 | -119,601,5404 | -100,560,3068 |
| 755 | 2,0625 | -38,393,06 | -146,5941 | 1,038,32686 | -145,556 | -0,285,603 | 24,661,94 | -341,022,5126 | -341,308,1153 | -316,360,569 |
| 756 | 0 | -38,393,06 | -146,5941 | 1,038,32686 | -145,556 | -0,285,603 | 24,661,94 | -341,022,5126 | -341,308,1153 | -316,360,569 |
| 756 | 1,0313 | -126,60,78 | -73,779,26 | -38,177,0327 | -111,956 | -0,006,255 | -5,002,326 | -1187,146,272 | -1187,105,366 | -1194,509,425 |
| 756 | 2,0625 | 130,3911 | 47,656,5 | 30,136,4216 | 77,7929 | -0,053,416 | -2,641,498 | -388,502,6781 | -388,508,9329 | -393,505,0038 |
| 757 | 0 | 122,5969 | 45,632,4 | 24,148,4784 | 69,7809 | 0,010,042 | -3,066,47 | 325,094,2743 | 325,040,8584 | 322,452,7763 |
| 757 | 1,0313 | 197,055 | 110,565,7 | 44,701,1357 | 155,267 | -0,026,437 | -0,987,253 | 298,937,7415 | 298,947,7839 | 295,871,2712 |
| 757 | 2,0625 | 271,5132 | 129,610,8 | 65,253,7929 | 194,865 | -0,062,916 | 1,091,965 | 566,705,2179 | 566,678,7812 | 565,717,9653 |
| 758 | 0 | 276,7724 | 130,426 | 65,736,1183 | 196,162 | -0,059,687 | 0,739,197 | 742,696,239 | 742,633,3232 | 743,788,2042 |
| 758 | 1,0313 | 173,4729 | 96,290,11 | 43,153,688 | 139,444 | -0,018,581 | 2,873,917 | 752,128,2458 | 752,068,5585 | 752,867,4428 |
| 758 | 2,0625 | 70,17342 | 16,266,02 | 20,571,2577 | 36,8373 | 0,022,525 | 5,008,637 | 504,402,3562 | 504,383,7748 | 507,276,2734 |
| 759 | 0 | 86,678,07 | 19,635,47 | 27,154,9694 | 46,7904 | -0,030,494 | 4,862,84 | 164,900,0113 | 164,922,5359 | 169,908,6487 |
| 759 | 1,0313 | -217,7,44 | -96,241,15 | -43,865,0806 | -140,106 | 0,023,439 | 7,254,224 | 206,262,3683 | 206,231,8747 | 211,125,2078 |
| 759 | 2,0625 | -522,166 | -212,9452 | -114,885,13 | -327,83 | 0,077,372 | 9,645,609 | -563,279,5993 | -563,256,16 | -566,025,375 |
| 760 | 0 | -432,8227 | -213,0994 | -114,885,13 | -327,985 | 0,077,372 | -13,473,08 | -1334,476,439 | -1334,399,067 | -1324,830,83 |
| 760 | 1,0313 | -151,1038 | -96,21984 | -43,865,0806 | -140,085 | 0,023,439 | 9,595,493 | -1218,638,55 | -1218,561,178 | -1232,111,628 |
| 760 | 2,0625 | 130,6151 | 19,688,61 | 27,154,9694 | 46,8436 | -0,030,494 | -5,717,909 | -476,604,7736 | -476,581,3342 | -486,200,2669 |
| 761 | 0 | 113,8771 | 16,318,03 | 20,571,2577 | 36,8893 | 0,022,525 | -6,171,394 | 263,486,8267 | 263,456,333 | 257,768,918 |
| 761 | 1,0313 | 195,3323 | 96,325,93 | 43,153,688 | 139,48 | -0,018,581 | -2,524,371 | 221,818,7478 | 221,841,2724 | 215,647,3539 |
| 761 | 2,0625 | 195,3323 | 96,325,93 | 43,153,688 | 139,48 | -0,018,581 | -2,524,371 | 532,891,2917 | 532,872,7104 | 530,366,9209 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 761 | 2,0625 | 276,7876 | 130,4456 | 65,7361183 | 196,182 | -0,059687 | 1,122652 | 752,1873804 | 752,1276931 | 753,3100326 |
| 762 | 0 | 271,5574 | 129,6298 | 65,2537929 | 194,884 | -0,062916 | 0,4672 | 742,791706 | 742,7287903 | 743,2589063 |
| 762 | 1,0313 | 174,6375 | 110,5691 | 44,7011357 | 155,27 | -0,026437 | 4,447099 | 537,5690638 | 537,5426272 | 542,0161633 |
| 762 | 2,0625 | 77,71753 | 45,62011 | 24,1484784 | 69,7686 | 0,010042 | 8,426999 | 240,5699664 | 240,5800089 | 248,9969651 |
| 763 | 0 | 85,95059 | 47,64354 | 30,1364216 | 77,78 | -0,053416 | 8,122327 | 267,2956842 | 267,2422683 | 275,4180111 |
| 763 | 1,0313 | -196,4593 | -73,80431 | -38,1770327 | -111,981 | -0,006255 | 13,08498 | -479,3660837 | -479,3660837 | -466,2748533 |
| 763 | 2,0625 | -478,8693 | -237,7755 | -106,490487 | -344,266 | 0,040906 | 18,04763 | -1311,061994 | -1311,021087 | -1293,014359 |
| 764 | 0 | -172,5378 | -211,72 | -20,8626664 | -232,583 | 0,992575 | -2,889855 | -689,46457 | -688,4719949 | -692,3544245 |
| 764 | 1,0313 | -58,20053 | -64,15168 | -10,393846 | -74,5455 | 0,440869 | -2,152769 | -224,7517419 | -224,3108734 | -226,904511 |
| 764 | 2,0625 | 56,13675 | 40,89336 | 0,07497429 | 40,9683 | -0,110838 | -1,415684 | 154,9144446 | 154,8036066 | 153,4987609 |
| 765 | 0 | 65,25563 | 42,28891 | 4,27522611 | 46,5641 | 0,071719 | -1,460994 | 177,9606014 | 178,0323201 | 176,4996078 |
| 765 | 1,0313 | 101,2121 | 103,4391 | 9,30648276 | 112,746 | -0,146344 | -0,558999 | 357,0668631 | 356,920519 | 356,5078644 |
| 765 | 2,0625 | 137,1686 | 118,701 | 14,3377394 | 133,039 | -0,364407 | 0,342996 | 444,3966696 | 444,0322626 | 444,7396658 |
| 766 | 0 | 134,8443 | 118,9936 | 14,3453733 | 133,339 | -0,342865 | 0,341167 | 441,9756116 | 441,6327466 | 442,3167784 |
| 766 | 1,0313 | 86,1467 | 89,49697 | 10,3829252 | 99,8799 | -0,312112 | 1,177586 | 311,7505045 | 311,4383926 | 312,9280909 |
| 766 | 2,0625 | 37,4491 | 14,11208 | 6,42047706 | 20,5326 | -0,281359 | 2,014006 | 89,74894206 | 89,46758338 | 91,76294821 |
| 767 | 0 | 22,99252 | 12,91304 | 2,28762266 | 15,2007 | -0,42201 | 1,899418 | 60,29159026 | 59,86958063 | 62,19100865 |
| 767 | 1,0313 | -103,9458 | -84,82784 | -6,87330732 | -91,7011 | -0,053161 | 2,515956 | -318,5318534 | -318,5850142 | -316,015897 |
| 767 | 2,0625 | -230,8841 | -183,3962 | -16,0342373 | -199,43 | 0,315688 | 3,132494 | -699,0101693 | -698,6944813 | -695,877675 |
| 768 | 0 | -144,3221 | -183,5208 | -16,0342373 | -199,556 | 0,315688 | -4,635644 | -586,7288983 | -586,4132104 | -591,3645428 |
| 768 | 1,0313 | -37,48711 | -84,79142 | -6,87330732 | -91,6647 | -0,053161 | -3,421497 | -232,0626986 | -232,1158595 | -235,4841952 |
| 768 | 2,0625 | 69,34787 | 12,96692 | 2,28762266 | 15,2545 | -0,42201 | -2,207349 | 120,6613246 | 120,239315 | 118,4539759 |
| 769 | 0 | 78,37941 | 14,16515 | 6,42047706 | 20,5856 | -0,281359 | -2,256407 | 143,064487 | 142,7831284 | 140,8080805 |
| 769 | 1,0313 | 106,8131 | 89,53139 | 10,3829252 | 99,9143 | -0,312112 | -0,816373 | 338,6857307 | 338,3736189 | 337,8693573 |
| 769 | 2,0625 | 135,2469 | 119,0094 | 14,3453733 | 133,355 | -0,342865 | 0,62366 | 442,5305192 | 442,1876542 | 443,1541789 |
| 770 | 0 | 131,898 | 118,718 | 14,3377394 | 133,056 | -0,364407 | 0,724694 | 437,5787746 | 437,2143676 | 438,3034689 |
| 770 | 1,0313 | 76,11994 | 103,4427 | 9,30648276 | 112,749 | -0,146344 | 1,988316 | 324,4542119 | 324,3078677 | 326,4425281 |
| 770 | 2,0625 | 20,34192 | 42,27912 | 4,27522611 | 46,5543 | 0,071719 | 3,251938 | 119,5531939 | 119,6249125 | 122,8051321 |
| 774 | 0 | 5,473255 | 40,88437 | 0,07497429 | 40,9593 | -0,110838 | 3,236322 | 89,03392545 | 88,92308742 | 92,27024762 |
| 774 | 1,0313 | -126,4695 | -64,17424 | -10,393846 | -74,5681 | 0,440869 | 3,819019 | -313,5465938 | -313,1057253 | -309,7275744 |
| 774 | 2,0625 | -258,4124 | -211,7562 | -20,8626664 | -232,619 | 0,992575 | 4,401717 | -801,1737546 | -800,1811795 | -796,7720381 |
| 775 | 0 | -210,2982 | -169,105 | -12,5184697 | -181,623 | -0,887121 | 1,702086 | -636,634542 | -637,5216631 | -634,9324555 |
| 775 | 1,0313 | -80,13383 | -76,67297 | -3,62585025 | -80,2988 | -0,601661 | 1,24655 | -264,7716163 | -265,3732774 | -263,5250666 |
| 775 | 2,0625 | 50,03054 | 14,78795 | 5,26676922 | 20,0547 | -0,316201 | 0,791014 | 105,1491329 | 104,8329318 | 105,9401471 |
| 843 | 0 | 59,10975 | 16,66219 | 8,58169326 | 25,2439 | -0,278061 | 0,84122 | 127,3304394 | 127,0523783 | 128,171659 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 843 | 1,0313 | 98,72093 | 88,85558 | 11,5137414 | 100,369 | -0,114996 | 0,416039 | 329,0758577 | 328,9608612 | 329,4918968 |
| 843 | 2,0625 | 138,3321 | 115,1608 | 14,4457895 | 129,607 | 0,048068 | -0,009141 | 439,0448207 | 439,0928889 | 439,0356793 |
| 910 | 0 | 143,6504 | 115,2036 | 14,7181781 | 129,922 | 0,017996 | -0,014472 | 446,5889946 | 446,6069901 | 446,5745227 |
| 910 | 1,0313 | 95,44987 | 99,09333 | 8,35928617 | 107,453 | 0,226206 | -0,447054 | 338,9900715 | 339,2162771 | 338,543018 |
| 910 | 2,0625 | 47,24935 | 37,09487 | 2,00039428 | 39,0953 | 0,434416 | -0,879635 | 139,6146932 | 140,0491088 | 138,735058 |
| 918 | 0 | 47,89363 | 35,2561 | -1,03292505 | 34,2232 | 0,343264 | -0,900872 | 130,7080675 | 131,0513315 | 129,8071955 |
| 918 | 1,0313 | -86,45001 | -67,73184 | -13,2972221 | -81,0291 | 0,446885 | -1,371398 | -274,4431394 | -273,9962542 | -275,8145375 |
| 918 | 2,0625 | -220,7937 | -213,2431 | -25,5615191 | -238,805 | 0,550506 | -1,841924 | -764,6409878 | -764,0904814 | -766,4829121 |
| 919 | 0 | -136,5795 | -169,1219 | -12,5184697 | -181,64 | -0,887121 | -1,714716 | -540,834129 | -541,7212501 | -542,5488445 |
| 919 | 1,0313 | -21,59579 | -76,67447 | -3,62585025 | -80,3003 | -0,601661 | -1,250344 | -188,6751556 | -189,2768167 | -189,9254993 |
| 919 | 2,0625 | 93,38791 | 14,80191 | 5,26676922 | 20,0687 | -0,316201 | -0,785972 | 161,5416413 | 161,2254402 | 160,7556696 |
| 920 | 0 | 93,8298 | 16,67699 | 8,58169326 | 25,2587 | -0,278061 | -0,739007 | 172,4961134 | 172,2180523 | 171,7571061 |
| 920 | 1,0313 | 117,6198 | 88,87147 | 11,5137414 | 100,385 | -0,114996 | -0,338516 | 353,6761177 | 353,5611212 | 353,3376018 |
| 920 | 2,0625 | 141,4097 | 115,1777 | 14,4457895 | 129,624 | 0,048068 | 0,061976 | 443,0796666 | 443,1277348 | 443,1416423 |
| 921 | 0 | 138,1094 | 115,2169 | 14,7181781 | 129,935 | 0,017996 | 0,143796 | 439,4123112 | 439,4303067 | 439,5561072 |
| 921 | 1,0313 | 74,09061 | 99,09931 | 8,35928617 | 107,459 | 0,226206 | 0,491173 | 311,2349946 | 311,4612001 | 311,7261675 |
| 921 | 2,0625 | 10,07187 | 37,0935 | 2,00039428 | 39,0939 | 0,434416 | 0,83855 | 91,28122275 | 91,71563833 | 92,1197726 |
| 922 | 0 | 2,798226 | 35,25175 | -1,03292505 | 34,2188 | 0,343264 | 0,792544 | 72,0753452 | 72,41860921 | 72,86788926 |
| 922 | 1,0313 | -147,4313 | -67,74513 | -13,2972221 | -81,0423 | 0,446885 | 1,157523 | -353,7454114 | -353,2985262 | -352,5878889 |
| 922 | 2,0625 | -297,6609 | -213,2653 | -25,5615191 | -238,827 | 0,550506 | 1,522501 | -864,6128095 | -864,0623031 | -863,0903085 |
| 923 | 0 | -320,7534 | -228,0043 | -94,439755 | -322,444 | 1,107141 | -0,859966 | -1061,86741 | -1060,760269 | -1062,727376 |
| 923 | 1,0313 | -131,895 | -75,32985 | -36,2010419 | -111,531 | 0,706326 | -0,679527 | -394,525274 | -393,8189478 | -395,2048011 |
| 923 | 2,0625 | 56,96337 | 34,82125 | 22,0376713 | 56,8589 | 0,305512 | -0,499088 | 187,7702202 | 188,0757317 | 187,2711323 |
| 924 | 0 | 48,17565 | 36,12552 | 15,7832263 | 51,9087 | 0,475002 | -0,491438 | 166,445835 | 166,9208374 | 165,9543975 |
| 924 | 1,0313 | 116,9646 | 101,5256 | 34,1720789 | 135,698 | 0,157993 | -0,272416 | 423,4492434 | 423,6072362 | 423,1768275 |
| 924 | 2,0625 | 185,7535 | 121,0374 | 52,5609315 | 173,598 | -0,159017 | -0,053394 | 588,6761965 | 588,5171798 | 588,6228022 |
| 925 | 0 | 179,3662 | 120,9453 | 52,0941389 | 173,039 | -0,126637 | -0,051528 | 579,2548454 | 579,1282085 | 579,2033171 |
| 925 | 1,0313 | 134,3337 | 94,48787 | 37,060288 | 131,548 | -0,30262 | 0,180858 | 437,7301666 | 437,4275469 | 437,9110248 |
| 925 | 2,0625 | 89,30132 | 22,14222 | 22,0264371 | 44,1687 | -0,478603 | 0,413245 | 204,4290326 | 203,95043 | 204,8422772 |
| 926 | 0 | 86,4065 | 20,83701 | 27,2684711 | 48,1055 | -0,590613 | 0,402308 | 208,5394121 | 207,9487987 | 208,9417204 |
| 926 | 1,0313 | -82,23983 | -74,7496 | -26,9238593 | -101,673 | -0,683364 | 0,624448 | -310,2586884 | -310,9420523 | -309,6342409 |
| 926 | 2,0625 | -250,8862 | -171,1636 | -81,1161896 | -252,28 | -0,776114 | 0,846587 | -830,7116613 | -831,4877756 | -829,8650745 |
| 927 | 0 | -196,3622 | -171,2873 | -81,1161896 | -252,404 | -0,776114 | -0,700799 | -760,0779329 | -760,8540472 | -760,7787317 |
| 927 | 1,0313 | -37,10348 | -74,71224 | -26,9238593 | -101,636 | -0,683364 | -0,547156 | -251,506735 | -252,1900989 | -252,0538908 |
| 927 | 2,0625 | 122,1553 | 20,89176 | 27,2684711 | 48,1602 | -0,590613 | -0,393513 | 255,1222865 | 254,531673 | 254,7287736 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 928 | 0 | 114,776 | 22,1969 | 22,0264371 | 44,2233 | -0,478603 | -0,386037 | 237,6554924 | 237,1768898 | 237,2694551 |
| 928 | 1,0313 | 149,2224 | 94,52291 | 37,060288 | 131,583 | -0,30262 | -0,212196 | 457,1554825 | 456,8528627 | 456,9432866 |
| 928 | 2,0625 | 183,6687 | 120,9607 | 52,0941389 | 173,055 | -0,126637 | -0,038354 | 584,8790173 | 584,7523804 | 584,8406628 |
| 929 | 0 | 179,3713 | 121,0539 | 52,5609315 | 173,615 | -0,159017 | -0,032536 | 580,41233 | 580,2533133 | 580,3797937 |
| 929 | 1,0313 | 99,97542 | 101,5272 | 34,1720789 | 135,699 | 0,157993 | 0,162549 | 401,3666774 | 401,5246702 | 401,5292263 |
| 929 | 2,0625 | 20,57958 | 36,11233 | 15,7832263 | 51,8956 | 0,475002 | 0,357634 | 130,5445695 | 131,0195719 | 130,9022037 |
| 930 | 0 | 19,80792 | 34,80808 | 22,0376713 | 56,8458 | 0,305512 | 0,337664 | 139,441795 | 139,7473065 | 139,779459 |
| 930 | 1,0313 | -178,7438 | -75,35679 | -36,2010419 | -111,558 | 0,706326 | 0,540192 | -455,4825585 | -454,7762322 | -454,9423667 |
| 930 | 2,0625 | -377,2955 | -228,045 | -94,439755 | -322,485 | 1,107141 | 0,74272 | -1135,453553 | -1134,346412 | -1134,710834 |
| 931 | 0 | -291,4774 | -233,7568 | -29,0842682 | -262,841 | 1,352628 | -0,404655 | -904,6027971 | -903,2501687 | -905,0074521 |
| 931 | 1,0313 | -128,7271 | -77,42697 | -14,1888201 | -91,6158 | 0,822456 | -0,316869 | -350,5768236 | -349,7543672 | -350,8936924 |
| 931 | 2,0625 | 34,02322 | 36,37953 | 0,70662802 | 37,0862 | 0,292284 | -0,229083 | 118,4025084 | 118,6947927 | 118,1734257 |
| 932 | 0 | 32,85624 | 37,71956 | 2,258023 | 39,9776 | 0,500428 | -0,233747 | 122,6682794 | 123,1687071 | 122,4345328 |
| 932 | 1,0313 | 100,6721 | 105,1479 | 9,64704794 | 114,795 | 0,10515 | -0,127873 | 360,4636079 | 360,568758 | 360,3357349 |
| 932 | 2,0625 | 168,4879 | 126,688 | 17,0360729 | 143,724 | -0,290127 | -0,021999 | 506,4824811 | 506,1923536 | 506,4604818 |
| 933 | 0 | 161,5821 | 126,404 | 16,8068255 | 143,211 | -0,25 | -0,024142 | 496,4783654 | 496,2283655 | 496,4542235 |
| 933 | 1,0313 | 127,5852 | 99,50097 | 12,8801079 | 112,361 | -0,412585 | 0,089026 | 390,6229304 | 390,2103451 | 390,7119566 |
| 933 | 2,0625 | 93,58832 | 26,70972 | 8,95339027 | 35,6631 | -0,575171 | 0,202194 | 192,9910402 | 192,4158694 | 193,1932344 |
| 934 | 0 | 82,8943 | 25,20776 | 7,11302074 | 32,3208 | -0,711431 | 0,196404 | 172,404155 | 171,6927245 | 172,6005592 |
| 934 | 1,0313 | -50,4806 | -72,39821 | -4,30728788 | -76,7055 | -0,751249 | 0,304611 | -219,0357826 | -219,7870311 | -218,7311716 |
| 934 | 2,0625 | -183,8555 | -170,8316 | -15,7275965 | -186,559 | -0,791066 | 0,412818 | -612,1305924 | -612,9216589 | -611,7177747 |
| 935 | 0 | -143,5162 | -170,9695 | -15,7275965 | -186,697 | -0,791066 | -0,403412 | -559,9652892 | -560,7563557 | -560,3687013 |
| 935 | 1,0313 | -15,86682 | -72,36349 | -4,30728788 | -76,6708 | -0,751249 | -0,305552 | -173,9684243 | -174,7196728 | -174,2739762 |
| 935 | 2,0625 | 111,7826 | 25,27143 | 7,11302074 | 32,3845 | -0,711431 | -0,207692 | 210,0862642 | 209,3748336 | 209,8785726 |
| 936 | 0 | 111,6431 | 26,77253 | 8,95339027 | 35,7259 | -0,575171 | -0,21932 | 216,5878572 | 216,0126865 | 216,3685375 |
| 936 | 1,0313 | 138,9232 | 99,54491 | 12,8801079 | 112,425 | -0,412585 | -0,110385 | 405,4501727 | 405,0375873 | 405,3397874 |
| 936 | 2,0625 | 166,2033 | 126,4291 | 16,8068255 | 143,236 | -0,25 | -0,001451 | 502,5360328 | 502,2860329 | 502,534582 |
| 937 | 0 | 161,5972 | 126,713 | 17,0360729 | 143,749 | -0,290127 | -0,00988 | 497,5743928 | 497,2842653 | 497,5645124 |
| 937 | 1,0313 | 87,23269 | 105,1534 | 9,64704794 | 114,8 | 0,10515 | 0,105187 | 343,0034686 | 343,1086188 | 343,1086561 |
| 937 | 2,0625 | 12,86823 | 37,70567 | 2,258023 | 39,9637 | 0,500428 | 0,220255 | 96,65608922 | 97,15651691 | 96,87634458 |
| 938 | 0 | 3,96766 | 36,36546 | 0,70662802 | 37,0721 | 0,292284 | 0,21474 | 79,30213947 | 79,59442378 | 79,51687974 |
| 938 | 1,0313 | -164,643 | -77,46042 | -14,1888201 | -91,6492 | 0,822456 | 0,325813 | -397,3344043 | -396,5119479 | -397,0085911 |
| 938 | 2,0625 | -333,2537 | -233,8096 | -29,0842682 | -262,894 | 1,352628 | 0,436886 | -959,0175896 | -957,6649611 | -958,5807035 |
| 939 | 0 | -294,7935 | -225,7024 | -2,24667263 | -227,949 | 1,391352 | -0,24353 | -839,1296752 | -837,7383227 | -839,373205 |
| 939 | 1,0313 | -122,5819 | -68,89768 | -2,55396323 | -71,4516 | 0,775961 | -0,187341 | -302,2597423 | -301,4837812 | -302,4470832 |

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|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 939 | 2,0625 | 49,62971 | 45,38372 | -2,86125382 | 42,5225 | 0,16057 | -0,131152 | 149,563549 | 149,7241187 | 149,4323971 |
| 940 | 0 | 43,32421 | 45,21357 | -1,46302867 | 43,7505 | 0,454796 | -0,139859 | 143,8225617 | 144,2773581 | 143,6827028 |
| 940 | 1,0313 | 112,4605 | 111,9591 | -0,88027265 | 111,079 | 0,050195 | -0,072617 | 368,3562559 | 368,4064506 | 368,2836384 |
| 940 | 2,0625 | 181,5968 | 132,8163 | -0,29751663 | 132,519 | -0,354407 | -0,005376 | 501,1134948 | 500,7590879 | 501,1081187 |
| 941 | 0 | 173,9139 | 131,9889 | -0,2537275 | 131,735 | -0,308054 | -0,018651 | 489,5584088 | 489,2503548 | 489,5397578 |
| 941 | 1,0313 | 138,5099 | 103,8349 | 1,29614337 | 105,131 | -0,45047 | 0,0506 | 390,3250351 | 389,8745653 | 390,3756356 |
| 941 | 2,0625 | 103,1059 | 29,79276 | 2,84601423 | 32,6388 | -0,592886 | 0,119852 | 199,3152061 | 198,7223205 | 199,4350581 |
| 942 | 0 | 96,17619 | 28,96873 | 1,57615052 | 30,5449 | -0,799925 | 0,104985 | 186,118811 | 185,3188857 | 186,2237958 |
| 942 | 1,0313 | -47,07767 | -71,17556 | 3,84968821 | -67,3259 | -0,741856 | 0,169574 | -195,8527236 | -196,5945797 | -195,6831497 |
| 942 | 2,0625 | -190,3315 | -172,1473 | 6,1232259 | -166,024 | -0,683787 | 0,234163 | -579,4791303 | -580,1629173 | -579,2449673 |
| 943 | 0 | -157,3339 | -172,2839 | 6,1232259 | -166,161 | -0,683787 | -0,271903 | -536,8552894 | -537,5390763 | -537,1271926 |
| 943 | 1,0313 | -18,2992 | -71,13981 | 3,84968821 | -67,2901 | -0,741856 | -0,197327 | -158,3692033 | -159,1110595 | -158,5665305 |
| 943 | 2,0625 | 120,7355 | 29,03316 | 1,57615052 | 30,6093 | -0,799925 | -0,122751 | 218,1747063 | 217,374781 | 218,0519551 |
| 944 | 0 | 117,3688 | 29,85672 | 2,84601423 | 32,7027 | -0,592886 | -0,140777 | 217,9849161 | 217,3920305 | 217,8441393 |
| 944 | 1,0313 | 147,8089 | 103,8812 | 1,29614337 | 105,177 | -0,45047 | -0,061452 | 402,5062502 | 402,0557804 | 402,4447978 |
| 944 | 2,0625 | 178,249 | 132,0175 | -0,2537275 | 131,764 | -0,308054 | 0,017872 | 495,2511291 | 494,943075 | 495,2690011 |
| 945 | 0 | 174,7775 | 132,8439 | -0,29751663 | 132,546 | -0,354407 | 0,00193 | 492,3034225 | 491,9490156 | 492,3053522 |
| 945 | 1,0313 | 100,8707 | 111,968 | -0,88027265 | 111,088 | 0,050195 | 0,078689 | 353,3073096 | 353,3575044 | 353,3858985 |
| 945 | 2,0625 | 26,96391 | 45,20386 | -1,46302867 | 43,7408 | 0,454796 | 0,155248 | 122,5347415 | 122,9899538 | 122,6899897 |
| 946 | 0 | 23,35085 | 45,37256 | -2,86125382 | 42,5113 | 0,16057 | 0,146473 | 115,3787276 | 115,5392973 | 115,5252008 |
| 946 | 1,0313 | -152,8357 | -68,92824 | -2,55396323 | -71,4822 | 0,775961 | 0,211265 | -341,650868 | -340,8749068 | -341,4396031 |
| 946 | 2,0625 | -329,0223 | -225,7524 | -2,24667263 | -227,999 | 1,391352 | 0,276057 | -883,7271051 | -882,3357526 | -883,4510485 |
| 947 | 0 | -233,0603 | -180,6333 | 0,12327678 | -180,51 | 0,708047 | -0,185415 | -663,9983599 | -663,2903132 | -664,1837752 |
| 947 | 1,0313 | -83,65221 | -39,94897 | -0,39081216 | -40,3398 | 0,436713 | -0,132207 | -189,4274371 | -188,9907242 | -189,5596444 |
| 947 | 2,0625 | 65,7559 | 58,21199 | -0,90490109 | 57,3071 | 0,165379 | -0,078999 | 200,0968441 | 200,2622232 | 200,0178448 |
| 948 | 0 | 57,45656 | 57,29127 | -0,68375087 | 56,6075 | 0,525825 | -0,094451 | 187,9085725 | 188,4343975 | 187,8141216 |
| 948 | 1,0313 | 115,6498 | 115,5833 | -0,69742892 | 114,886 | 0,282288 | -0,040873 | 380,1164484 | 380,3987362 | 380,0755751 |
| 948 | 2,0625 | 173,843 | 127,9871 | -0,71110697 | 127,276 | 0,038751 | 0,012704 | 480,547869 | 480,5866198 | 480,5605734 |
| 949 | 0 | 164,3984 | 125,8765 | -0,58032924 | 125,296 | 0,087086 | -0,012347 | 464,3103278 | 464,397414 | 464,2979804 |
| 949 | 1,0313 | 130,4172 | 98,91992 | 0,16119607 | 99,0811 | -0,149082 | 0,035408 | 367,7045339 | 367,5554522 | 367,7399417 |
| 949 | 2,0625 | 96,43586 | 26,07511 | 0,90272138 | 26,9778 | -0,38525 | 0,083163 | 179,3222847 | 178,9370351 | 179,4054477 |
| 950 | 0 | 88,48116 | 23,93541 | 0,88846104 | 24,8239 | -0,650434 | 0,059311 | 164,6732594 | 164,0228259 | 164,7325704 |
| 950 | 1,0313 | -41,60444 | -67,22233 | 2,03769526 | -65,1846 | -0,874819 | 0,099373 | -184,4550335 | -185,3298527 | -184,3556609 |
| 950 | 2,0625 | -171,69 | -159,2075 | 3,18692948 | -156,021 | -1,099205 | 0,139434 | -535,2381987 | -536,3374035 | -535,0987644 |
| 951 | 0 | -146,3735 | -159,334 | 3,18692948 | -156,147 | -1,099205 | -0,172456 | -502,5797173 | -503,678922 | -502,7521737 |

| | | | | | | | | | | |
|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 951 | 1,0313 | -18,16784 | -67,17725 | 2,03769526 | -65,1396 | -0,874819 | -0,123955 | -153,8972936 | -154,7721128 | -154,0212491 |
| 951 | 2,0625 | 110,0378 | 24,00842 | 0,88846104 | 24,8969 | -0,650434 | -0,075455 | 192,8429536 | 192,19252 | 192,767499 |
| 952 | 0 | 108,8408 | 26,1467 | 0,90272138 | 27,0494 | -0,38525 | -0,099879 | 195,5918699 | 195,2066204 | 195,4919912 |
| 952 | 1,0313 | 139,5005 | 98,97335 | 0,16119607 | 99,1345 | -0,149082 | -0,044375 | 379,6197637 | 379,470682 | 379,5753891 |
| 952 | 2,0625 | 170,1602 | 125,9118 | -0,58032924 | 125,331 | 0,087086 | 0,01113 | 471,8712022 | 471,9582883 | 471,8823318 |
| 953 | 0 | 169,9214 | 128,02 | -0,71110697 | 127,309 | 0,038751 | -0,015331 | 475,5156431 | 475,5543939 | 475,5003117 |
| 953 | 1,0313 | 107,1844 | 115,5982 | -0,69742892 | 114,901 | 0,282288 | 0,044821 | 369,1411893 | 369,4234772 | 369,1860104 |
| 953 | 2,0625 | 44,44748 | 57,28803 | -0,68375087 | 56,6043 | 0,525825 | 0,104974 | 170,9902802 | 171,5161051 | 171,0952539 |
| 954 | 0 | 44,04477 | 58,20641 | -0,90490109 | 57,3015 | 0,165379 | 0,087491 | 171,8612274 | 172,0266065 | 171,9487186 |
| 954 | 1,0313 | -110,8417 | -39,97246 | -0,39081216 | -40,3633 | 0,436713 | 0,14682 | -224,8207579 | -224,3840451 | -224,6739384 |
| 954 | 2,0625 | -265,7282 | -180,6747 | 0,12327678 | -180,551 | 0,708047 | 0,206148 | -706,5493849 | -705,8413382 | -706,3432369 |
| 955 | 0 | -133,6623 | -113,7018 | 1,17364943 | -112,528 | -0,687796 | -0,060261 | -398,817388 | -399,5051841 | -398,8776488 |
| 955 | 1,0313 | -25,31351 | 2,934834 | 0,49580791 | 3,43064 | -0,14929 | -0,024099 | -26,04628625 | -26,19557648 | -26,07038484 |
| 955 | 2,0625 | 83,03531 | 77,04817 | -0,18203361 | 79,2834 | 0,781626 | -0,006463 | 261,6781739 | 262,0673896 | 261,6902376 |
| 956 | 0 | 76,01486 | 79,26583 | 0,01760129 | 79,2834 | 0,875419 | 0,011098 | 257,3861857 | 258,1678113 | 257,3797225 |
| 956 | 1,0313 | 112,1643 | 123,8824 | -0,20625082 | 123,676 | 0,969212 | 0,02866 | 393,1658502 | 394,0412692 | 393,1769485 |
| 956 | 2,0625 | 148,3137 | 122,6107 | -0,43010293 | 122,181 | 0,969212 | 0,02866 | 437,1690595 | 438,1382719 | 437,1977192 |
| 957 | 0 | 137,2936 | 119,6701 | -0,32315745 | 119,347 | 1,00681 | 0,001481 | 417,1755528 | 418,1823626 | 417,1770338 |
| 957 | 1,0313 | 102,7547 | 88,6182 | -0,1278525 | 88,4903 | 0,534974 | 0,010281 | 310,5618654 | 311,0968394 | 310,5721468 |
| 957 | 2,0625 | 68,21588 | 11,67809 | 0,06745246 | 11,7455 | 0,063138 | 0,019082 | 112,1717227 | 112,2348609 | 112,1908044 |
| 958 | 0 | 55,61785 | 4,580212 | 0,04242412 | 4,62264 | -0,254957 | -0,002423 | 81,29352385 | 81,29352385 | 81,54605782 |
| 958 | 1,0313 | -50,13334 | -75,54662 | 0,61069294 | -74,9359 | -1,181408 | 0,006108 | -215,0451952 | -216,2266037 | -215,0390869 |
| 958 | 2,0625 | -155,8845 | -156,5009 | 1,17896177 | -155,322 | -2,10786 | 0,01464 | -513,2937434 | -515,4016034 | -513,2791039 |
| 959 | 0 | -145,1056 | -156,5968 | 1,17896177 | -155,418 | -2,10786 | -0,031898 | -499,4728742 | -501,5807342 | -499,5047724 |
| 959 | 1,0313 | -37,38752 | -75,47603 | 0,61069294 | -74,8653 | -1,181408 | -0,019094 | -198,3344607 | -199,5158692 | -198,3535544 |
| 959 | 2,0625 | 70,33054 | 4,673616 | 0,04242412 | 4,71604 | -0,254957 | -0,006289 | 100,8617763 | 100,6068194 | 100,8554872 |
| 960 | 0 | 73,13093 | 11,76958 | 0,06745246 | 11,837 | 0,063138 | -0,028063 | 118,744275 | 118,8074132 | 118,7162118 |
| 960 | 1,0313 | 109,4789 | 88,68642 | -0,1278525 | 88,5586 | 0,534974 | -0,015971 | 319,4397496 | 319,9747236 | 319,4237782 |
| 960 | 2,0625 | 145,8269 | 119,715 | -0,32315745 | 119,392 | 1,00681 | -0,00388 | 428,358769 | 429,3655787 | 428,3548892 |
| 961 | 0 | 147,2337 | 122,6527 | -0,43010293 | 122,223 | 0,969212 | -0,032105 | 435,8490084 | 436,8182208 | 435,8169031 |
| 961 | 1,0313 | 110,9393 | 123,9029 | -0,20625082 | 123,697 | 0,781626 | 0,008765 | 391,614344 | 392,489763 | 391,6026741 |
| 961 | 2,0625 | 74,64494 | 79,2648 | 0,01760129 | 79,2824 | 0,875419 | -0,01167 | 255,6032245 | 256,38485 | 255,6119899 |
| 962 | 0 | 73,39626 | 77,04444 | -0,18203361 | 76,8624 | 0,389216 | -0,011571 | 249,13995 | 249,5291657 | 249,128379 |
| 962 | 1,0313 | -39,44953 | 2,913608 | 0,49580791 | 3,40942 | -0,14929 | 0,02747 | -44,46555179 | -44,61484202 | -44,43808138 |
| 962 | 2,0625 | -152,2953 | -113,7405 | 1,17364943 | -112,567 | -0,687796 | 0,066512 | -423,1176951 | -423,8054913 | -423,0511833 |

| | | | | | | | | | | |
|-----|--------|-----------|-----------|-------------|----------|-----------|-----------|--------------|--------------|--------------|
| 963 | 0 | -54,58193 | -115,0873 | -0,33022738 | -115,418 | -2,224599 | 0,403767 | -301,7915137 | -304,0161132 | -301,3877466 |
| 963 | 1,0313 | 31,56446 | 30,07354 | 0,2622932 | 30,3358 | -0,711357 | 0,26314 | 101,7054575 | 100,9941004 | 101,9685974 |
| 963 | 2,0625 | 117,7108 | 132,711 | 0,85481379 | 133,566 | 0,801885 | 0,122513 | 420,1557871 | 420,9576723 | 420,2782998 |
| 964 | 0 | 119,2605 | 131,9941 | 0,81596787 | 132,81 | 0,89125 | 0,173779 | 420,6587438 | 421,5499938 | 420,8325224 |
| 964 | 1,0313 | 131,7928 | 173,8942 | 0,82421314 | 174,718 | 1,443673 | 0,070161 | 520,7673951 | 522,2110682 | 520,8375561 |
| 964 | 2,0625 | 144,3251 | 169,906 | 0,83245841 | 170,739 | 1,996096 | -0,033457 | 529,099591 | 531,0956873 | 529,0661344 |
| 965 | 0 | 147,7221 | 175,055 | 0,90489225 | 175,96 | 1,947888 | 0,020631 | 543,9584379 | 545,906326 | 543,9790685 |
| 965 | 1,0313 | 88,52422 | 111,7891 | 0,4990984 | 112,288 | 1,218543 | -0,068997 | 339,6579417 | 340,8764851 | 339,5889444 |
| 965 | 2,0625 | 29,32633 | 2,635076 | 0,09330455 | 2,72838 | 0,489199 | -0,158625 | 43,58099031 | 44,07018881 | 43,42236498 |
| 966 | 0 | 31,24432 | 10,51334 | 0,23114203 | 10,7445 | 0,318259 | -0,114385 | 62,10657682 | 62,42483574 | 61,99219158 |
| 966 | 1,0313 | -108,0715 | -142,308 | -0,69715264 | -143,005 | -1,36388 | -0,204898 | -426,5032856 | -427,8671654 | -426,7081835 |
| 966 | 2,0625 | -247,3873 | -295,9568 | -1,62544732 | -297,582 | -3,046019 | -0,295411 | -916,7680202 | -919,8140388 | -917,0634308 |
| 967 | 0 | -279,5337 | -295,9938 | -1,62544732 | -297,619 | -3,046019 | 0,306524 | -958,6323244 | -961,678343 | -958,3258005 |
| 967 | 1,0313 | -126,1354 | -142,1923 | -0,69715264 | -142,889 | -1,36388 | 0,209923 | -449,7549899 | -451,1188698 | -449,5450673 |
| 967 | 2,0625 | 27,2629 | 10,63805 | 0,23114203 | 10,8692 | 0,318259 | 0,113321 | 57,18016817 | 57,49842709 | 57,29348945 |
| 968 | 0 | 12,25402 | 2,762743 | 0,09330455 | 2,85605 | 0,489199 | 0,159951 | 21,64232054 | 22,13151905 | 21,80227109 |
| 968 | 1,0313 | 83,80942 | 111,8806 | 0,4990984 | 112,38 | 1,218543 | 0,066431 | 333,7117251 | 334,9302685 | 333,7781565 |
| 968 | 2,0625 | 155,3648 | 175,1103 | 0,90489225 | 176,015 | 1,947888 | -0,027088 | 554,0046745 | 555,9525626 | 553,9775866 |
| 969 | 0 | 137,0633 | 169,9671 | 0,83245841 | 170,8 | 1,996096 | 0,02933 | 519,7813949 | 521,7774911 | 519,810725 |
| 969 | 1,0313 | 138,6342 | 173,9182 | 0,82421314 | 174,742 | 1,443673 | -0,076755 | 529,7092844 | 531,1529575 | 529,6325291 |
| 969 | 2,0625 | 140,205 | 131,9811 | 0,81596787 | 132,797 | 0,89125 | -0,182841 | 447,8607187 | 448,7519687 | 447,6778779 |
| 970 | 0 | 125,3986 | 132,7042 | 0,85481379 | 133,559 | 0,801885 | -0,130442 | 430,1361477 | 430,938033 | 430,0057057 |
| 970 | 1,0313 | 59,25898 | 30,02661 | 0,2622932 | 30,2889 | -0,711357 | -0,272175 | 137,6144722 | 136,9031151 | 137,3422968 |
| 970 | 2,0625 | -6,880596 | -115,1743 | -0,33022738 | -115,505 | -2,224599 | -0,413909 | -239,953845 | -242,1784444 | -240,3677537 |

TABEL MOMEN BALOK LINTANG STRUKTUR BAWAH

| FRAME | STA | ML | | ML TOT | ME | | COMB1 | | COMB 2 | | COMB 3 | | |
|-------|-------|-----------|-----------|-------------|---------------|-----------|-----------|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
| | | MID | ML merata | | ML_Koef kejut | ME X | ME Y | 1,3MD + 2 (MLQ+MLP) | | 1,3MD + 2 (MLQ+MLP)+1MEX | | 1,3MD + 2 (MLQ+MLP)+1MEY | |
| | | | | | | | | 1,3MD + 2 (MLQ+MLP) | 1,3MD + 2 (MLQ+MLP)+1MEX | 1,3MD + 2 (MLQ+MLP) | 1,3MD + 2 (MLQ+MLP)+1MEY | | |
| 404 | 0 | 42,09221 | 74,62269 | 0,203705475 | 74,8264 | 0,574632 | 0,998036 | 204,3726765 | 204,9473087 | 205,3707124 | | | |
| 404 | 4,125 | 35,26704 | 29,43477 | 0,225522919 | 29,66029 | 0,038248 | 0,183469 | 105,1677257 | 105,2059733 | 105,3511947 | | | |
| 404 | 8,25 | 28,44186 | -15,75316 | 0,247340362 | -15,50582 | -0,498137 | -0,631098 | 5,962774961 | 5,464637891 | 5,331677084 | | | |
| 405 | 0 | 28,80926 | -15,7177 | 0,247340362 | -15,47036 | -0,498137 | 0,291999 | 6,511310562 | 6,013173492 | 6,803309541 | | | |
| 405 | 4,125 | 35,19142 | 29,44973 | 0,225522919 | 29,67525 | 0,038248 | 0,070087 | 105,0993537 | 105,1376012 | 105,1694405 | | | |
| 405 | 8,25 | 41,57359 | 74,61716 | 0,203705475 | 74,82087 | 0,574632 | -0,151825 | 203,6873968 | 204,262029 | 203,5355714 | | | |
| 406 | 0 | -20,01094 | 29,25003 | -1,16575261 | 28,08428 | 0,451247 | 0,570669 | 30,15432954 | 30,60557636 | 30,72499808 | | | |
| 406 | 4,125 | 28,38677 | 20,46901 | 0,30324247 | 20,77225 | -0,052059 | 0,021799 | 78,44729855 | 78,39523945 | 78,46909744 | | | |
| 406 | 8,25 | 76,78448 | 11,68798 | 1,772237547 | 13,46022 | -0,555365 | -0,527071 | 126,7402676 | 126,1849025 | 126,2131968 | | | |
| 409 | 0 | 76,01305 | 11,71834 | 1,772237547 | 13,49058 | -0,555365 | 0,698483 | 125,7981321 | 125,2427671 | 126,4966155 | | | |
| 409 | 4,125 | 28,41623 | 20,47881 | 0,30324247 | 20,78205 | -0,052059 | -0,05 | 78,50521049 | 78,45315138 | 78,45521049 | | | |
| 409 | 8,25 | -19,18059 | 29,23928 | -1,16575261 | 28,07353 | 0,451247 | -0,798483 | 31,21228888 | 31,6635357 | 30,41380543 | | | |
| 410 | 0 | -57,55788 | 1,429198 | -3,61621914 | -2,187021 | 0,433482 | 1,048588 | -79,19928031 | -78,76579858 | -78,150692 | | | |
| 410 | 4,125 | 17,3475 | 11,4056 | 0,428429986 | 11,83403 | -0,056661 | 0,016307 | 46,21981276 | 46,16315153 | 46,23611953 | | | |
| 410 | 8,25 | 92,25288 | 21,382 | 4,473079111 | 25,85508 | -0,546804 | -1,015975 | 171,6389058 | 171,0921016 | 170,6229311 | | | |
| 413 | 0 | 91,06062 | 21,40675 | 4,473079111 | 25,87983 | -0,546804 | 1,235829 | 170,1384687 | 169,5916645 | 171,374298 | | | |
| 413 | 4,125 | 17,39329 | 11,40998 | 0,428429986 | 11,83841 | -0,056661 | -0,036425 | 46,288088 | 46,23142677 | 46,2516626 | | | |
| 413 | 8,25 | -56,27404 | 1,413198 | -3,61621914 | -2,203022 | 0,433482 | -1,30868 | -77,5622927 | -77,12881097 | -78,87097282 | | | |
| 415 | 0 | -73,66417 | -12,04384 | -6,83575061 | -18,87959 | 0,390695 | 2,087449 | -133,522603 | -133,1319085 | -131,4351543 | | | |
| 415 | 4,125 | 8,468639 | 5,073219 | 0,610621344 | 5,68384 | -0,036178 | 0,05182 | 22,37691063 | 22,34073279 | 22,42873021 | | | |
| 415 | 8,25 | 90,60145 | 22,19028 | 8,056993302 | 30,24727 | -0,46305 | -1,98381 | 178,2764242 | 177,813374 | 176,2926147 | | | |
| 417 | 0 | 89,35506 | 22,21 | 8,056993302 | 30,26699 | -0,46305 | 2,254248 | 176,6955568 | 176,2325066 | 178,9498051 | | | |
| 417 | 4,125 | 8,502067 | 5,074192 | 0,610621344 | 5,684814 | -0,036178 | -0,003793 | 22,42231442 | 22,38613659 | 22,4185219 | | | |
| 417 | 8,25 | -72,35092 | -12,06161 | -6,83575061 | -18,89736 | 0,390695 | -2,261833 | -131,850928 | -131,4602335 | -134,1127613 | | | |
| 422 | 0 | -55,62146 | -14,27581 | -7,75034792 | -22,02616 | 0,180575 | 4,036045 | -116,360212 | -116,1796369 | -112,3241667 | | | |
| 422 | 4,125 | 0,804617 | -0,143504 | 0,146294983 | 0,002791 | -0,01296 | 0,571818 | 1,051584871 | 1,038624774 | 1,623403023 | | | |
| 422 | 8,25 | 57,23069 | 13,9888 | 8,042937884 | 22,03174 | -0,206495 | -2,892409 | 118,4633817 | 118,2568864 | 115,5709727 | | | |
| 423 | 0 | 57,83225 | 13,99684 | 8,042937884 | 22,03978 | -0,206495 | 2,198433 | 119,2614903 | 119,054995 | 121,4599231 | | | |
| 423 | 4,125 | 0,8094 | -0,144671 | 0,146294983 | 0,001624 | -0,01296 | 0,178552 | 1,055466839 | 1,042506742 | 1,234018744 | | | |
| 423 | 8,25 | -56,21345 | -14,28619 | -7,75034792 | -22,03654 | 0,180575 | -1,841329 | -117,1505566 | -116,9699815 | -118,9918856 | | | |
| 424 | 0 | -28,31629 | -10,13517 | -3,99388465 | -14,12906 | 0,059735 | 1,333308 | -65,06928982 | -64,99955467 | -63,7359822 | | | |
| 424 | 4,125 | -0,524751 | -1,000516 | -0,0297133 | -1,030229 | -0,007473 | 0,43182 | -2,74263559 | -2,750108213 | -2,310815654 | | | |

| | | | | | | | | | | |
|-----|-------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 424 | 8,25 | 27,26678 | 8,134143 | 3,934458045 | 12,0686 | -0,08468 | -0,469668 | 59,58401864 | 59,49933824 | 59,11435089 |
| 425 | 0 | 30,97255 | 8,14303 | 3,934458045 | 12,07749 | -0,08468 | -0,534983 | 64,41929232 | 64,33461192 | 63,88430966 |
| 425 | 4,125 | -0,527584 | -0,999759 | -0,0297133 | -1,029472 | -0,007473 | 0,341928 | -2,744804226 | -2,752276849 | -2,402876201 |
| 425 | 8,25 | -32,02772 | -10,14255 | -3,99388465 | -14,13643 | 0,069735 | 1,218839 | -69,90890077 | -69,83916561 | -68,69006206 |
| 426 | 0 | 13,59387 | -4,406213 | 0,470982216 | -3,93523 | -0,118327 | 19,93928 | 9,801570408 | 9,683243508 | 29,74085228 |
| 426 | 4,125 | 0,317656 | -0,638569 | -0,01929648 | -0,657866 | 0,001399 | 1,015138 | -0,902778535 | -0,901379208 | 0,112359396 |
| 426 | 8,25 | -12,95856 | 3,129074 | -0,50957519 | 2,619499 | 0,121126 | -17,90901 | -11,60712748 | -11,48600192 | -29,51613349 |
| 427 | 0 | 41,98771 | 3,136332 | -0,50957519 | 2,626757 | 0,121126 | 15,74758 | 59,83753748 | 59,95866304 | 75,5851178 |
| 427 | 4,125 | 0,127978 | -0,640061 | -0,01929648 | -0,659357 | 0,001399 | 0,42628 | -1,15234282 | -1,150943494 | -0,726063204 |
| 427 | 8,25 | -41,73175 | -4,416454 | 0,470982216 | -3,945471 | -0,118327 | -14,89502 | -62,14222312 | -62,26055002 | -77,03724421 |
| 428 | 0 | -7,248023 | -4,798245 | 0,422515962 | -4,375729 | -0,202475 | 11,85824 | -18,17388724 | -18,37636224 | -6,315642673 |
| 428 | 4,125 | 0,784103 | 0,073331 | -0,016078 | 0,057253 | 0,01153 | 0,25858 | 1,133839987 | 1,145370335 | 1,392419622 |
| 428 | 8,25 | 8,816229 | 4,944906 | -0,45467195 | 4,490234 | 0,225536 | -11,34109 | 20,44156722 | 20,66710291 | 9,100481916 |
| 429 | 0 | 83,66149 | 4,957633 | -0,45467195 | 4,502961 | 0,225536 | 11,53361 | 117,7658549 | 117,9913906 | 129,29946684 |
| 429 | 4,125 | 0,660872 | 0,07232 | -0,016078 | 0,056242 | 0,01153 | -0,076841 | 0,97161767 | 0,983148018 | 0,894776349 |
| 429 | 8,25 | -82,33974 | -4,812993 | 0,422515962 | -4,390477 | -0,202475 | -11,6873 | -115,8226195 | -116,0250945 | -127,5099157 |
| 430 | 0 | -27,87835 | -4,244741 | -0,03730409 | -4,282045 | -0,273388 | 4,807166 | -44,80593935 | -45,07932702 | -39,99877289 |
| 430 | 4,125 | 4,178289 | 1,43609 | 0,057474622 | 1,493564 | 0,012213 | 0,069388 | 8,418904382 | 8,431117861 | 8,488292094 |
| 430 | 8,25 | 36,23492 | 7,11692 | 0,152253335 | 7,269174 | 0,297815 | -4,668391 | 61,64374811 | 61,94156274 | 56,97535708 |
| 431 | 0 | 87,97513 | 7,132596 | 0,152253335 | 7,284849 | 0,297815 | 4,947444 | 128,9373726 | 129,2351872 | 133,8848165 |
| 431 | 4,125 | 3,957941 | 1,435764 | 0,057474622 | 1,493238 | 0,012213 | -0,093459 | 8,131799463 | 8,144012941 | 8,038340933 |
| 431 | 8,25 | -80,05925 | -4,261068 | -0,03730409 | -4,298372 | -0,273388 | -5,134361 | -112,6737737 | -112,9471613 | -117,8081346 |
| 432 | 0 | -39,95731 | -1,474838 | -1,60956558 | -3,084404 | -0,276187 | 1,824146 | -58,11331384 | -58,38950042 | -56,28916753 |
| 432 | 4,125 | 9,698672 | 3,749291 | 0,325743254 | 4,075034 | 0,017431 | 0,016205 | 20,75834159 | 20,77577265 | 20,77454658 |
| 432 | 8,25 | 59,35466 | 8,973419 | 2,26105209 | 11,23447 | 0,311049 | -1,791736 | 99,62999701 | 99,94104571 | 97,8382607 |
| 437 | 0 | 92,90633 | 8,990698 | 2,26105209 | 11,25175 | 0,311049 | 1,635602 | 143,2817316 | 143,5927803 | 144,9173338 |
| 437 | 4,125 | 9,36561 | 3,750093 | 0,325743254 | 4,075836 | 0,017431 | -0,070612 | 20,32696451 | 20,34439557 | 20,25635234 |
| 437 | 8,25 | -74,17511 | -1,490513 | -1,60956558 | -3,100078 | -0,276187 | -1,776827 | -102,6278025 | -102,9039891 | -104,4046291 |
| 439 | 0 | -38,24536 | 3,481132 | -3,65712045 | -0,175988 | -0,220114 | 0,710623 | -50,07094613 | -50,29106012 | -49,3603233 |
| 439 | 4,125 | 18,303 | 6,923585 | 1,145242398 | 8,068828 | 0,022574 | -0,078053 | 39,93155711 | 39,95413129 | 39,85350445 |
| 439 | 8,25 | 74,85136 | 10,36604 | 5,947605247 | 16,31364 | 0,265262 | -0,866728 | 129,9340603 | 130,1993227 | 129,0673322 |
| 441 | 0 | 100,9563 | 10,38528 | 5,947605247 | 16,33288 | 0,265262 | 0,182381 | 164,1742065 | 164,1742065 | 164,0913254 |
| 441 | 4,125 | 17,40253 | 6,926259 | 1,145242398 | 8,071502 | 0,022574 | -0,131315 | 38,78886937 | 38,78886937 | 38,63498064 |
| 441 | 8,25 | -66,15123 | 3,467241 | -3,65712045 | -0,18988 | -0,220114 | -0,44501 | -86,37635373 | -86,59646772 | -86,82136409 |
| 443 | 0 | -35,23946 | 2,820683 | -6,15793729 | -3,337255 | -0,120788 | 0,037509 | -52,48581075 | -52,60659911 | -52,44830138 |

| | | | | | | | | | | |
|-----|-------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 443 | 4,125 | 26,30589 | 8,630665 | 2,636516359 | 11,26718 | 0,020825 | -0,331261 | 56,73201981 | 56,7528446 | 56,40075892 |
| 443 | 8,25 | 87,85124 | 14,44065 | 11,43097 | 25,87162 | 0,162438 | -0,700031 | 165,9498504 | 166,1122883 | 165,2498192 |
| 445 | 0 | 115,1792 | 14,45425 | 11,43097 | 25,88522 | 0,162438 | -0,397132 | 201,5034408 | 201,6658788 | 201,1063083 |
| 445 | 4,125 | 23,33506 | 8,633642 | 2,636516359 | 11,27016 | 0,020825 | -0,371894 | 52,87589555 | 52,89672034 | 52,50400174 |
| 445 | 8,25 | -68,50911 | 2,813033 | -6,15793729 | -3,344904 | -0,120788 | -0,346655 | -95,75164974 | -95,8724381 | -96,09830488 |
| 447 | 0 | -18,58788 | 4,174877 | -7,39867282 | -3,223795 | -0,03003 | -1,145894 | -30,61183276 | -30,64186292 | -31,75772628 |
| 447 | 4,125 | 33,61907 | 9,841814 | 3,787274471 | 13,62909 | 0,011602 | -0,818367 | 70,96296722 | 70,9745688 | 70,14460009 |
| 447 | 8,25 | 85,82602 | 15,50875 | 14,97322176 | 30,48197 | 0,053233 | -0,490841 | 172,5377672 | 172,5910005 | 172,0469265 |
| 448 | 0 | 123,9263 | 15,52165 | 14,97322176 | 30,49488 | 0,053233 | -0,292061 | 222,0938786 | 222,1471119 | 221,8018172 |
| 448 | 4,125 | 27,14366 | 9,845669 | 3,787274471 | 13,63294 | 0,011602 | -0,847534 | 62,55264346 | 62,56424504 | 61,70510976 |
| 448 | 8,25 | -69,63894 | 4,169685 | -7,39867282 | -3,228988 | -0,03003 | -1,403006 | -96,98859166 | -97,01862182 | -98,39159764 |
| 452 | 0 | -43,01152 | 3,014583 | -6,4379659 | -3,423383 | 0,015799 | -2,488667 | -62,76174009 | -62,74594142 | -65,25040715 |
| 452 | 4,125 | 27,18005 | 8,887442 | 2,704427506 | 11,59187 | 0,002109 | -1,248078 | 58,5177996 | 58,51990889 | 57,26972202 |
| 452 | 8,25 | 97,37161 | 14,7603 | 11,84682091 | 26,60712 | -0,01158 | -0,007488 | 179,7973393 | 179,7857592 | 179,7898512 |
| 456 | 0 | 114,4558 | 14,77369 | 11,84682091 | 26,62051 | -0,01158 | 0,355474 | 202,0335885 | 202,0220084 | 202,3890624 |
| 456 | 4,125 | 24,37805 | 8,890604 | 2,704427506 | 11,59503 | 0,002109 | -1,270821 | 54,88152476 | 54,88363405 | 53,61070388 |
| 456 | 8,25 | -65,69973 | 3,007521 | -6,43796589 | -3,430445 | 0,015799 | -2,897116 | -92,270539 | -92,25474033 | -95,16765466 |
| 458 | 0 | -49,74722 | 4,412478 | -4,03194682 | 0,380531 | 0,026464 | -0,725182 | -63,91032136 | -63,88385765 | -64,63550368 |
| 458 | 4,125 | 20,4012 | 7,575603 | 1,262254084 | 8,837857 | -0,002937 | -0,66878 | 44,19727065 | 44,19433329 | 43,52849095 |
| 458 | 8,25 | 90,54961 | 10,73873 | 6,556454987 | 17,29518 | -0,032338 | -0,612377 | 152,3048627 | 152,2725242 | 151,6924856 |
| 461 | 0 | 101,0323 | 10,75883 | 6,556454987 | 17,31528 | -0,032338 | -0,11317 | 165,9725215 | 165,9401831 | 165,8593512 |
| 461 | 4,125 | 19,61937 | 7,578878 | 1,262254084 | 8,841132 | -0,002937 | -0,682912 | 43,18744897 | 43,1845116 | 42,50453741 |
| 461 | 8,25 | -61,79353 | 4,39893 | -4,03194682 | 0,366983 | 0,026464 | -1,252653 | -79,59762357 | -79,57115986 | -80,85027638 |
| 464 | 0 | -58,79833 | -1,062686 | -2,09439395 | -3,15708 | 0,028005 | 0,5534 | -82,751996 | -82,72399108 | -82,19859641 |
| 464 | 4,125 | 11,83318 | 4,423608 | 0,411530056 | 4,835138 | -0,002535 | -0,162557 | 25,05341544 | 25,05088084 | 24,89085836 |
| 464 | 8,25 | 82,4647 | 9,909903 | 2,917454058 | 12,82736 | -0,033074 | -0,878514 | 132,8588269 | 132,8257527 | 131,9803131 |
| 466 | 0 | 95,39134 | 9,929142 | 2,917454058 | 12,8466 | -0,033074 | -0,291451 | 149,7019328 | 149,6688587 | 149,4104817 |
| 466 | 4,125 | 11,61035 | 4,424958 | 0,411530056 | 4,836488 | -0,002535 | -0,172199 | 24,76642399 | 24,76388938 | 24,59422486 |
| 466 | 8,25 | -72,17065 | -1,079227 | -2,09439395 | -3,173621 | 0,028005 | -0,052947 | -100,1410799 | -100,1410799 | -100,222032 |
| 468 | 0 | -58,46742 | -5,221439 | -0,47237011 | -5,693809 | 0,025854 | 0,610116 | -87,39526042 | -87,3694061 | -86,7851446 |
| 468 | 4,125 | 5,630892 | 1,913216 | 0,089654411 | 2,002871 | -0,001469 | -0,029006 | 11,3259014 | 11,32443262 | 11,29689566 |
| 468 | 8,25 | 69,7292 | 9,047872 | 0,651678927 | 9,699551 | -0,028792 | -0,668127 | 110,0470632 | 110,0182713 | 109,3789359 |
| 469 | 0 | 92,56751 | 9,065518 | 0,651678927 | 9,717197 | -0,028792 | 0,064803 | 139,772151 | 139,7433592 | 139,8369544 |
| 469 | 4,125 | 5,519953 | 1,913105 | 0,089654411 | 2,002759 | -0,001469 | -0,034905 | 11,18145727 | 11,1799885 | 11,1465523 |
| 469 | 8,25 | -81,5276 | -5,239308 | -0,47237011 | -5,711678 | 0,025854 | -0,134613 | -117,4092365 | -117,3833822 | -117,5438498 |

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|-----|-------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 473 | 0 | -46,22696 | -7,290376 | 0,514194535 | -6,776181 | 0,024085 | 0,502307 | -73,64741653 | -73,62333114 | -73,14510949 |
| 473 | 4,125 | 2,11153 | 0,343783 | -0,0005068 | 0,343276 | -0,000784 | -0,005996 | 3,431540693 | 3,430756324 | 3,425544981 |
| 473 | 8,25 | 50,45003 | 7,977941 | -0,51520813 | 7,462733 | -0,025654 | -0,514298 | 80,51049792 | 80,48484379 | 79,99619945 |
| 476 | 0 | 94,12445 | 7,993359 | -0,51520813 | 7,478381 | -0,025654 | 0,443349 | 137,3185525 | 137,2928984 | 137,7619011 |
| 476 | 4,125 | 1,893973 | 0,342659 | -0,0005068 | 0,342152 | -0,000784 | -0,010625 | 3,146469678 | 3,145685308 | 3,135844402 |
| 476 | 8,25 | -90,33651 | -7,308272 | 0,514194535 | -6,794077 | 0,024085 | -0,464599 | -131,0256132 | -131,0015278 | -131,4902123 |
| 477 | 0 | -21,39803 | -8,165216 | 0,816308047 | -7,348908 | 0,021929 | 0,432589 | -42,5152553 | -42,49332667 | -42,08266611 |
| 477 | 4,125 | 0,281612 | -0,608264 | -0,01806117 | -0,626325 | -0,000467 | -0,016791 | -0,886553858 | -0,887020574 | -0,903344973 |
| 477 | 8,25 | 21,96126 | 6,948688 | -0,85243039 | 6,096258 | -0,022862 | -0,466171 | 40,74214758 | 40,71928552 | 40,27597616 |
| 478 | 0 | 101,993 | 6,961894 | -0,85243039 | 6,109463 | -0,022862 | 0,747537 | 144,8098082 | 144,7869462 | 145,557345 |
| 478 | 4,125 | -0,285027 | -0,610153 | -0,01806117 | -0,628214 | -0,000467 | -0,022192 | -1,626964113 | -1,627430828 | -1,649156525 |
| 478 | 8,25 | -102,563 | -8,1822 | 0,816308047 | -7,365892 | 0,021929 | -0,791922 | -148,0637364 | -148,0418078 | -148,8556581 |
| 479 | 0 | 15,85897 | -8,239458 | 0,363752848 | -7,875705 | 0,016656 | 0,500148 | 4,865249388 | 4,881905234 | 5,365396906 |
| 479 | 4,125 | -0,678157 | -1,190921 | -0,03470759 | -1,225628 | -0,000359 | 0,001841 | -3,332859964 | -3,33321886 | -3,331018886 |
| 479 | 8,25 | -17,21528 | 5,857617 | -0,43316803 | 5,424449 | -0,017374 | -0,496465 | -11,53096932 | -11,54834295 | -12,02743468 |
| 480 | 0 | 112,9472 | 5,86797 | -0,43316803 | 5,434802 | -0,017374 | 0,832746 | 157,7009703 | 157,6835966 | 158,5337164 |
| 480 | 4,125 | -1,755936 | -1,193336 | -0,03470759 | -1,228043 | -0,000359 | -0,004707 | -4,738803109 | -4,739162004 | -4,743510251 |
| 480 | 8,25 | -116,4591 | -8,254641 | 0,363752848 | -7,890888 | 0,016656 | -0,84216 | -167,1785765 | -167,1619206 | -168,0207369 |
| 481 | 0 | 51,75574 | -6,875519 | -0,99355723 | -7,869076 | 0,011323 | 1,524907 | 51,54431129 | 51,55563421 | 53,06921868 |
| 481 | 4,125 | -1,129619 | -1,344617 | -0,16228653 | -1,506904 | 0,000416 | 0,299925 | -4,482312811 | -4,481897008 | -4,182388143 |
| 481 | 8,25 | -54,01498 | 4,186285 | 0,668984163 | 4,855269 | -0,010491 | -0,925058 | -60,50893691 | -60,51942822 | -61,43399497 |
| 482 | 0 | 106,385 | 4,19307 | 0,668984163 | 4,862055 | -0,010491 | 0,062769 | 148,024586 | 148,0140946 | 148,087355 |
| 482 | 4,125 | -2,287721 | -1,346929 | -0,16228653 | -1,509215 | 0,000416 | 0,295942 | -5,992467421 | -5,992051618 | -5,696525516 |
| 482 | 8,25 | -110,9604 | -6,886928 | -0,99355723 | -7,880485 | 0,011323 | 0,529115 | -160,0095208 | -159,9981979 | -159,480406 |
| 483 | 0 | 55,51072 | -7,447197 | -1,07236192 | -8,519559 | 0,109361 | 0,637257 | 55,12481725 | 55,23417802 | 55,76207429 |
| 483 | 4,125 | -1,08523 | -1,345396 | -0,16209168 | -1,507488 | -0,000281 | 0,294571 | -4,425774736 | -4,426056144 | -4,131204127 |
| 483 | 8,25 | -57,68118 | 4,756404 | 0,748178563 | 5,504583 | -0,109924 | -0,048116 | -63,97636672 | -64,0862903 | -64,02448254 |
| 484 | 0 | 111,5755 | 4,761241 | 0,748178563 | 5,509419 | -0,109924 | -0,984376 | 156,067005 | 155,9570814 | 155,0826295 |
| 484 | 4,125 | -2,325595 | -1,347673 | -0,16209168 | -1,509765 | -0,000281 | 0,298422 | -6,042803803 | -6,04308521 | -5,744381653 |
| 484 | 8,25 | -116,2267 | -7,456587 | -1,07236192 | -8,528949 | 0,109361 | 1,58122 | -168,1526126 | -168,0432519 | -166,5713928 |
| 485 | 0 | 21,14225 | -9,04626 | 0,246329408 | -8,79993 | 0,170371 | -0,722762 | 9,885064253 | 10,05543526 | 9,162301913 |
| 485 | 4,125 | -0,57678 | -1,165702 | -0,03122678 | -1,196928 | -0,004532 | -0,007118 | -3,1436702 | -3,148202106 | -3,150788006 |
| 485 | 8,25 | -22,29581 | 6,714857 | -0,30878297 | 6,406074 | -0,179435 | 0,708527 | -16,17240465 | -16,35183948 | -15,46387792 |
| 486 | 0 | 120,522 | 6,72185 | -0,30878297 | 6,413067 | -0,179435 | -0,629047 | 169,5046721 | 169,3252373 | 168,8756251 |
| 486 | 4,125 | -1,788615 | -1,168057 | -0,03122678 | -1,199283 | -0,004532 | 0,000357 | -4,72376663 | -4,728298536 | -4,723410084 |

| | | | | | | | | | | |
|-----|-------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 486 | 8,25 | -124,0992 | -9,057963 | 0,246329408 | -8,811633 | 0,170371 | 0,62976 | -178,9522054 | -178,7818344 | -178,3224452 |
| 487 | 0 | -17,01082 | -9,18206 | 0,666279207 | -8,515781 | 0,214882 | -0,72509 | -39,14562828 | -38,93074634 | -39,87071862 |
| 487 | 4,125 | 0,388603 | -0,578536 | -0,01382764 | -0,592364 | -0,005532 | -0,023266 | -0,679544502 | -0,685076649 | -0,702810594 |
| 487 | 8,25 | 17,78803 | 8,024988 | -0,693934448 | 7,331053 | -0,225946 | 0,678558 | 37,78653928 | 37,56059304 | 38,46509743 |
| 488 | 0 | 109,4878 | 8,034673 | -0,693934448 | 7,340739 | -0,225946 | -0,580915 | 157,0156396 | 156,7896933 | 156,4347248 |
| 488 | 4,125 | -0,303109 | -0,580368 | -0,01382764 | -0,594196 | -0,005532 | -0,016743 | -1,582432994 | -1,587965142 | -1,599176043 |
| 488 | 8,25 | -110,094 | -9,195409 | 0,666279207 | -8,52913 | 0,214882 | 0,547429 | -160,1805056 | -159,9656236 | -159,6330769 |
| 489 | 0 | -43,37096 | -8,404265 | 0,346028307 | -8,058237 | 0,233573 | -0,527898 | -72,4987172 | -72,26514439 | -73,02661568 |
| 489 | 4,125 | 2,243642 | 0,38395 | 0,005415217 | 0,389365 | -0,007456 | -0,005425 | 3,695465714 | 3,688009241 | 3,690040271 |
| 489 | 8,25 | 47,85824 | 9,172165 | -0,33519787 | 8,836967 | -0,248486 | 0,517048 | 79,88964862 | 79,64116287 | 80,40669622 |
| 490 | 0 | 100,7363 | 9,184635 | -0,33519787 | 8,849437 | -0,248486 | -0,502269 | 148,6560677 | 148,407582 | 148,1537989 |
| 490 | 4,125 | 1,903635 | 0,38288 | 0,005415217 | 0,388295 | -0,007456 | 0,000448 | 3,251314921 | 3,2438858448 | 3,251762884 |
| 490 | 8,25 | -96,92903 | -8,418876 | 0,346028307 | -8,072847 | 0,233573 | 0,503165 | -142,1534379 | -141,9198651 | -141,6502731 |
| 491 | 0 | -56,46273 | -6,289055 | -0,6402117 | -6,929266 | 0,22667 | -0,40688 | -87,26007841 | -87,03340866 | -87,6669586 |
| 491 | 4,125 | 5,868858 | 1,97273 | 0,099243968 | 2,071974 | -0,01068 | -0,003128 | 11,77346447 | 11,76278446 | 11,7703369 |
| 491 | 8,25 | 68,20044 | 10,23452 | 0,838699636 | 11,07322 | -0,24803 | 0,400625 | 110,8070073 | 110,5589776 | 111,2076324 |
| 492 | 0 | 98,61768 | 10,24929 | 0,838699636 | 11,08799 | -0,24803 | -0,405761 | 150,3789686 | 150,1309388 | 149,9732078 |
| 492 | 4,125 | 5,579659 | 1,972678 | 0,099243968 | 2,071922 | -0,01068 | 0,004431 | 11,39740179 | 11,38672178 | 11,40183316 |
| 492 | 8,25 | -87,45837 | -6,303934 | -0,6402117 | -6,944145 | 0,22667 | 0,414624 | -127,584165 | -127,3574952 | -127,1695414 |
| 493 | 0 | -55,71978 | -1,910163 | -2,23214563 | -4,142308 | 0,195785 | -0,346217 | -80,72033264 | -80,5245479 | -81,06654993 |
| 493 | 4,125 | 12,40454 | 4,513552 | 0,429538054 | 4,94309 | -0,013697 | -0,006392 | 26,01208022 | 25,99838304 | 26,0056879 |
| 493 | 8,25 | 80,52886 | 10,93727 | 3,091221741 | 14,02849 | -0,223179 | 0,333433 | 132,7444931 | 132,521314 | 133,0779257 |
| 494 | 0 | 101,8625 | 10,95369 | 3,091221741 | 14,04491 | -0,223179 | -0,344714 | 160,5111135 | 160,2879343 | 160,1663996 |
| 494 | 4,125 | 11,74238 | 4,514991 | 0,429538054 | 4,944529 | -0,013697 | 0,006022 | 25,15414982 | 25,14045264 | 25,16017206 |
| 494 | 8,25 | -78,37778 | -1,923705 | -2,23214563 | -4,15585 | 0,195785 | 0,356758 | -110,2028138 | -110,0070291 | -109,8460555 |
| 495 | 0 | -40,94935 | 4,036078 | -4,07685018 | -0,040772 | 0,143434 | -0,313366 | -53,31569424 | -53,17226064 | -53,62906006 |
| 495 | 4,125 | 21,93625 | 7,721187 | 1,301185817 | 9,022372 | -0,011921 | -0,010337 | 46,5618687 | 46,54994756 | 46,5515314 |
| 495 | 8,25 | 84,82184 | 11,4063 | 6,679221812 | 18,08552 | -0,167276 | 0,292691 | 146,4394316 | 146,2721558 | 146,7321229 |
| 496 | 0 | 109,6106 | 11,42358 | 6,679221812 | 18,1028 | -0,167276 | -0,312393 | 178,6994139 | 178,532138 | 178,3870204 |
| 496 | 4,125 | 19,86992 | 7,724642 | 1,301185817 | 9,025828 | -0,011921 | 0,008258 | 43,88255173 | 43,87063059 | 43,89080976 |
| 496 | 8,25 | -69,87078 | 4,025703 | -4,07685018 | -0,051147 | 0,143434 | 0,328909 | -90,93431042 | -90,79087681 | -90,60540092 |
| 497 | 0 | -17,66916 | 3,664056 | -6,24739954 | -2,583343 | 0,065197 | -0,250088 | -28,13659296 | -28,0713957 | -28,38668115 |
| 497 | 4,125 | 31,71363 | 9,188166 | 2,790072362 | 11,97824 | 0,000396 | -0,015863 | 65,18419256 | 65,18458832 | 65,1683293 |
| 497 | 8,25 | 81,09642 | 14,71228 | 11,82754427 | 26,53982 | -0,064406 | 0,218362 | 158,5049781 | 158,4405724 | 158,7233398 |
| 498 | 0 | 124,4446 | 14,72333 | 11,82754427 | 26,55087 | -0,064406 | -0,249106 | 214,879714 | 214,8153083 | 214,6306079 |

| | | | | | | | | | | |
|-----|-------|-----------|-----------|-------------|-------------|-----------|-----------|--------------|--------------|--------------|
| 498 | 4,125 | 25,48042 | 9,191773 | 2,790072362 | 11,98185 | 0,00396 | 0,012374 | 57,08824228 | 57,08863805 | 57,10061634 |
| 498 | 8,25 | -73,48374 | 3,660217 | -6,24739954 | -2,587183 | 0,065197 | 0,273854 | -100,7032295 | -100,6380322 | -100,4293752 |
| 499 | | 0 | -37,08358 | 4,586173 | -7,29896633 | -2,712793 | -0,060968 | -0,130187 | -53,63424139 | -53,76442826 |
| 499 | 4,125 | 30,2446 | 9,954564 | 3,824309258 | 13,77887 | 0,020646 | -0,016756 | 66,87573098 | 66,89637734 | 66,85897473 |
| 499 | 8,25 | 97,57279 | 15,32296 | 14,94758485 | 30,27054 | 0,102261 | 0,096674 | 187,3857033 | 187,487964 | 187,4823777 |
| 500 | | 0 | 117,3923 | 15,33418 | 14,94758485 | 30,28176 | 0,102261 | 213,1734529 | 213,2757136 | 213,0396501 |
| 500 | 4,125 | 27,11483 | 9,958639 | 3,824309258 | 13,78295 | 0,020646 | 0,013212 | 62,81517721 | 62,83582356 | 62,82838931 |
| 500 | 8,25 | -63,16259 | 4,583102 | -7,29896633 | -2,715864 | -0,060968 | 0,160227 | -87,54309852 | -87,60406646 | -87,38287153 |
| 501 | | 0 | -44,30291 | 3,285725 | -6,05714363 | -2,771418 | -0,25504 | -63,1366197 | -63,39166 | -63,26613671 |
| 501 | 4,125 | 24,70813 | 8,63065 | 2,642301501 | 11,27295 | 0,039991 | -0,018411 | 54,66647198 | 54,7064631 | 54,64806052 |
| 501 | 8,25 | 93,71917 | 13,97557 | 11,34174663 | 25,31732 | 0,335023 | 0,092694 | 172,4698637 | 172,8045862 | 172,5622577 |
| 502 | | 0 | 107,269 | 11,34174663 | 25,33072 | 0,335023 | -0,118638 | 190,1110804 | 190,446103 | 189,9924426 |
| 502 | 4,125 | 23,54632 | 8,633733 | 2,642301501 | 11,27603 | 0,039991 | 0,017287 | 53,16227977 | 53,20227089 | 53,17956721 |
| 502 | 8,25 | -60,17632 | 3,278491 | -6,05714363 | -2,778653 | -0,25504 | 0,153213 | -83,7865209 | -84,0415612 | -83,63330817 |
| 503 | | 0 | -43,01484 | 4,190914 | -3,50472711 | 0,686187 | -0,46975 | -54,54691537 | -55,01666512 | -55,03706816 |
| 503 | 4,125 | 17,57543 | 6,873367 | 1,136549005 | 8,009916 | 0,044897 | -0,02208 | 38,86789479 | 38,91279132 | 38,84581472 |
| 503 | 8,25 | 78,1657 | 9,55582 | 5,777825121 | 15,33365 | 0,559543 | 0,445993 | 132,8422478 | 132,8422478 | 132,7286976 |
| 504 | | 0 | 92,83995 | 9,576491 | 5,777825121 | 15,35432 | 0,559543 | 151,4005618 | 151,9601047 | 150,9694592 |
| 504 | 4,125 | 17,42798 | 6,876195 | 1,136549005 | 8,012744 | 0,044897 | 0,025384 | 38,68186176 | 38,72675829 | 38,70724618 |
| 504 | 8,25 | -57,98399 | 4,175899 | -3,50472711 | 0,671172 | -0,46975 | 0,481871 | -74,03683832 | -74,50658806 | -73,55496687 |
| 505 | | 0 | -44,29264 | -0,559191 | -1,41199407 | -1,971185 | -0,600195 | -61,52280471 | -62,12300001 | -63,278314 |
| 505 | 4,125 | 9,30946 | 3,684638 | 0,314075365 | 3,998714 | 0,037056 | -0,039093 | 20,09972489 | 20,13678089 | 20,06063152 |
| 505 | 8,25 | 62,91156 | 7,928468 | 2,040144796 | 9,968613 | 0,674307 | 1,677323 | 101,7222545 | 102,3965618 | 103,399577 |
| 506 | | 0 | 83,71564 | 7,94873 | 2,040144796 | 9,988875 | 0,674307 | 128,8080806 | 129,4823878 | 127,2294501 |
| 506 | 4,125 | 9,336111 | 3,685642 | 0,314075365 | 3,999717 | 0,037056 | 0,043761 | 20,13637841 | 20,1734344 | 20,18013932 |
| 506 | 8,25 | -65,04342 | -0,577446 | -1,41199407 | -1,98944 | -0,600195 | 1,666152 | -88,53532374 | -89,13551904 | -86,86917151 |
| 507 | | 0 | -32,55317 | -3,28023 | 0,177570445 | -3,10266 | -0,617769 | -48,52443621 | -49,14220503 | -53,62014205 |
| 507 | 4,125 | 3,952629 | 1,385168 | 0,048267763 | 1,433436 | 0,025966 | -0,087657 | 8,005288366 | 8,031254245 | 7,917631383 |
| 507 | 8,25 | 40,45842 | 6,050566 | -0,08103492 | 5,969531 | 0,669701 | 4,920392 | 64,53501295 | 65,20471352 | 69,45540481 |
| 508 | | 0 | 78,25301 | 6,070243 | -0,08103492 | 5,989208 | 0,669701 | 113,7073255 | 114,3770261 | 109,0507287 |
| 508 | 4,125 | 3,950253 | 1,385232 | 0,048267763 | 1,4335 | 0,025966 | 0,074748 | 8,00232959 | 8,028295468 | 8,077077651 |
| 508 | 8,25 | -70,3525 | -3,299778 | 0,177570445 | -3,122208 | -0,617769 | 4,806093 | -97,70266637 | -98,32043518 | -92,89657344 |
| 509 | | 0 | -11,15527 | -3,868422 | 0,61783225 | -3,25059 | -0,503131 | -21,00302879 | -21,50615972 | -32,82524486 |
| 509 | 4,125 | 0,653939 | 0,040607 | -0,02199871 | 0,018608 | 0,020206 | -0,079461 | 0,887338039 | 0,90754391 | 0,807877454 |
| 509 | 8,25 | 12,46315 | 3,949636 | -0,66182968 | 3,287807 | 0,543543 | 11,66329 | 22,77770487 | 23,32124754 | 34,44099977 |

| | | | | | | | | | | |
|-----|-------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 510 | 0 | 75,426 | 3,972221 | -0,66182968 | 3,310391 | 0,543543 | -11,58865 | 104,6745814 | 105,2181241 | 93,08593074 |
| 510 | 4,125 | 0,658505 | 0,041794 | -0,02199871 | 0,019795 | 0,020206 | 0,261455 | 0,895647144 | 0,915853015 | 1,157102109 |
| 510 | 8,25 | -74,10899 | -3,888633 | 0,61783225 | -3,270801 | -0,503131 | 12,11156 | -102,8832871 | -103,386418 | -90,77172652 |
| 511 | 0 | 14,06271 | -3,922907 | 0,580182711 | -3,342724 | -0,284252 | -15,46193 | 11,59607202 | 11,31181967 | -3,86586286 |
| 511 | 4,125 | 0,269513 | -0,663252 | -0,0219598 | -0,685212 | 0,005226 | 0,422288 | -1,020055886 | -1,014830146 | -0,597768016 |
| 511 | 8,25 | -13,52368 | 2,596403 | -0,62410232 | 1,972301 | 0,294704 | 16,30651 | -13,63618379 | -13,34147996 | 2,670326828 |
| 512 | 0 | 40,09538 | 2,65486 | -0,62410232 | 2,030757 | 0,294704 | -18,55698 | 56,18551064 | 56,48021447 | 37,62853012 |
| 512 | 4,125 | 0,118938 | -0,646661 | -0,0219598 | -0,668621 | 0,005226 | 1,01843 | -1,18262262 | -1,17739688 | -0,164192325 |
| 512 | 8,25 | -39,85751 | -3,948182 | 0,580182712 | -3,367999 | -0,284252 | 20,59384 | -58,55075588 | -58,83500823 | -37,95691477 |
| 513 | 0 | 9,185367 | -10,72022 | -4,15608228 | -14,8763 | 0,34639 | -1,658285 | -17,81163218 | -17,46524264 | -19,4699171 |
| 513 | 4,125 | -0,406247 | -1,026866 | -0,03087784 | -1,057744 | -0,009108 | 0,275097 | -2,643608867 | -2,652716966 | -2,368511688 |
| 513 | 8,25 | -9,997861 | 8,66649 | 4,094326603 | 12,76082 | -0,364606 | 2,208479 | 12,52441445 | 12,15980871 | 14,73289373 |
| 514 | 0 | 71,89218 | 8,664122 | 4,094326603 | 12,75845 | -0,364606 | -3,188148 | 118,9767348 | 118,612129 | 115,7885868 |
| 514 | 4,125 | -0,650245 | -1,028636 | -0,03087784 | -1,059514 | -0,009108 | 0,305522 | -2,96434643 | -2,973454529 | -2,658824477 |
| 514 | 8,25 | -73,19267 | -10,72139 | -4,15608228 | -14,87748 | 0,34639 | 3,799192 | -124,9054276 | -124,5590381 | -121,1062357 |
| 515 | 0 | -15,38251 | -14,82729 | -7,99625152 | -22,82354 | 0,652248 | -1,757091 | -65,64433384 | -64,99208594 | -67,40142435 |
| 515 | 4,125 | 1,016044 | -0,151912 | 0,149734642 | -0,002177 | -0,022003 | -0,020433 | 1,316502885 | 1,294500029 | 1,296070208 |
| 515 | 8,25 | 17,4146 | 14,52346 | 8,295720808 | 22,81918 | -0,696254 | 1,716225 | 68,27733961 | 67,581086 | 69,993556476 |
| 516 | 0 | 103,7265 | 14,52606 | 8,295720808 | 22,82178 | -0,696254 | -1,64159 | 180,488012 | 179,7917584 | 178,8464218 |
| 516 | 4,125 | 0,694558 | -0,152619 | 0,149734642 | -0,002884 | -0,022003 | 0,017604 | 0,897157192 | 0,875154336 | 0,914761219 |
| 516 | 8,25 | -102,3374 | -14,83129 | -7,99625152 | -22,82755 | 0,652248 | 1,676798 | -178,6936976 | -178,0414497 | -177,0168993 |
| 519 | 0 | -40,97086 | -16,10536 | -10,4234044 | -26,52876 | 0,879501 | -0,982985 | -106,3196428 | -105,4401418 | -107,3026273 |
| 519 | 4,125 | 3,636995 | 1,603977 | 0,418304584 | 2,022281 | -0,036352 | -0,037835 | 8,772656863 | 8,736305041 | 8,734822012 |
| 519 | 8,25 | 48,24485 | 19,31331 | 11,2600136 | 30,57333 | -0,952205 | 0,907315 | 123,8649565 | 122,9127519 | 124,7722713 |
| 520 | 0 | 117,0266 | 19,32076 | 11,2600136 | 30,58078 | -0,952205 | -0,814487 | 213,2961081 | 212,3439035 | 212,4816211 |
| 520 | 4,125 | 3,391687 | 1,603387 | 0,418304584 | 2,021691 | -0,036352 | -0,012642 | 8,452575769 | 8,416223948 | 8,439934119 |
| 520 | 8,25 | -110,2432 | -16,11399 | -10,4234044 | -26,53739 | 0,879501 | 0,789204 | -196,3909566 | -195,5114556 | -195,6017528 |
| 521 | 0 | -50,14544 | -12,16752 | -7,10867147 | -19,27619 | 0,986523 | -0,4731 | -103,7414501 | -102,7549271 | -104,2145504 |
| 521 | 4,125 | 8,779841 | 5,027656 | 0,618940656 | 5,646597 | -0,061799 | -0,014616 | 22,70698692 | 22,64518762 | 22,6923709 |
| 521 | 8,25 | 67,70512 | 22,22283 | 8,346552783 | 30,56938 | -1,110122 | 0,443868 | 149,155424 | 148,0453023 | 149,5992922 |
| 522 | 0 | 119,7371 | 22,23703 | 8,346552783 | 30,58358 | -1,110122 | -0,455592 | 216,8254387 | 215,7153171 | 216,3698463 |
| 522 | 4,125 | 8,450599 | 5,028839 | 0,618940656 | 5,64778 | -0,061799 | 0,003498 | 22,28133728 | 22,21953798 | 22,28483565 |
| 522 | 8,25 | -102,8359 | -12,17935 | -7,10867147 | -19,28802 | 0,986523 | 0,462589 | -172,2627642 | -171,2762411 | -171,800175 |
| 523 | 0 | -38,16178 | 1,747991 | -3,81455095 | -2,06656 | 0,930845 | -0,269848 | -53,74343519 | -52,81259033 | -54,01328324 |
| 523 | 4,125 | 17,82305 | 11,2492 | 0,433408865 | 11,68261 | -0,090897 | -0,01023 | 46,5351787 | 46,44428199 | 46,52494864 |

| | | | | | | | | | | |
|-----|-------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 523 | 8,25 | 73,80788 | 20,7504 | 4,681368678 | 25,43177 | -1,112638 | 0,249388 | 146,8137926 | 145,7011543 | 147,0631805 |
| 524 | 0 | 115,4054 | 20,77118 | 4,681368678 | 25,45255 | -1,112638 | -0,285376 | 200,9321803 | 199,819542 | 200,6468039 |
| 524 | 4,125 | 17,229 | 11,25446 | 0,433408865 | 11,68787 | -0,090897 | 0,007581 | 45,77343195 | 45,68253524 | 45,78101282 |
| 524 | 8,25 | -80,94745 | 1,737732 | -3,81455095 | -2,076819 | 0,930845 | 0,300538 | -109,3853164 | -108,4544715 | -109,0847782 |
| 525 | 0 | -3,66561 | 29,63265 | -1,29278406 | 28,33987 | 0,799226 | -0,175285 | 51,9144473 | 52,7136732 | 51,73916255 |
| 525 | 4,125 | 28,71186 | 20,04524 | 0,286716555 | 20,33196 | -0,078078 | -0,009541 | 77,98933756 | 77,91125997 | 77,9797964 |
| 525 | 8,25 | 61,08934 | 10,45783 | 1,866217168 | 12,32404 | -0,955381 | 0,156202 | 104,0642278 | 103,1088467 | 104,2204303 |
| 526 | 0 | 95,07374 | 10,49207 | 1,866217168 | 12,35829 | -0,955381 | -0,1863 | 148,3124379 | 147,3570568 | 148,1261374 |
| 526 | 4,125 | 28,10727 | 20,05917 | 0,286716555 | 20,34589 | -0,078078 | 0,005793 | 77,23121709 | 77,15313951 | 77,23701052 |
| 526 | 8,25 | -38,85921 | 29,62627 | -1,29278406 | 28,33348 | 0,799226 | 0,197887 | 6,14999629 | 6,949222193 | 6,347883622 |
| 528 | 0 | 48,27126 | 74,70579 | 0,143594999 | 74,84938 | 0,69756 | -0,02284 | 212,4514063 | 213,1489663 | 212,4285661 |
| 528 | 4,125 | 34,39014 | 28,90293 | 0,197105269 | 29,10003 | 0,015607 | 0,00074 | 102,9072405 | 102,9228479 | 102,9079806 |
| 528 | 8,25 | 20,50901 | -16,89994 | 0,250615539 | -16,64932 | -0,666345 | 0,02432 | -6,636925192 | -7,303270461 | -6,612604985 |
| 529 | 0 | 38,3599 | -16,83419 | 0,250615539 | -16,58357 | -0,666345 | -0,039353 | 16,70072849 | 16,03438322 | 16,66137525 |
| 529 | 4,125 | 35,44509 | 28,92987 | 0,197105269 | 29,12697 | 0,015607 | -0,004705 | 104,3325627 | 104,3481701 | 104,3278582 |
| 529 | 8,25 | 32,53028 | 74,69392 | 0,143594999 | 74,83751 | 0,69756 | 0,029944 | 191,9643969 | 192,6619569 | 191,9943411 |
| 541 | 0 | -72,48319 | -15,63827 | -10,132547 | -25,77082 | 0,294717 | 3,825889 | -145,7697934 | -145,4750763 | -141,9439045 |
| 541 | 4,125 | 3,424675 | 1,622617 | 0,412789054 | 2,035406 | -0,021052 | 0,279024 | 8,522889497 | 8,501837984 | 8,801913102 |
| 541 | 8,25 | 79,33254 | 18,88351 | 10,95812514 | 29,84163 | -0,33682 | -3,267842 | 162,8155724 | 162,4787523 | 159,5477307 |
| 542 | 0 | 78,48893 | 18,89755 | 10,95812514 | 29,85567 | -0,33682 | 3,176924 | 161,7469503 | 161,4101302 | 164,9238741 |
| 542 | 4,125 | 3,444533 | 1,621822 | 0,412789054 | 2,034611 | -0,021052 | 0,085567 | 8,547114428 | 8,526062916 | 8,632681245 |
| 542 | 8,25 | -71,59986 | -15,6539 | -10,132547 | -25,78645 | 0,294717 | -3,00579 | -144,6527215 | -144,3580044 | -147,6585116 |

TABEL MOMEN BALOK LINGKUNG TEPI ARAH X

| FRAME | STA | MD | ML | | ML TOT | ME | | COMB1 | | COMB 2 | | COMB 3 | |
|-------|----------|-----------|-----------|----------------|-----------|-----------|-----------|-------------------|------------------------|------------------------|------------------------|--------|--|
| | | | ML merata | ML.Koeff kejut | | ME X | ME Y | 1,3MD + 2 (MQ+MP) | 1,3MD + 2 (MQ+MP)+TMAX | 1,3MD + 2 (MQ+MP)+TMEY | 1,3MD + 2 (MQ+MP)+TMEY | | |
| 13 | 0 | -565,2518 | -658,2966 | -113,374339 | -771,6709 | 9,932677 | -0,873864 | -2278,169134 | -2268,236457 | -2279,042998 | | | |
| 13 | 2,586036 | -100,6621 | -137,0098 | -22,2232845 | -159,233 | 5,499124 | -0,48558 | -449,3267556 | -443,8276316 | -449,812336 | | | |
| 13 | 5,172072 | 363,9276 | 384,2771 | 68,92776989 | 453,2048 | 1,065571 | -0,097297 | 1379,515623 | 1380,581194 | 1379,418326 | | | |
| 14 | 0 | -314,0648 | -391,5076 | -78,9871135 | -470,4947 | 0,422672 | 0,268177 | -1349,273639 | -1348,850967 | -1349,005462 | | | |
| 14 | 2,567192 | -0,434163 | 17,92465 | 5,807961219 | 23,73261 | 0,794779 | 0,112192 | 46,90081076 | 47,69558927 | 47,01300289 | | | |
| 14 | 5,134383 | 313,1965 | 427,3569 | 90,60303597 | 517,9599 | 1,166885 | -0,043793 | 1443,075261 | 1444,242145 | 1443,031468 | | | |
| 15 | 0 | -163,6876 | -370,9677 | -86,5448352 | -457,5125 | 1,355452 | 0,342642 | -1127,818999 | -1126,463547 | -1127,476357 | | | |
| 15 | 2,55129 | -75,04869 | 22,07027 | 16,04537747 | 38,11565 | 0,603442 | 0,079184 | -21,3319995 | -20,72855751 | -21,25281552 | | | |
| 15 | 5,10258 | 13,59024 | 415,1083 | 118,6355901 | 533,7438 | -0,148568 | -0,184274 | 1085,155 | 1085,006432 | 1084,970726 | | | |
| 19 | 0 | 395,6699 | 240,4215 | 7,12875591 | 247,5503 | -18,30356 | 1,364407 | 1009,471413 | 991,1678487 | 1010,83582 | | | |
| 19 | 2,506689 | 496,2987 | 264,7648 | 3,54442071 | 268,3092 | -12,09684 | 0,275568 | 1181,806698 | 1169,709854 | 1182,082266 | | | |
| 19 | 5,013378 | 596,9275 | 289,1081 | -0,03991449 | 289,0681 | -5,890123 | -0,813271 | 1354,141983 | 1348,25186 | 1353,328711 | | | |
| 20 | 0 | 758,6426 | 389,7709 | 2,995226675 | 392,7661 | -19,06084 | -0,961481 | 1771,767658 | 1752,706817 | 1770,806177 | | | |
| 20 | 2,502183 | 395,2074 | 191,8034 | 1,395554752 | 193,199 | -9,554815 | -0,453443 | 900,1675375 | 890,6127223 | 899,7140942 | | | |
| 20 | 5,004366 | 31,77214 | -6,164062 | -0,20411717 | -6,36818 | -0,04879 | 0,054594 | 28,56741712 | 28,51862757 | 28,62201111 | | | |
| 164 | 0 | -194,5786 | -52,86007 | 7,985862674 | -44,87421 | -8,285382 | 0,6766 | -342,7006326 | -350,9860143 | -342,0240325 | | | |
| 164 | 2,513691 | 238,8016 | 141,3972 | 4,007778196 | 145,405 | -6,546036 | 0,415315 | 601,2520088 | 594,7059724 | 601,6673239 | | | |
| 164 | 5,027383 | 672,1818 | 335,6545 | 0,029693718 | 335,6842 | -4,806691 | 0,15403 | 1545,20465 | 1540,397959 | 1545,35868 | | | |
| 167 | 0 | -83,47809 | -83,753 | 41,43013975 | -42,32286 | -14,68346 | 2,999738 | -193,167235 | -207,8506957 | -190,1674972 | | | |
| 167 | 2,705585 | -59,38267 | -24,40927 | 7,575193492 | -16,83408 | -7,283543 | 0,034921 | -110,8656221 | -118,1491654 | -110,8307012 | | | |
| 167 | 5,41117 | -35,28725 | 34,93446 | -26,2797528 | 8,654707 | 0,116374 | -2,929896 | -28,56400924 | -28,44763502 | -31,49390513 | | | |
| 187 | 0 | -304,5871 | -149,5342 | 29,02267603 | -120,5116 | 7,851345 | 1,294696 | -636,9863385 | -629,1349931 | -635,6916424 | | | |
| 187 | 2,651523 | -79,6047 | -23,63884 | -7,39137236 | -31,03021 | 1,730663 | -0,671549 | -165,5465335 | -163,8158704 | -166,2180829 | | | |
| 187 | 5,303045 | 145,3777 | 102,2566 | -43,8054208 | 58,45115 | -4,390019 | -2,637795 | 305,8932715 | 301,5032523 | 303,2554766 | | | |
| 213 | 0 | -191,846 | -59,84603 | 48,89389881 | -10,96213 | -2,535151 | 10,53724 | -271,3040727 | -273,8392239 | -260,7668291 | | | |
| 213 | 2,672821 | -131,6229 | -21,34029 | 2,971842679 | -18,36845 | -3,006798 | 0,859684 | -207,8466706 | -210,8534685 | -206,9869865 | | | |
| 213 | 5,345641 | -71,3998 | 17,16545 | -42,9502135 | -25,78477 | -3,478445 | -8,817875 | -144,3892685 | -147,8677132 | -153,207144 | | | |
| 214 | 0 | -495,8361 | -184,2165 | 4,556957799 | -179,6596 | 5,816873 | -0,994594 | -1003,906059 | -998,0891858 | -1004,900653 | | | |
| 214 | 2,623968 | -97,61621 | -41,58066 | -12,7759366 | -54,3566 | 0,419835 | -1,16048 | -235,614273 | -235,1944379 | -236,7747526 | | | |
| 214 | 5,247936 | 300,6037 | 101,0552 | -30,108831 | 70,94637 | -4,977203 | -1,326365 | 532,677513 | 527,70031 | 531,3511481 | | | |
| 215 | 0 | -461,5282 | -208,8115 | -4,80277971 | -213,6142 | 5,857804 | 0,738486 | -1027,215111 | -1021,357307 | -1026,476626 | | | |
| 215 | 2,585908 | -79,63126 | -37,74854 | -13,7082605 | -51,4568 | 0,481138 | -0,561797 | -206,434249 | -205,9531113 | -206,9960458 | | | |
| 215 | 5,171816 | 302,2657 | 133,3144 | -22,6137413 | 110,7006 | -4,895529 | -1,862079 | 614,3466133 | 609,4510844 | 612,4845339 | | | |
| 216 | 0 | -564,291 | -240,8554 | -30,3617514 | -271,2171 | 7,01437 | 0,333259 | -1276,012554 | -1268,998184 | -1275,679295 | | | |

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|-----|----------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 216 | 2,555252 | -83,08255 | -38,9609 | -15,4233999 | -54,3843 | 0,849309 | -0,934486 | -216,7759193 | -215,9266102 | -217,7104054 |
| 216 | 5,110504 | 398,1259 | 162,9336 | -0,48504846 | 162,4485 | -5,315752 | -2,202231 | 842,4607154 | 837,1449637 | 840,2584845 |
| 217 | 0 | -559,6312 | -243,7581 | -56,4059197 | -300,1641 | 7,440946 | -1,066983 | -1327,848752 | -1320,407806 | -1328,915734 |
| 217 | 2,531798 | -39,32236 | -25,14322 | -13,2568514 | -38,40007 | 0,815069 | -1,406281 | -127,9192104 | -127,1041412 | -129,3254912 |
| 217 | 5,063596 | 480,9865 | 193,4717 | 29,89221699 | 223,3639 | -5,810608 | -1,745579 | 1072,010331 | 1066,199523 | 1070,264752 |
| 218 | 0 | -412,9968 | -192,1595 | -77,5790188 | -269,7385 | 6,399658 | -4,050893 | -1076,372865 | -1069,973207 | -1080,423758 |
| 218 | 2,515189 | 25,75197 | -4,085353 | -7,60910452 | -11,69446 | 0,647495 | -2,292098 | 10,08864356 | 10,73613888 | 7,796545949 |
| 218 | 5,030378 | 464,5007 | 183,9888 | 62,36080972 | 246,3496 | -5,104667 | -0,533302 | 1096,550152 | 1091,445485 | 1096,01685 |
| 219 | 0 | 103,5081 | 21,16797 | -6,63212105 | 14,53585 | -0,291716 | -5,175692 | 163,6321981 | 163,3404816 | 158,4565059 |
| 219 | 2,504407 | 307,7214 | 115,5159 | 53,74751797 | 169,6635 | -2,473177 | -0,40819 | 739,3647197 | 736,8915422 | 738,9565296 |
| 219 | 5,008813 | 511,9347 | 210,6639 | 114,127157 | 324,7911 | -4,654639 | 4,359312 | 1315,097241 | 1310,442603 | 1319,456553 |
| 221 | 0 | 429,176 | 166,2839 | 104,6643424 | 270,9483 | -4,336462 | -2,036506 | 1099,825342 | 1095,48888 | 1097,788836 |
| 221 | 2,500135 | 347,976 | 135,9773 | 57,89354024 | 193,8708 | -2,284352 | 4,140581 | 840,1104499 | 837,8260983 | 844,2510313 |
| 221 | 5,00027 | 266,7759 | 105,6707 | 11,12273805 | 116,7934 | -0,232241 | 10,31767 | 580,3955581 | 580,1633167 | 590,713227 |
| 224 | 0 | 481,84 | 199,574 | 6,871040582 | 206,445 | -5,196581 | 4,043846 | 1039,282042 | 1034,085461 | 1043,325887 |
| 224 | 2,52383 | -43,88122 | -17,52444 | -11,5627725 | -29,08721 | 2,395398 | -1,018866 | -115,2200132 | -112,8246152 | -116,2388789 |
| 224 | 5,047659 | -569,6025 | -234,6228 | -29,9965855 | -264,6194 | 9,987377 | -6,081577 | -1269,722068 | -1259,734691 | -1275,803645 |
| 227 | 0 | 263,7379 | 133,5056 | -37,0416233 | 96,46397 | -3,950196 | -2,77227 | 535,7872666 | 531,8370701 | 533,0149962 |
| 227 | 2,607363 | -60,70065 | -17,91423 | -10,5103235 | -28,42465 | 1,024727 | -0,758237 | -135,7599475 | -134,7352204 | -136,5181842 |
| 227 | 5,214725 | -385,1392 | -169,3341 | 16,02097623 | -153,3131 | 5,999651 | 1,255797 | -807,3071616 | -801,3075108 | -806,0513645 |
| 230 | 0 | -469,671 | -198,4867 | 4,46320114 | -194,0235 | 7,587964 | 0,422973 | -998,6192931 | -991,0313289 | -998,1963201 |
| 230 | 2,572163 | -59,27053 | -20,30955 | -10,8047758 | -31,11433 | 1,595876 | -1,000171 | -139,2803395 | -137,6844633 | -140,2805105 |
| 230 | 5,144327 | 351,13 | 157,8676 | -26,0727527 | 131,7948 | -4,396212 | -2,423315 | 720,0586141 | 715,6624024 | 717,6352992 |
| 231 | 0 | -541,8293 | -224,7522 | -10,6819829 | -235,4342 | 8,847181 | -1,703613 | -1175,246441 | -1166,39926 | -1176,950054 |
| 231 | 2,544352 | -59,42002 | -22,30505 | -11,3321206 | -33,63717 | 2,05066 | -1,252687 | -144,520369 | -142,4697093 | -145,7730565 |
| 231 | 5,088705 | 422,9893 | 180,1421 | -11,9822582 | 168,1598 | -4,745861 | -0,801762 | 886,205703 | 881,4598419 | 885,4039412 |
| 235 | 0 | 532,8908 | 216,4967 | 34,26533411 | 250,7621 | -5,608428 | 12,90158 | 1194,282222 | 1188,673794 | 1207,183804 |
| 235 | 2,509705 | 20,5615 | 6,958574 | -7,80279127 | -0,844217 | 2,146045 | 1,566252 | 25,0415184 | 27,18756293 | 26,60777043 |
| 235 | 5,01941 | -491,7678 | -202,5796 | -49,8709166 | -252,4505 | 9,900517 | -9,769078 | -1144,199185 | -1134,298668 | -1153,968263 |
| 236 | 0 | -240,1847 | -99,46556 | -59,8708857 | -159,3364 | 7,482528 | 1,873629 | -630,9130007 | -623,4304725 | -629,0393717 |
| 236 | 2,501881 | 125,1428 | 47,23258 | 2,274740356 | 49,50732 | 1,368984 | 5,0551 | 261,7003067 | 263,0692902 | 266,755407 |
| 236 | 5,003762 | 490,4703 | 193,9307 | 64,42036644 | 258,3511 | -4,744561 | 8,236572 | 1154,313614 | 1149,569053 | 1162,550186 |
| 323 | 0 | -303,6103 | -249,7198 | 21,91728598 | -227,8026 | 63,85086 | 0,158051 | -850,2985353 | -786,4476703 | -850,1404845 |
| 323 | 2,705585 | -126,975 | -75,14077 | 1,61072729 | -73,53005 | 16,73265 | 0,145194 | -312,1275269 | -295,3948735 | -311,9823331 |
| 323 | 5,41117 | 49,66041 | 99,43831 | -18,6958314 | 80,74247 | -30,38556 | 0,132337 | 226,0434815 | 195,6579233 | 226,1758184 |
| 324 | 0 | -341,1565 | -178,8527 | 25,56077866 | -153,292 | 21,87259 | -0,490296 | -750,0874552 | -728,214869 | -750,5777515 |
| 324 | 2,651523 | -60,49361 | -9,364856 | -5,71452805 | -15,07938 | -5,00319 | -0,005844 | -108,8004551 | -113,8036449 | -108,806299 |
| 324 | 5,303045 | 220,1693 | 160,123 | -36,9898348 | 123,1332 | -31,87897 | 0,478609 | 532,4865451 | 500,6075792 | 532,9651536 |

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|-----|----------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 325 | 0 | -432,0757 | -206,3466 | 11,65365175 | -194,693 | 23,67242 | -0,256577 | -951,0844033 | -927,411988 | -951,3409804 |
| 325 | 2,607363 | -44,70876 | -5,928408 | -9,0992808 | -15,02834 | -4,650794 | 0,013766 | -88,17806588 | -92,82886007 | -88,16429984 |
| 325 | 5,214725 | 342,6582 | 194,4898 | -29,8535079 | 164,6363 | -32,974 | 0,284109 | 774,7282716 | 741,7542678 | 775,0123807 |
| 326 | 0 | -502,2781 | -224,955 | 1,338803071 | -223,6162 | 20,248 | -0,286527 | -1100,194017 | -1079,946019 | -1100,480544 |
| 326 | 2,572163 | -39,65014 | -5,775545 | -9,09327857 | -14,86882 | -5,297006 | -0,036209 | -81,28283441 | -86,57984047 | -81,31904357 |
| 326 | 5,144327 | 422,9778 | 213,4039 | -19,5253502 | 193,8786 | -30,84201 | 0,214109 | 937,6283483 | 906,7863377 | 937,8424573 |
| 342 | 0 | -516,6284 | -188,8134 | 4,189768656 | -184,6237 | 6,38875 | -2,256464 | -1040,864282 | -1034,475532 | -1043,120746 |
| 342 | 2,623968 | -133,757 | -66,14449 | -15,648545 | -81,79303 | 11,86297 | -0,622713 | -337,4702234 | -325,6072514 | -338,0929364 |
| 342 | 5,247936 | 249,1143 | 56,52446 | -35,4868586 | 21,0376 | 17,33719 | 1,011038 | 365,9238351 | 383,2610292 | 366,9348732 |
| 343 | 0 | -470,5401 | -205,4793 | -4,25874547 | -209,7381 | 2,866203 | -0,512612 | -1031,178347 | -1028,312144 | -1031,690959 |
| 343 | 2,585908 | -111,9524 | -59,96054 | -16,3056977 | -76,26623 | 10,86371 | 0,094022 | -298,0705774 | -287,2068626 | -297,9765558 |
| 343 | 5,171816 | 246,6353 | 85,55828 | -28,3526489 | 57,20563 | 18,86123 | 0,700655 | 435,0371919 | 453,8984187 | 435,7378472 |
| 344 | 0 | -609,6156 | -263,2898 | -32,8466669 | -296,1365 | 16,27597 | -0,301501 | -1384,77322 | -1368,497249 | -1385,074721 |
| 344 | 2,555252 | -126,991 | -69,45198 | -18,991502 | -88,44349 | 15,12759 | 0,049284 | -341,9752871 | -326,8476972 | -341,9260034 |
| 344 | 5,110504 | 355,6335 | 124,3859 | -5,13633507 | 119,2495 | 13,97921 | 0,400069 | 700,8226454 | 714,8018544 | 701,222714 |
| 345 | 0 | -647,3174 | -297,9921 | -62,6703455 | -360,6624 | 32,11664 | -0,138761 | -1562,837531 | -1530,720893 | -1562,976292 |
| 345 | 2,531798 | -94,71562 | -64,48262 | -17,8673782 | -82,35 | 19,3023 | 0,067411 | -287,8303051 | -268,5280037 | -287,7628943 |
| 345 | 5,063596 | 457,8862 | 169,0269 | 26,93558905 | 195,9624 | 6,487965 | 0,273582 | 987,1769205 | 993,6648851 | 987,450503 |
| 346 | 0 | -552,3511 | -288,1537 | -88,7825702 | -376,9363 | 51,2518 | 0,079993 | -1471,929051 | -1420,677249 | -1471,849058 |
| 346 | 2,515189 | -47,72171 | -57,84282 | -13,9163764 | -71,7592 | 25,98946 | 0,117185 | -205,5566138 | -179,5671506 | -205,4394284 |
| 346 | 5,030378 | 456,9077 | 172,4681 | 60,94981744 | 233,4179 | 0,727124 | 0,154378 | 1060,815823 | 1061,542947 | 1060,970201 |
| 347 | 0 | -6,218841 | -62,01066 | -16,399219 | -78,40987 | 39,09396 | 0,212698 | -164,9042419 | -125,8102771 | -164,6915436 |
| 347 | 2,504407 | 280,8194 | 91,052 | 50,79861438 | 141,8506 | 9,391041 | 0,126302 | 648,766383 | 658,1574242 | 648,8926852 |
| 347 | 5,008813 | 567,8575 | 244,1147 | 117,9964478 | 362,1111 | -20,31188 | 0,039906 | 1462,437008 | 1442,125126 | 1462,476914 |
| 348 | 0 | 386,2272 | 118,3873 | 99,00770241 | 217,395 | 18,46698 | 0,220728 | 936,8854618 | 955,3524459 | 937,1061896 |
| 348 | 2,500135 | 360,5507 | 144,941 | 58,91195363 | 203,8529 | -6,545554 | 0,062331 | 876,42173 | 869,8761757 | 876,4840611 |
| 348 | 5,00027 | 334,8741 | 171,4946 | 18,81620485 | 190,3108 | -31,55809 | -0,096065 | 815,9579981 | 784,3999055 | 815,8619326 |
| 349 | 0 | 480,7282 | 194,0519 | 64,40720228 | 258,4591 | -5,02209 | 0,152122 | 1141,864829 | 1136,842739 | 1142,016951 |
| 349 | 2,501979 | 173,0221 | 86,14092 | 6,869120346 | 93,01004 | -16,96271 | -0,070492 | 410,9488342 | 393,9861253 | 410,8783421 |
| 349 | 5,003959 | -134,6839 | -21,77006 | -50,6689616 | -72,43902 | -28,90333 | -0,293106 | -319,9671611 | -348,8704888 | -320,2602672 |
| 350 | 0 | 559,3383 | 236,8171 | 36,72995829 | 273,547 | -14,4172 | 0,172238 | 1274,233829 | 1259,816632 | 1274,406068 |
| 350 | 2,509487 | 59,74057 | 36,02238 | -4,37448513 | 31,6479 | -11,56884 | -0,070481 | 140,958633 | 129,3896967 | 140,8880519 |
| 350 | 5,018974 | -439,8572 | -164,7723 | -45,4789285 | -210,2512 | -8,720475 | -0,3132 | -992,3167635 | -1001,037239 | -992,6299637 |
| 351 | 0 | 528,1757 | 236,8883 | 11,24743024 | 248,1357 | -22,95591 | 0,1846 | 1182,899957 | 1159,944046 | 1183,084557 |
| 351 | 2,52383 | -13,34009 | 5,041354 | -8,91016826 | -3,858815 | -8,346038 | -0,070049 | -25,07974224 | -33,4257804 | -25,14979086 |
| 351 | 5,047659 | -554,8559 | -226,8056 | -29,0677668 | -255,8734 | 6,263834 | -0,324697 | -1233,059441 | -1226,795607 | -1233,384139 |
| 352 | 0 | 484,7056 | 228,2925 | -6,30973614 | 221,9828 | -27,65359 | 0,203528 | 1074,082821 | 1046,429232 | 1074,286349 |
| 352 | 2,544352 | -35,70584 | -4,900805 | -9,28211483 | -14,18292 | -6,207383 | -0,057235 | -74,78343213 | -80,99081464 | -74,84066717 |

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|-----|----------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 352 | 5,088705 | -556,1173 | -238,0941 | -12,2544935 | -250,3486 | 15,23882 | -0,317998 | -1223,649685 | -1208,410861 | -1223,967683 |
| 354 | 0 | -166,6764 | -54,55353 | -51,4916384 | -106,0452 | 31,17223 | -6,427065 | -428,7697133 | -397,5974804 | -435,196778 |
| 354 | 2,672821 | -5,879088 | 66,10601 | 13,20386108 | 79,30987 | -43,84586 | 0,255503 | 150,9769312 | 107,1310706 | 151,2324346 |
| 354 | 5,345641 | 154,9183 | 186,7656 | 77,89936056 | 264,6649 | -118,864 | 6,938071 | 730,7235758 | 611,8596215 | 737,6616472 |
| 365 | 0 | 28,8523 | -6,488624 | -0,2413694 | -6,729994 | 0,092692 | -0,001521 | 24,04800619 | 24,14069808 | 24,04648527 |
| 365 | 2,502183 | 514,9451 | 268,0633 | 10,30512401 | 278,3684 | -45,04575 | -0,02616 | 1226,165431 | 1181,119677 | 1226,139271 |
| 365 | 5,004366 | 1001,038 | 542,6152 | 20,85161742 | 563,4668 | -90,1842 | -0,050799 | 2428,282856 | 2338,098655 | 2428,232058 |
| 366 | 0 | 750,1441 | 397,6157 | 12,60073994 | 410,2165 | -56,03743 | -0,038043 | 1795,620271 | 1739,582839 | 1795,582227 |
| 366 | 2,506689 | 676,3722 | 381,3454 | 17,17444387 | 398,5199 | -66,49765 | -0,031283 | 1676,323591 | 1609,825941 | 1676,292309 |
| 366 | 5,013378 | 602,6002 | 365,0752 | 21,7481478 | 386,8233 | -76,95787 | -0,024522 | 1557,026912 | 1480,069043 | 1557,00239 |
| 367 | 0 | 833,184 | 455,4549 | 14,02035471 | 469,4752 | -60,56504 | -0,052493 | 2022,089561 | 1961,524518 | 2022,037068 |
| 367 | 2,513691 | 354,9105 | 217,5134 | 12,91553938 | 230,4289 | -42,15894 | -0,009696 | 922,2414596 | 880,0825238 | 922,2317636 |
| 367 | 5,027383 | -123,3629 | -20,42813 | 11,81072404 | -8,617407 | -23,75283 | 0,033101 | -177,6066413 | -201,3594702 | -177,5735406 |
| 368 | 0 | 857,046 | 477,1568 | 14,83641608 | 491,9932 | -58,40314 | -0,069266 | 2098,146255 | 2039,743117 | 2098,076989 |
| 368 | 2,523556 | 148,7722 | 107,215 | 10,56645842 | 117,7814 | -23,46729 | 0,002492 | 428,9667124 | 405,4994241 | 428,969204 |
| 368 | 5,047112 | -559,5016 | -262,7269 | 6,296500753 | -256,4304 | 11,46856 | 0,07425 | -1240,212831 | -1228,744269 | -1240,138581 |
| 369 | 0 | 844,2423 | 504,9021 | 39,2650001 | 544,1671 | -59,31153 | -0,092891 | 2185,849249 | 2126,53772 | 2185,756358 |
| 369 | 2,537563 | 4,992677 | 60,98051 | 17,15319952 | 78,13371 | -14,02035 | 0,014773 | 162,7579045 | 148,7375531 | 162,7726777 |
| 369 | 5,075126 | -834,257 | -382,9411 | -4,95860107 | -387,8997 | 31,27083 | 0,122437 | -1860,33344 | -1829,062613 | -1860,211003 |
| 370 | 0 | 157,1228 | 537,2076 | 132,9645841 | 670,1722 | -57,66472 | -0,008959 | 1544,603952 | 1486,939236 | 1544,594992 |
| 370 | 2,55129 | -53,22353 | 41,12377 | 18,26756158 | 59,39133 | -8,23674 | 0,053561 | 49,59207774 | 41,35533803 | 49,64563884 |
| 370 | 5,10258 | -263,5699 | -454,96 | -96,429461 | -551,3895 | 41,19124 | 0,116082 | -1445,419796 | -1404,22856 | -1445,303715 |
| 371 | 0 | 429,453 | 536,8452 | 103,4344376 | 640,2796 | -50,24931 | 0,220829 | 1838,848119 | 1788,598814 | 1839,068949 |
| 371 | 2,567192 | 23,76669 | 39,6465 | 8,329376508 | 47,97587 | -9,163658 | 0,061851 | 126,8484349 | 117,6847769 | 126,9102854 |
| 371 | 5,134383 | -381,9197 | -457,5522 | -86,7756846 | -544,3278 | 31,92199 | -0,097128 | -1585,15125 | -1553,22926 | -1585,248378 |
| 372 | 0 | 502,0207 | 510,3079 | 83,62420805 | 593,9322 | -57,37863 | -0,077393 | 1840,491242 | 1783,112613 | 1840,413849 |
| 372 | 2,586036 | -259,0898 | -248,0508 | -35,1815464 | -283,2324 | 57,08527 | -0,09363 | -903,2814297 | -846,1961624 | -903,3750593 |
| 372 | 5,172072 | -1020,2 | -1006,41 | -153,987301 | -1160,397 | 171,5492 | -0,109866 | -3647,054102 | -3475,504937 | -3647,163968 |
| 532 | 0 | -758,9503 | -317,3327 | 2,751509111 | -314,5812 | 0,265701 | 0,400352 | -1615,797735 | -1615,532033 | -1615,397382 |
| 532 | 2,537563 | -34,36552 | 31,73879 | 13,73581704 | 45,47461 | -0,387163 | 0,094985 | 46,27403567 | 45,88687261 | 46,36902069 |
| 532 | 5,075126 | 690,2192 | 380,8103 | 24,72012497 | 405,5304 | -1,040028 | -0,210382 | 1708,345806 | 1707,305779 | 1708,135424 |
| 533 | 0 | 704,0329 | 357,9768 | 0,881561923 | 358,8584 | -2,580035 | -0,027888 | 1632,959514 | 1630,379479 | 1632,931626 |
| 533 | 2,523556 | 82,73273 | 62,1588 | 5,295070525 | 67,45387 | -2,40379 | 0,190167 | 242,4603033 | 240,0565128 | 242,6504701 |
| 533 | 5,047112 | -538,5674 | -233,6592 | 9,708579126 | -223,9506 | -2,227546 | 0,408221 | -1148,038908 | -1150,266454 | -1147,630686 |

| | | | | | | | | | | |
|-----|----------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|---------------|--------------|
| 324 | 2,651523 | -212,6464 | -1,378177 | -0,789012142 | -2,167189 | 0,053388 | 98,60916 | -280,7747097 | -280,7213214 | -182,165549 |
| 324 | 5,303045 | -34,1878 | 2,015677 | 0,660191592 | 2,675869 | -0,13644 | 34,06827 | -39,09240533 | -39,22884522 | -5,024140079 |
| 325 | 0 | -140,0796 | 3,523118 | 0,73905132 | 4,262169 | 0,063399 | 29,74272 | -173,5792031 | -173,5158043 | -143,8364816 |
| 325 | 2,607363 | -37,18151 | 1,697056 | 0,503312893 | 2,200369 | -0,03849 | 11,59355 | -43,93522807 | -43,97371819 | -32,34168056 |
| 325 | 5,214725 | 65,71662 | -0,129006 | 0,267574467 | 0,138569 | -0,140379 | -6,555626 | 85,70874697 | 85,56836795 | 79,15312051 |
| 326 | 0 | -27,67142 | 7,320472 | 0,536195138 | 7,856667 | 0,270172 | -5,320254 | -20,25951561 | -19,98934369 | -25,57977006 |
| 326 | 2,572163 | 34,40261 | 1,313353 | 0,309357656 | 1,62271 | 0,010318 | -3,778206 | 47,96881364 | 47,97913128 | 44,19060732 |
| 326 | 5,144327 | 96,47664 | 4,693767 | 0,082520173 | -4,611247 | -0,249537 | -2,236158 | 116,1971429 | 115,9476063 | 113,9609847 |
| 342 | 0 | 348,102 | 7,300593 | 0,188250037 | 7,488843 | -0,310339 | -182,8151 | 467,1998837 | 467,1998837 | 284,6951389 |
| 342 | 2,623968 | 232,6585 | 3,824225 | 0,3845218 | 4,208747 | -1,071806 | -112,6666 | 310,8735038 | 309,8016975 | 198,2069472 |
| 342 | 5,247936 | 117,215 | 0,347858 | 0,580793564 | 0,928651 | -1,833274 | -42,51803 | 154,2367349 | 152,4035113 | 111,7187554 |
| 343 | 0 | 147,1768 | -7,037471 | 0,288162344 | -6,749309 | 2,755172 | -4,022659 | 177,831226 | 180,5863981 | 173,8085666 |
| 343 | 2,585908 | 70,67071 | 0,695638 | -0,347276288 | 0,348362 | 0,35887 | 1,618888 | 92,56865256 | 92,92752296 | 94,18754072 |
| 343 | 5,171816 | -5,835374 | 8,428747 | -0,98271492 | 7,446032 | -2,037431 | 7,260436 | 7,306079058 | 5,268647847 | 14,56651479 |
| 344 | 0 | 34,86756 | -12,03029 | -3,057459103 | -15,08775 | 3,088314 | 5,470324 | 15,15232806 | 18,2406418 | 20,62265216 |
| 344 | 2,555252 | 13,7298 | 5,426273 | -0,993177166 | 4,433096 | 0,283505 | 2,619546 | 26,71492967 | 26,99843422 | 29,33447547 |
| 344 | 5,11050A | -7,407964 | 22,88284 | 1,071104771 | 23,95394 | -2,521305 | -0,231233 | 38,27753128 | 35,75622663 | 38,04629878 |
| 345 | 0 | -5,132923 | -12,94933 | -5,014937555 | -17,96427 | 3,930203 | 0,181483 | -42,60134435 | -38,67114107 | -42,41986168 |
| 345 | 2,531798 | -11,59975 | 13,40259 | 0,356886912 | 13,75948 | 0,199394 | -0,10142 | 12,43927525 | 12,63866958 | 12,33785521 |
| 345 | 5,063596 | -18,06658 | 39,75451 | 5,728711378 | 45,48322 | -3,531415 | -0,384323 | 67,47989486 | 63,94848022 | 67,09557211 |
| 346 | 0 | -30,06749 | -2,202015 | -4,486688743 | -6,688704 | 4,054162 | -0,135178 | -52,46515071 | -48,41098904 | -52,60032837 |
| 346 | 2,515189 | -78,96335 | 9,532377 | 1,158143184 | 10,69052 | 1,096788 | -0,12612 | -81,27133075 | -80,17454295 | -81,39745123 |
| 346 | 5,030378 | -127,8592 | 21,26677 | 6,802975112 | 28,06974 | -1,860586 | -0,117063 | -110,0775108 | -111,93809369 | -110,1945741 |
| 347 | 0 | -102,3288 | 10,1334 | 1,639309103 | 11,77271 | 1,319142 | -0,040732 | -109,4820426 | -108,1629006 | -109,5227745 |
| 347 | 2,504407 | -178,3702 | 13,64423 | 9,002647443 | 22,64687 | -0,063915 | -0,047075 | -186,5875712 | -186,6514864 | -186,6346458 |
| 347 | 5,008813 | -254,4117 | 17,15505 | 16,36598578 | 33,52104 | -1,446972 | -0,053417 | -263,6930997 | -265,1400721 | -263,746517 |
| 348 | 0 | -235,8615 | 12,46152 | 15,31529117 | 27,77681 | 1,64321 | -0,019894 | -251,0664786 | -249,4232683 | -251,0863724 |
| 348 | 2,500135 | -422,6793 | 12,50854 | 8,618401588 | 21,12694 | 0,255321 | -0,022545 | -507,2292157 | -506,9738945 | -507,2517611 |
| 348 | 5,00027 | -509,497 | 12,55557 | 1,921512008 | 14,47708 | -1,132568 | -0,025197 | -763,3919527 | -764,5245206 | -763,4171498 |
| 349 | 0 | -586,1292 | 16,33249 | 5,990896815 | 22,32339 | 1,564984 | -0,019117 | -717,3211389 | -715,7561554 | -717,3402555 |
| 349 | 2,501979 | -430,3799 | 11,06488 | 1,381168804 | 12,44605 | -0,47812 | -0,013087 | -534,6018135 | -535,0799333 | -534,6149005 |
| 349 | 5,003959 | -274,6307 | 5,797265 | -3,22859208 | 2,568706 | -2,521223 | -0,007057 | -351,8824882 | -354,4037113 | -351,8895454 |
| 350 | 0 | -209,3912 | 32,80307 | 5,060716703 | 37,86378 | 2,330015 | -0,008876 | -196,4810354 | -194,1510208 | -196,4899118 |
| 350 | 2,509487 | -187,6221 | 13,02545 | 0,562519689 | 13,58797 | 0,144645 | -0,035727 | -216,7327253 | -216,5880801 | -216,7684518 |
| 350 | 5,018974 | -155,8529 | -6,752165 | -3,935677325 | -10,68784 | -2,040724 | -0,062577 | -236,9844151 | -239,0251393 | -237,0469918 |
| 351 | 0 | -140,6286 | 25,25217 | 1,359385079 | 26,61155 | 1,066753 | -0,08931 | -129,5941302 | -128,5273772 | -129,6834403 |
| 351 | 2,52383 | -118,125 | 6,770488 | -0,447877912 | 6,32261 | -0,005896 | -0,080441 | -140,9173263 | -140,9232226 | -140,9977671 |

| | | | | | | | | | | |
|-----|----------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 351 | 5,047659 | -95,62143 | -11,71119 | -2,255140603 | -13,96633 | -1,078545 | -0,071571 | -152,2405224 | -153,3190679 | -152,3120938 |
| 352 | 0 | -113,167 | 12,82007 | 0,009606792 | 12,82968 | 0,490201 | -0,088172 | -121,4577305 | -120,9675291 | -121,5459028 |
| 352 | 2,544352 | -74,95924 | 1,204435 | -0,456893462 | 0,747542 | -0,026246 | 0,863863 | -95,95192289 | -95,97816912 | -95,08805997 |
| 352 | 5,088705 | -36,75148 | -10,4112 | -0,923392715 | -11,33459 | -0,542694 | 1,815898 | -70,44611531 | -70,98880911 | -68,63021713 |
| 354 | 0 | -337,707 | -2,511972 | 0,446059381 | -2,065912 | -0,702433 | 185,8798 | -443,8533796 | -443,8533796 | -257,2711421 |
| 354 | 2,672821 | -527,7417 | 8,43964 | 0,380033302 | 8,819673 | -0,199144 | -113,3051 | -668,6239592 | -668,6239592 | -781,72988 |
| 354 | 5,345641 | -717,7763 | 19,39125 | 0,314007223 | 19,70526 | 0,304145 | -412,4899 | -893,3945388 | -893,3945388 | -1306,188518 |
| 365 | 0 | -129,6953 | 1,869605 | -0,38315683 | 1,486448 | 64,51445 | 0,067595 | -165,6310485 | -101,1165983 | -165,5634538 |
| 365 | 2,502183 | 27,45002 | 16,06382 | -0,114478049 | 15,94934 | 22,37897 | 0,019129 | 67,5837107 | 89,96267944 | 67,60283926 |
| 365 | 5,004366 | 184,5954 | 30,25803 | 0,154200732 | 30,41223 | -19,75651 | -0,329338 | 300,7984599 | 281,0419572 | 300,7691323 |
| 366 | 0 | 15,23195 | 51,3464 | -0,328715458 | 51,01768 | 32,31818 | 0,045384 | 121,8369081 | 154,1550885 | 121,8822925 |
| 366 | 2,506689 | 60,97734 | 34,3783 | -0,33796446 | 34,04034 | 5,88467 | -0,03673 | 147,3512129 | 153,2358827 | 147,314483 |
| 366 | 5,013378 | 106,7227 | 17,4102 | -0,347213462 | 17,06299 | -20,54884 | -0,118844 | 172,8655177 | 152,3166769 | 172,7466735 |
| 367 | 0 | 16,27654 | 73,23378 | -0,21020664 | 73,02357 | 12,63896 | -0,074299 | 167,2066418 | 179,8456042 | 167,1323425 |
| 367 | 2,513691 | 50,37741 | 32,1519 | -1,038770381 | 31,11313 | -0,184931 | -0,10103 | 127,7168821 | 127,5319515 | 127,6158519 |
| 367 | 5,027383 | 84,47828 | -8,929987 | -1,867334123 | -10,79732 | -13,00882 | -0,127761 | 88,2271224 | 75,21829878 | 88,09936122 |
| 368 | 0 | 24,30107 | 57,17691 | -1,770863037 | 55,40604 | 6,430599 | -0,058624 | 142,4034756 | 148,8340754 | 142,3448522 |
| 368 | 2,523556 | 57,47994 | 15,98042 | -0,905363386 | 15,07505 | -0,417316 | 0,884599 | 104,8740274 | 104,456711 | 105,7586259 |
| 368 | 5,047112 | 90,65881 | -25,21608 | -0,039863734 | -25,25594 | -7,265232 | 1,827821 | 67,34457825 | 60,07934663 | 69,17239972 |
| 369 | 0 | 10,17736 | 27,05469 | 0,768041822 | 27,82273 | 4,275598 | 2,406251 | 68,87602395 | 73,15162214 | 71,28227475 |
| 369 | 2,537563 | 93,05836 | 1,891833 | 4,218191477 | 6,110025 | 0,030704 | 3,706241 | 133,1959216 | 133,2266258 | 136,9021628 |
| 369 | 5,075126 | 175,9394 | -23,27102 | 7,668341132 | -15,60268 | -4,21419 | 5,006232 | 197,5158193 | 193,3016294 | 202,5220508 |
| 370 | 0 | 70,55898 | 9,746568 | 12,15995097 | 21,90654 | 3,247756 | 6,194284 | 135,5397574 | 138,7875134 | 141,7340413 |
| 370 | 2,55129 | 200,0506 | -1,718897 | 3,017727072 | 1,29883 | 0,288516 | -13,80516 | 262,6634998 | 262,9520157 | 248,8583361 |
| 370 | 5,10258 | 329,5423 | -13,18438 | -6,124496822 | -19,30888 | -2,670724 | -33,80461 | 389,7872423 | 387,1165181 | 355,9826309 |
| 371 | 0 | 225,8793 | 5,571471 | -1,448947165 | 4,122524 | 2,539717 | -40,30823 | 301,8880991 | 304,4278161 | 261,5798655 |
| 371 | 2,567192 | 431,1451 | 4,668969 | -1,133292952 | 3,535676 | 0,053914 | -103,5083 | 567,6139505 | 567,6139505 | 464,0517302 |
| 371 | 5,134383 | 636,411 | 3,766467 | -0,817638738 | 2,948828 | -2,43189 | -166,7084 | 833,2319746 | 830,8000849 | 666,5235949 |
| 372 | 0 | 580,6265 | 10,58048 | 0,062831085 | 10,64331 | 1,640383 | -193,1339 | 776,1010647 | 777,7414474 | 582,9671245 |
| 372 | 2,586036 | 839,4381 | -10,12097 | -1,75354275 | -11,87451 | 0,674665 | 112,0671 | 1067,520531 | 1068,195196 | 1179,587672 |
| 372 | 5,172072 | 1098,25 | -30,82242 | -3,569916585 | -34,39233 | -0,291052 | 417,2682 | 1358,939997 | 1358,648945 | 1776,208219 |
| 532 | 0 | -18,3288 | -20,44108 | 7,96668522 | -12,47439 | -5,22683 | 4,933781 | -48,77623375 | -54,00306381 | -43,84245271 |
| 532 | 2,537563 | 10,74911 | 1,395214 | 4,150605765 | 5,545819 | 0,360484 | 3,765904 | 25,06548211 | 25,42596578 | 28,83138646 |
| 532 | 5,075126 | 39,82702 | 23,23151 | 0,334526311 | 23,56603 | 5,947797 | 2,598028 | 98,90719797 | 104,8549954 | 101,5052256 |
| 533 | 0 | -90,1832 | -53,04675 | 2,260667686 | -50,78608 | -8,74752 | -5,905772 | -218,8103153 | -227,5578355 | -224,7160873 |
| 533 | 2,523556 | -30,27899 | -15,66215 | 0,976019614 | -14,68614 | -0,235901 | -4,277201 | -68,7349533 | -68,97085438 | -73,01215412 |
| 533 | 5,047112 | 29,62522 | 21,72244 | -0,308628457 | 21,41381 | 8,275718 | -2,64863 | 81,34040868 | 89,6161267 | 78,69177906 |

TABEL MOMEN BALOK LENKUNG TENGAH ARAH X

| FRAME | STA | MD | ML | | ML TOT | ME | | COMB1 1,3MD + 2 (MQ+MP) | COMB 2 1,3MD + 2 (MQ+MP)+1MEX | COMB 3 1,3MD + 2 (MQ+MP)+1MEY |
|-------|---------|-----------|-----------|---------------|-----------|-----------|-----------|----------------------------|----------------------------------|----------------------------------|
| | | | ML merata | ML_Koef sejut | | ME X | ME Y | | | |
| 545 | 0 | -865,8396 | -719,0412 | -154,4571985 | -873,4984 | 11,86018 | -3,968794 | -2872,588198 | -2860,728023 | -2876,556992 |
| 545 | 2,58604 | -157,4529 | -148,6667 | -29,24026329 | -177,907 | 8,128486 | -0,229841 | -560,5027673 | -552,3742816 | -560,732608 |
| 545 | 5,17207 | 550,9338 | 421,7077 | 95,97667192 | 517,6844 | 4,396796 | 3,509113 | 1751,582664 | 1755,97946 | 1755,091776 |
| 546 | 0 | -469,914 | -427,2056 | -106,7450678 | -533,9507 | -5,841086 | 0,762383 | -1678,789629 | -1684,630715 | -1678,027246 |
| 546 | 2,56719 | 11,19157 | 17,40506 | 8,288168596 | 25,69323 | 0,878043 | 0,335674 | 65,93550409 | 66,81354688 | 66,27117782 |
| 546 | 5,13438 | 492,2971 | 462,0158 | 123,321405 | 585,3372 | 7,597172 | -0,091035 | 1810,660637 | 1818,257809 | 1810,569602 |
| 547 | 0 | -314,0462 | -412,8625 | -122,6388947 | -535,5014 | -5,20315 | 0,269106 | -1479,26295 | -1484,4661 | -1478,993844 |
| 547 | 2,55129 | -64,83453 | 19,43483 | 23,37810001 | 42,81293 | 0,958304 | -0,109152 | 1,340970715 | 2,299274749 | 1,231819157 |
| 547 | 5,10258 | 184,3772 | 451,7322 | 169,3950947 | 621,1273 | 7,119758 | -0,487409 | 1481,944891 | 1489,064649 | 1481,457482 |
| 548 | 0 | 476,7487 | 266,7066 | 3,777049011 | 270,4836 | -29,09196 | 0,107277 | 1160,740555 | 1131,648591 | 1160,847832 |
| 548 | 2,50669 | 636,1289 | 329,6219 | 0,482442301 | 330,1044 | -15,28334 | 0,647556 | 1487,176238 | 1471,892894 | 1487,823793 |
| 548 | 5,01338 | 795,509 | 392,5372 | -2,812164409 | 389,7251 | -1,474723 | 1,187834 | 1813,61192 | 1812,137197 | 1814,799754 |
| 549 | 0 | 1011,698 | 515,9048 | -0,403576869 | 515,5012 | -24,96861 | 1,580316 | 2346,209594 | 2321,240988 | 2347,789911 |
| 549 | 2,50218 | 516,9313 | 250,8863 | -0,333051605 | 250,5532 | -12,39926 | 0,770461 | 1173,117042 | 1160,717779 | 1173,887503 |
| 549 | 5,00437 | 22,16471 | -14,13229 | -0,262526341 | -14,39482 | 0,170079 | -0,039394 | 0,024490364 | 0,194569435 | -0,014903715 |
| 563 | 0 | -271,2248 | -100,733 | 9,183860001 | -91,54915 | -18,13324 | -0,228521 | -535,6905302 | -553,8237675 | -535,9190514 |
| 563 | 2,51369 | 292,3357 | 160,7201 | 1,72958204 | 162,4497 | -8,644367 | 0,0736 | 704,9358196 | 696,2914522 | 705,0094201 |
| 563 | 5,02738 | 855,8962 | 422,1733 | -5,724695921 | 416,4486 | 0,844502 | 0,375722 | 1945,562169 | 1946,406672 | 1945,937892 |
| 564 | 0 | -396,1876 | -95,61181 | 37,05192613 | -58,55988 | -13,64821 | -10,16174 | -632,1636489 | -645,8118568 | -642,3253847 |
| 564 | 2,70559 | -111,9795 | -26,51609 | 8,031691995 | -18,4844 | -7,42129 | -0,788941 | -182,5421215 | -189,963411 | -183,3310623 |
| 564 | 5,41117 | 172,2286 | 42,57963 | -20,98854214 | 21,59109 | -1,194371 | 8,583854 | 267,079406 | 265,8850348 | 275,6632601 |
| 565 | 0 | -436,8069 | -159,0649 | 38,70759676 | -120,3573 | 9,403627 | -2,173557 | -808,5635088 | -799,1598814 | -810,7370656 |
| 565 | 2,65152 | -53,07201 | -24,004 | -6,99066186 | -30,99467 | 1,691569 | 1,786126 | -130,9829457 | -129,2913765 | -129,1968202 |
| 565 | 5,30305 | 330,6629 | 111,0569 | -52,68892048 | 58,36795 | -6,020489 | 5,745808 | 546,5976174 | 540,5771285 | 552,3434253 |
| 566 | 0 | -299,4727 | -74,22193 | 57,17695247 | -17,04498 | -6,159383 | -19,42105 | -423,4044837 | -429,5638665 | -442,825534 |
| 566 | 2,67282 | -161,2226 | -24,69229 | 3,551793452 | -21,14049 | -5,394271 | -0,804054 | -251,8703124 | -257,2645836 | -252,6743659 |
| 566 | 5,34564 | -22,97241 | 24,83736 | -50,07336557 | -25,23601 | -4,62916 | 17,81294 | -80,33614098 | -84,96530071 | -62,52319772 |
| 567 | 0 | -741,431 | -200,2878 | 5,533923045 | -194,7539 | 10,41054 | 1,043262 | -1353,36804 | -1342,957497 | -1352,324778 |
| 567 | 2,62397 | -97,16547 | -44,33857 | -14,76930422 | -59,10788 | 0,998359 | 2,519223 | -244,5308624 | -243,5325032 | -242,0116398 |
| 567 | 5,24794 | 547,1001 | 111,6106 | -35,07253148 | 76,5381 | -8,413825 | 3,995184 | 864,3063151 | 855,8924901 | 868,3014987 |
| 568 | 0 | -569,1801 | -233,0017 | -0,887561006 | -233,8892 | 10,71175 | -0,232125 | -1207,712689 | -1197,000939 | -1207,944814 |
| 568 | 2,58591 | -75,74085 | -40,88371 | -16,70387899 | -57,58759 | 0,924134 | 1,017123 | -213,6382818 | -212,7141476 | -212,6211588 |
| 568 | 5,17182 | 417,6985 | 151,2343 | -32,52019696 | 118,7141 | -8,863482 | 2,266371 | 780,4361258 | 771,5726433 | 782,7024964 |

| | | | | | | | | | | |
|-----|---------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 569 | 0 | -709,5088 | -270,695 | -33,84802001 | -304,5431 | 12,25816 | -0,236789 | -1531,447603 | -1519,189444 | -1531,684392 |
| 569 | 2,55525 | -96,9955 | -42,12959 | -20,11830929 | -62,2479 | 1,531142 | 1,31673 | -250,5899588 | -249,0588168 | -249,273229 |
| 569 | 5,1105 | 515,5178 | 186,4359 | -6,388598574 | 180,0473 | -9,195875 | 2,870248 | 1030,267685 | 1021,071811 | 1033,137934 |
| 570 | 0 | -711,5513 | -277,1514 | -70,97451706 | -348,1259 | 12,44876 | 1,940394 | -1621,268464 | -1608,819703 | -1619,328069 |
| 570 | 2,5318 | -52,03996 | -26,91364 | -18,72347604 | -45,63712 | 1,646899 | 2,019413 | -158,9261945 | -157,2792954 | -156,9067816 |
| 570 | 5,0636 | 607,4713 | 223,3241 | 33,52756499 | 256,8517 | -9,154962 | 2,098432 | 1303,416075 | 1294,261112 | 1305,514506 |
| 571 | 0 | -539,1587 | -218,7731 | -108,2190409 | -326,9922 | 10,67152 | 7,29063 | -1354,890722 | -1344,219206 | -1347,600092 |
| 571 | 2,51519 | 14,47035 | -3,64297 | -12,61745241 | -16,26042 | 1,816135 | 3,127203 | -13,70938851 | -11,89325393 | -10,58218535 |
| 571 | 5,03038 | 568,0994 | 211,4872 | 82,98413611 | 294,4713 | -7,039246 | -1,036224 | 1327,471944 | 1320,432698 | 1326,435721 |
| 572 | 0 | 100,85 | 26,69812 | -14,7900895 | 11,90803 | 1,176499 | 7,400667 | 154,9210965 | 156,0975958 | 162,3217639 |
| 572 | 2,50441 | 356,3299 | 129,3232 | 73,04239534 | 202,3656 | -2,643758 | -1,226808 | 867,9599349 | 865,3161772 | 866,7331268 |
| 572 | 5,00881 | 611,8097 | 231,9482 | 160,8748882 | 392,8231 | -6,464015 | -9,854284 | 1580,998773 | 1574,534759 | 1571,14449 |
| 573 | 0 | 509,749 | 185,5583 | 149,5883002 | 335,1466 | -4,120657 | -0,530941 | 1332,966951 | 1328,846294 | 1332,43601 |
| 573 | 2,50014 | 399,2885 | 149,2487 | 77,53806908 | 226,7868 | -2,781267 | -7,285105 | 972,6486107 | 969,8673441 | 965,363506 |
| 573 | 5,00027 | 288,8279 | 112,9392 | 5,487837921 | 118,427 | -1,441877 | -14,03927 | 612,3302706 | 610,888394 | 598,2910021 |
| 574 | 0 | 581,046 | 221,1936 | 0,550964087 | 221,7445 | -6,694696 | -10,00637 | 1198,848833 | 1192,154137 | 1188,842462 |
| 574 | 2,52383 | -55,37779 | -20,8747 | -15,68100286 | -36,5557 | 2,437733 | 1,206407 | -145,1025365 | -142,664804 | -143,8961299 |
| 574 | 5,04766 | -691,8016 | -262,943 | -31,9129698 | -294,8559 | 11,57016 | 12,41918 | -1489,053906 | -1477,483745 | -1476,634722 |
| 575 | 0 | 399,7536 | 142,7763 | -45,36026214 | 97,41604 | -5,668018 | 5,402225 | 714,5117101 | 708,843692 | 719,9139356 |
| 575 | 2,60736 | -45,26839 | -18,84571 | -12,29953642 | -31,14525 | 0,979556 | 1,544378 | -121,1394079 | -120,159852 | -119,5950298 |
| 575 | 5,21473 | -490,2903 | -180,4677 | 20,76118931 | -159,7065 | 7,62713 | -2,313469 | -966,790526 | -949,163396 | -959,1039952 |
| 576 | 0 | -567,8197 | -213,0758 | 8,726133504 | -204,3497 | 9,264671 | -0,631482 | -1146,86496 | -1137,600288 | -1147,496442 |
| 576 | 2,57216 | -56,33419 | -22,21275 | -12,82645043 | -35,0392 | 1,588881 | 1,966778 | -143,3128582 | -141,723977 | -141,3460806 |
| 576 | 5,14433 | 455,1513 | 168,6503 | -34,37903437 | 134,2713 | -6,086909 | 4,565037 | 860,2392433 | 854,1523342 | 864,8042802 |
| 577 | 0 | -649,456 | -245,7346 | -7,867495188 | -253,6021 | 10,54505 | 4,463883 | -1351,497028 | -1340,951982 | -1347,033145 |
| 577 | 2,54435 | -65,90522 | -25,22578 | -14,11976063 | -39,34554 | 2,088904 | 2,231298 | -164,3678562 | -162,2789526 | -162,1365582 |
| 577 | 5,0887 | 517,6455 | 195,2831 | -20,37202606 | 174,9111 | -6,367239 | -0,001287 | 1022,761315 | 1016,394076 | 1022,760029 |
| 578 | 0 | 641,5267 | 244,015 | 36,60487605 | 280,6199 | -6,850271 | -19,03218 | 1395,22454 | 1388,374269 | 1376,192359 |
| 578 | 2,50971 | 12,77211 | 5,199168 | -12,88336571 | -7,684198 | 2,083094 | -2,324387 | 1,235349314 | 3,318443674 | -1,089037815 |
| 578 | 5,01941 | -615,9825 | -233,6167 | -62,37160747 | -295,9883 | 11,01646 | 14,38341 | -1392,753842 | -1381,737382 | -1378,370434 |
| 579 | 0 | -328,7262 | -121,724 | -87,41863029 | -209,1426 | 7,477704 | -0,752434 | -845,6293072 | -838,1516032 | -846,3817413 |
| 579 | 2,50188 | 126,4222 | 48,55443 | -1,630547429 | 46,92388 | 1,03547 | -6,684407 | 258,1966563 | 259,2321259 | 251,5122495 |
| 579 | 5,00376 | 581,5707 | 218,8328 | 84,15753543 | 302,9904 | -5,406765 | -12,61638 | 1362,02262 | 1356,615855 | 1349,40624 |
| 614 | 0 | -577,5323 | -267,4796 | 16,7294102 | -250,7502 | 69,28052 | -2,495554 | -1252,292328 | -1183,011811 | -1254,787882 |
| 614 | 2,70559 | -167,4066 | -78,84735 | 1,835151259 | -77,0122 | 17,82743 | -0,212395 | -371,653014 | -353,8255875 | -371,8654086 |
| 614 | 5,41117 | 242,7191 | 109,7849 | -13,05910769 | 96,72576 | -33,62566 | 2,070765 | 508,9863 | 475,3606364 | 511,0570647 |
| 615 | 0 | -464,5137 | -186,0696 | 35,56344794 | -150,5061 | 22,10519 | 1,359291 | -904,8800551 | -882,7748678 | -903,5207643 |

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|-----|---------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 615 | 2,65152 | -37,34461 | -9,066912 | -5,22351752 | -14,29043 | -5,555551 | 0,348182 | -77,12885663 | -82,68440789 | -76,78067428 |
| 615 | 5,30305 | 389,8244 | 167,9358 | -46,01048296 | 121,9253 | -33,21629 | -0,662926 | 750,6223418 | 717,406052 | 749,9594157 |
| 616 | 0 | -527,288 | -216,2129 | 16,58625528 | -199,6266 | 24,51588 | 0,792116 | -1084,727628 | -1060,211748 | -1083,935512 |
| 616 | 2,60736 | -32,61032 | -6,720546 | -10,87087578 | -17,59142 | -4,866367 | -0,062503 | -77,57626516 | -82,4432318 | -77,63876837 |
| 616 | 5,21473 | 462,0673 | 202,7718 | -38,32801085 | 164,4438 | -34,24381 | -0,917122 | 929,5750973 | 895,3252847 | 928,6579749 |
| 617 | 0 | -593,3098 | -237,702 | 5,863884536 | -231,8381 | 20,81005 | 0,439258 | -1234,978966 | -1214,168914 | -1234,539709 |
| 617 | 2,57216 | -40,9834 | -7,482941 | -11,0931652 | -18,57611 | -5,500328 | -0,050224 | -90,43063002 | -95,93095788 | -90,48085389 |
| 617 | 5,14433 | 511,343 | 222,7361 | -28,05021494 | 194,6859 | -31,81071 | -0,539706 | 1054,117706 | 1022,306998 | 1053,578001 |
| 618 | 0 | -749,1239 | -203,4858 | 4,815605599 | -198,6702 | 14,99229 | 2,981555 | -1371,201384 | -1356,209094 | -1368,21983 |
| 618 | 2,62397 | -124,3242 | -69,62799 | -17,80781499 | -87,43581 | 13,51476 | 1,697947 | -336,4931062 | -322,9783427 | -334,7951591 |
| 618 | 5,24794 | 500,4754 | 64,22979 | -40,43123557 | 23,79855 | 12,03724 | 0,41434 | 698,2151718 | 710,2524091 | 698,6295114 |
| 619 | 0 | -569,9635 | -230,8382 | -0,868421065 | -231,7067 | 12,16101 | 1,568545 | -1204,365896 | -1192,204883 | -1202,797351 |
| 619 | 2,58591 | -99,74283 | -63,42908 | -19,39905459 | -82,82814 | 11,96137 | -0,028544 | -295,3219488 | -283,3605834 | -295,3504925 |
| 619 | 5,17182 | 370,4778 | 103,9801 | -37,92968811 | 66,0504 | 11,76172 | -1,625633 | 613,7219982 | 625,4837159 | 612,0963655 |
| 620 | 0 | -737,406 | -294,2975 | -36,92453033 | -331,2221 | 26,17034 | 0,557888 | -1621,071951 | -1594,901616 | -1620,514064 |
| 620 | 2,55525 | -129,6935 | -72,87749 | -23,78687424 | -96,66437 | 16,52888 | -0,221203 | -361,9302446 | -345,4013655 | -362,1514475 |
| 620 | 5,1105 | 478,0191 | 148,5426 | -10,64921815 | 137,8933 | 6,887423 | -1,000293 | 897,2114621 | 904,0988851 | 896,2111686 |
| 621 | 0 | -773,9203 | -335,2616 | -78,01682596 | -413,2784 | 42,09287 | -0,010327 | -1832,653326 | -1790,560459 | -1832,663652 |
| 621 | 2,5318 | -94,21904 | -66,48037 | -23,43809038 | -89,91846 | 20,85174 | -0,21388 | -302,3216805 | -281,4699367 | -302,5355604 |
| 621 | 5,0636 | 585,4823 | 202,3009 | 31,1406452 | 233,4415 | -0,389379 | -0,417433 | 1228,009965 | 1227,620586 | 1227,592531 |
| 622 | 0 | -645,7138 | -319,213 | -120,2561483 | -439,4691 | 60,0478 | -0,271034 | -1718,366159 | -1658,31836 | -1718,637192 |
| 622 | 2,51519 | -44,22852 | -58,2162 | -19,11683836 | -77,33304 | 28,22311 | -0,243727 | -212,1631574 | -183,9400437 | -212,406884 |
| 622 | 5,03038 | 557,2567 | 202,7806 | 82,02247155 | 284,803 | -3,601571 | -0,216419 | 1294,039844 | 1290,438273 | 1293,823424 |
| 623 | 0 | 7,946433 | -58,98551 | -24,9702638 | -83,95577 | 42,37529 | -0,339197 | -157,5811849 | -115,205892 | -157,9203823 |
| 623 | 2,50441 | 328,5369 | 104,5605 | 70,12773602 | 174,6883 | 9,065327 | -0,209934 | 776,4744586 | 785,539786 | 776,2645249 |
| 623 | 5,00881 | 649,1273 | 268,1066 | 165,2257358 | 433,3323 | -24,24464 | -0,08067 | 1686,285464 | 1686,285464 | 1710,449432 |
| 624 | 0 | 452,1344 | 134,8496 | 143,6162146 | 278,4658 | 20,06268 | -0,296661 | 1144,706262 | 1164,768947 | 1144,409602 |
| 624 | 2,50014 | 408,9301 | 158,1153 | 78,62561362 | 236,7409 | -7,180276 | -0,133892 | 1005,090967 | 997,9106913 | 1004,957075 |
| 624 | 5,00027 | 365,7258 | 181,3811 | 13,63501265 | 195,0161 | -34,42324 | 0,028876 | 865,4756722 | 831,0524352 | 865,5045481 |
| 625 | 0 | 580,6042 | 216,2282 | 83,94958752 | 300,1778 | -4,359848 | -0,227455 | 1355,141077 | 1350,781229 | 1354,913622 |
| 625 | 2,50198 | 170,8615 | 88,32698 | 3,138530562 | 91,46551 | -17,92994 | 0,000219 | 405,0510017 | 387,1210623 | 405,0512208 |
| 625 | 5,00396 | -238,8811 | -39,57427 | -77,6725264 | -117,2468 | -31,50003 | 0,227893 | -545,0390738 | -576,5391046 | -544,8111808 |
| 626 | 0 | 665,8703 | 260,5488 | 38,76678801 | 299,3156 | -13,81157 | -0,277698 | 1464,262696 | 1450,451129 | 1463,984998 |
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| 626 | 5,01897 | -576,7147 | -191,5997 | -57,58104644 | -249,1807 | -10,02847 | 0,304138 | -1248,090661 | -1258,119134 | -1247,786523 |
| 627 | 0 | 618,4886 | 255,827 | 4,61115119 | 260,4381 | -23,22413 | -0,326984 | 1324,911388 | 1301,682757 | 1324,584404 |
| 627 | 2,52383 | -31,53699 | 1,961843 | -13,00126517 | -11,03942 | -8,593677 | 0,025309 | -63,07693671 | -71,67061353 | -63,05162774 |

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|-----|---------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 627 | 5,04766 | -681,5626 | -251,9033 | -30,61364545 | -282,517 | 6,036777 | 0,377602 | -1451,065261 | -1445,028484 | -1450,68766 |
| 628 | 0 | 566,0228 | 241,4157 | -14,9734188 | 226,4422 | -28,31271 | -0,386081 | 1188,714113 | 1160,401406 | 1188,328032 |
| 628 | 2,54435 | -47,534 | -7,603773 | -12,04765737 | -19,65143 | -6,394249 | 0,00837 | -101,0970593 | -107,4913086 | -101,0886898 |
| 628 | 5,0887 | -661,0908 | -256,6232 | -9,12189595 | -265,7451 | 15,52421 | 0,40282 | -1390,908232 | -1375,384023 | -1390,505412 |
| 629 | 0 | -101,807 | -50,28444 | -58,98299672 | -109,2674 | 30,9732 | 14,24956 | -350,8839696 | -319,9107652 | -336,6344088 |
| 629 | 2,67282 | -65,94599 | 64,17967 | 14,17101066 | 78,35068 | -49,04662 | -0,739517 | 21,92494561 | 21,92494561 | 70,23204639 |
| 629 | 5,34564 | -30,08498 | 178,6438 | 87,32501803 | 265,9688 | -129,0664 | -15,72859 | 363,7606564 | 363,7606564 | 477,0985016 |
| 630 | 0 | 21,7856 | -14,51818 | -0,307264485 | -14,82544 | 0,346652 | 0,005361 | -1,329603981 | -0,982951846 | -1,324242816 |
| 630 | 2,50218 | 592,7558 | 322,1227 | 8,159940756 | 330,2827 | -47,20147 | -0,057253 | 1431,147877 | 1383,946411 | 1431,090624 |
| 630 | 5,00437 | 1163,726 | 658,7637 | 16,62714602 | 675,3908 | -34,74959 | -0,119867 | 2863,625359 | 2768,875773 | 2863,505492 |
| 631 | 0 | 905,8507 | 495,1986 | 9,513125967 | 504,7117 | -52,4266 | -0,046217 | 2187,029339 | 2134,602743 | 2186,983121 |
| 631 | 2,50669 | 755,4434 | 441,6724 | 13,82755568 | 455,4999 | -69,90233 | -0,101767 | 1893,076295 | 1823,173965 | 1892,974527 |
| 631 | 5,01338 | 605,0361 | 388,1462 | 18,1419854 | 406,2882 | -87,37806 | -0,157317 | 1599,123251 | 1511,745187 | 1598,965934 |
| 632 | 0 | 981,8519 | 539,9717 | 8,334163303 | 548,3059 | -56,84634 | -0,009693 | 2373,019235 | 2316,172891 | 2373,009542 |
| 632 | 2,51369 | 372,6281 | 236,119 | 10,69886366 | 246,8178 | -45,30459 | -0,08803 | 978,0522179 | 932,7476242 | 977,9641878 |
| 632 | 5,02738 | -236,5956 | -67,73379 | 13,06356402 | -54,67023 | -33,76284 | -0,166367 | -416,9147989 | -450,677643 | -417,0811664 |
| 633 | 0 | 988,1215 | 543,8107 | 4,17546797 | 547,9862 | -54,53669 | 0,03538 | 2380,530275 | 2325,993587 | 2380,565655 |
| 633 | 2,52356 | 145,155 | 108,7784 | 10,58275877 | 119,3612 | -25,52705 | -0,080566 | 427,4238988 | 401,8968491 | 427,343333 |
| 633 | 5,04711 | -697,8115 | -326,2538 | 16,99004957 | -309,2638 | 3,482589 | -0,196511 | -1525,682478 | -1522,199889 | -1525,878989 |
| 634 | 0 | 953,9649 | 553,7462 | 39,92179723 | 593,668 | -55,21402 | -0,090699 | 2427,490366 | 2372,276346 | 2427,399667 |
| 634 | 2,53756 | 4,499447 | 58,65527 | 23,01969535 | 81,67497 | -15,22038 | -0,116832 | 169,1992218 | 153,9788434 | 169,0823902 |
| 634 | 5,07513 | -944,966 | -436,4357 | 6,117593472 | -430,3181 | 24,77326 | -0,142964 | -2089,091923 | -2064,318659 | -2089,234886 |
| 635 | 0 | 317,0941 | 577,5332 | 184,2582372 | 761,7914 | -53,08137 | -0,587832 | 1935,8052 | 1882,72383 | 1935,217369 |
| 635 | 2,55129 | -43,46327 | 39,26464 | 25,75418964 | 65,01882 | -8,859394 | -0,094571 | 73,53539636 | 64,67600204 | 73,44082533 |
| 635 | 5,10258 | -404,0207 | -499,0039 | -132,7498579 | -631,7538 | 35,36258 | 0,39869 | -1788,734408 | -1753,371826 | -1788,335718 |
| 636 | 0 | 609,3996 | 572,8955 | 136,4259027 | 709,3214 | -45,60889 | -0,200876 | 2210,862397 | 2165,253504 | 2210,661621 |
| 636 | 2,56719 | 36,04591 | 40,17514 | 11,04144893 | 51,21658 | -10,62834 | 0,378545 | 149,2928557 | 138,6645132 | 149,6714005 |
| 636 | 5,13438 | -537,3078 | -492,5453 | -1,4,3430048 | -606,8883 | 24,35221 | 0,957966 | -1912,276685 | -1887,924477 | -1911,31872 |
| 637 | 0 | 691,446 | 552,5445 | 111,6276738 | 664,1721 | -60,07624 | 3,565654 | 2227,22407 | 2167,147828 | 2230,789724 |
| 637 | 2,58604 | -277,5096 | -260,3794 | -42,6126806 | -302,992 | 63,25472 | -0,02787 | -966,7466042 | -903,4918824 | -966,7744745 |
| 637 | 5,17207 | -1246,465 | -1073,303 | -196,853035 | -1270,156 | 186,5857 | -3,621395 | -4160,717279 | -3974,131592 | -4164,338673 |
| 771 | 0 | -873,9511 | -368,6488 | 14,08890392 | -354,5599 | -7,288743 | -0,179117 | -1845,256277 | -1852,54502 | -1845,435394 |
| 771 | 2,53756 | -27,94414 | 28,40267 | 19,40554254 | 47,80821 | -0,361784 | -0,11956 | 59,28904465 | 58,92726036 | 59,16948451 |
| 771 | 5,07513 | 818,0628 | 425,4542 | 24,72218116 | 450,1763 | 6,565175 | -0,060003 | 1963,834366 | 1970,399541 | 1963,774363 |
| 772 | 0 | 858,5761 | 421,9043 | -10,2969637 | 411,6053 | 4,458649 | 0,037926 | 1939,359514 | 1943,818164 | 1939,39744 |
| 772 | 2,52356 | 96,1829 | 62,93042 | 5,119905339 | 68,05033 | -3,148552 | -0,063426 | 261,1384359 | 257,9898836 | 261,0750103 |
| 772 | 5,04711 | -666,2103 | -296,0434 | 20,53877638 | -275,5047 | -10,75575 | -0,164777 | -1417,082643 | -1427,838396 | -1417,24742 |

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|-----|---------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|
| 569 | 0 | -95,30121 | -0,001851 | 1,59364E-11 | -0,001851 | 4,198027 | -0,607971 | -123,8952802 | -123,8952802 |
| 569 | 2,55525 | 32,66032 | -0,003969 | -7,4732E-12 | -0,003969 | 4,198027 | -0,607971 | 42,45048301 | 42,45048301 |
| 569 | 5,1105 | 160,6219 | -0,006087 | -3,0883E-11 | -0,006087 | 4,198027 | -0,607971 | 208,7962462 | 208,7962462 |
| 570 | 0 | -27,00551 | 0,00092 | 1,28662E-11 | 0,00092 | 4,266479 | -0,03121 | -35,10532378 | -35,10532378 |
| 570 | 2,5318 | 108,565 | -0,00576 | -1,7974E-11 | -0,00576 | 4,266479 | -0,03121 | 141,1229346 | 141,1229346 |
| 570 | 5,0636 | 244,1354 | -0,012439 | -4,8813E-11 | -0,012439 | 4,266479 | -0,03121 | 317,3511931 | 317,3511931 |
| 571 | 0 | 75,45983 | -0,004118 | 4,39715E-12 | -0,004118 | 3,520761 | 1,655314 | 98,08953936 | 98,08953936 |
| 571 | 2,51519 | 223,3975 | -0,005402 | -2,1178E-11 | -0,005402 | 3,520761 | 1,655314 | 290,4059411 | 290,4059411 |
| 571 | 5,03038 | 371,3352 | -0,006686 | -4,6753E-11 | -0,006686 | 3,520761 | 1,655314 | 482,7223428 | 482,7223428 |
| 572 | 0 | 291,7249 | -0,005655 | -1,7839E-11 | -0,005655 | 1,525414 | 3,444918 | 379,2310823 | 379,2310823 |
| 572 | 2,50441 | 442,8886 | -0,006477 | -3,4821E-11 | -0,006477 | 1,525414 | 3,444918 | 575,7422412 | 575,7422412 |
| 572 | 5,00881 | 594,0523 | -0,007298 | -5,1803E-11 | -0,007298 | 1,525414 | 3,444918 | 772,2534001 | 772,2534001 |
| 573 | 0 | 575,1017 | -0,007768 | -2,8362E-11 | -0,007768 | -0,535727 | 2,701519 | 747,6167332 | 747,6167332 |
| 573 | 2,50014 | 446,9744 | -0,005776 | -4,0831E-11 | -0,005776 | -0,535727 | 2,701519 | 581,0551321 | 581,0551321 |
| 573 | 5,00027 | 318,847 | -0,003784 | -5,3299E-11 | -0,003784 | -0,535727 | 2,701519 | 414,493531 | 414,493531 |
| 574 | 0 | 165,2818 | -0,009479 | -9,073E-11 | -0,009479 | -3,618451 | -4,442763 | 214,8473228 | 214,8473228 |
| 574 | 2,52383 | 75,45724 | -0,004624 | -4,9893E-11 | -0,004624 | -3,618451 | -4,442763 | 98,08515799 | 98,08515799 |
| 574 | 5,04766 | -14,36728 | 0,000231 | -9,0564E-12 | 0,000231 | -3,618451 | -4,442763 | -18,67700687 | -18,67700687 |
| 575 | 0 | 79,97236 | -0,005372 | -2,6597E-11 | -0,005372 | -2,549539 | 1,479597 | 103,953322 | 103,953322 |
| 575 | 2,60736 | -38,72822 | -0,002958 | -2,6137E-12 | -0,002958 | -2,549539 | 1,479597 | -50,35259802 | -50,35259802 |
| 575 | 5,21473 | -157,4288 | -0,000543 | 2,13698E-11 | -0,000543 | -2,549539 | 1,479597 | -204,658518 | -204,658518 |
| 576 | 0 | 77,05529 | 0,000214 | -1,5828E-11 | 0,000214 | 2,984177 | -1,010145 | 100,1722983 | 100,1722983 |
| 576 | 2,57216 | -16,27731 | 0,003377 | 1,9291E-11 | 0,003377 | 2,984177 | -1,010145 | -21,15375304 | -21,15375304 |
| 576 | 5,14433 | -109,6099 | 0,006541 | 5,44097E-11 | 0,006541 | 2,984177 | -1,010145 | -142,4798043 | -142,4798043 |
| 577 | 0 | 41,57 | -5,67E-05 | -4,7898E-12 | -5,67E-05 | 3,323495 | 0,877467 | 54,04089154 | 54,04089154 |
| 577 | 2,54435 | -44,31242 | 0,003887 | 3,68647E-11 | 0,003887 | 3,323495 | 0,877467 | -57,59837783 | -57,59837783 |
| 577 | 5,0887 | -130,1949 | 0,007831 | 7,85191E-11 | 0,007831 | 3,323495 | 0,877467 | -169,2376472 | -169,2376472 |
| 578 | 0 | 232,8282 | -0,012503 | -7,898E-11 | -0,012503 | -3,559528 | -6,657274 | 302,6516574 | 302,6516574 |
| 578 | 2,50971 | 130,7546 | -0,006332 | -5,2488E-11 | -0,006332 | -3,559528 | -6,657274 | 169,9683686 | 169,9683686 |
| 578 | 5,01941 | 28,68108 | -0,000161 | -2,5999E-11 | -0,000161 | -3,559528 | -6,657274 | 37,28507987 | 37,28507987 |
| 579 | 0 | -118,4275 | 0,003895 | 4,39609E-11 | 0,003895 | 2,574956 | 2,371005 | -153,9479657 | -153,9479657 |
| 579 | 2,50188 | -238,6471 | 0,004962 | 4,5475E-11 | 0,004962 | 2,574956 | 2,371005 | -310,2313007 | -310,2313007 |
| 579 | 5,00376 | -358,8667 | 0,006029 | 4,69821E-11 | 0,006029 | 2,574956 | 2,371005 | -466,5146357 | -466,5146357 |
| 614 | 0 | -913,4876 | 0,007038 | -2,4805E-11 | 0,007038 | 19,01736 | -0,843869 | -1187,51979 | -1187,51979 |
| 614 | 2,70559 | -612,3414 | 0,00141 | -1,4771E-11 | 0,00141 | 19,01736 | -0,843869 | -796,0410091 | -796,0410091 |
| 614 | 5,41117 | -311,1952 | -0,004217 | -4,7381E-12 | -0,004217 | 19,01736 | -0,843869 | -404,5622284 | -404,5622284 |
| 615 | 0 | -395,7893 | 0,000448 | -8,7577E-12 | 0,000448 | 10,43202 | 0,381331 | -514,5252276 | -514,5252276 |

| | | | | | | | | | |
|-----|---------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|
| 615 | 2,65152 | -202,2881 | -0,003713 | -1,0522E-12 | -0,003713 | 10,43202 | 0,381331 | -262,9819532 | -262,9819532 |
| 615 | 5,30305 | -8,786872 | -0,007873 | 6,65325E-12 | -0,007873 | 10,43202 | 0,381331 | -11,43867875 | -11,43867875 |
| 616 | 0 | -176,9214 | -0,001051 | 8,23671E-13 | -0,001051 | 11,26918 | 0,327772 | -229,9999777 | -229,9999777 |
| 616 | 2,60736 | -38,45905 | -0,005794 | 5,85716E-12 | -0,005794 | 11,26918 | 0,327772 | -50,00834799 | -50,00834799 |
| 616 | 5,21473 | 100,0033 | -0,010536 | 1,08907E-11 | -0,010536 | 11,26918 | 0,327772 | 129,9832817 | 129,9832817 |
| 617 | 0 | -76,1508 | -0,002967 | 6,04486E-12 | -0,002967 | 10,22889 | 0,1903 | -99,00197086 | -99,00197086 |
| 617 | 2,57216 | 33,37964 | -0,006979 | 8,22596E-12 | -0,006979 | 10,22889 | 0,1903 | 43,37957759 | 43,37957759 |
| 617 | 5,14433 | 142,9101 | -0,010991 | 1,04071E-11 | -0,010991 | 10,22889 | 0,1903 | 185,761126 | 185,761126 |
| 618 | 0 | 394,2781 | -0,092695 | 5,42732E-12 | -0,092695 | 0,563038 | 0,489186 | 512,376176 | 512,376176 |
| 618 | 2,62397 | 223,1851 | -0,028829 | 4,09478E-12 | -0,028829 | 0,563038 | 0,489186 | 290,0830255 | 290,0830255 |
| 618 | 5,24794 | 52,09215 | 0,035037 | 2,76224E-12 | 0,035037 | 0,563038 | 0,489186 | 67,78987498 | 67,78987498 |
| 619 | 0 | 180,0472 | 0,026019 | 3,58363E-12 | 0,026019 | 0,077203 | 0,617612 | 234,113374 | 234,113374 |
| 619 | 2,58591 | 60,47039 | 0,017325 | 1,28873E-12 | 0,017325 | 0,077203 | 0,617612 | 78,64615179 | 78,64615179 |
| 619 | 5,17182 | -59,10641 | 0,038631 | -1,0062E-12 | 0,008631 | 0,077203 | 0,617612 | -76,8210704 | -76,8210704 |
| 620 | 0 | 115,2067 | -0,002727 | 3,04438E-12 | -0,002727 | 3,773192 | 0,304898 | 149,7632572 | 149,7632572 |
| 620 | 2,55525 | 4,315567 | 0,004899 | -1,8704E-13 | 0,004899 | 3,773192 | 0,304898 | 5,620035434 | 5,620035434 |
| 620 | 5,1105 | -106,5756 | 0,012525 | -3,4185E-12 | 0,012525 | 3,773192 | 0,304898 | -138,5231863 | -138,5231863 |
| 621 | 0 | 75,87943 | -0,003479 | 2,73494E-12 | -0,003479 | 8,389739 | 0,080399 | 98,6363014 | 98,6363014 |
| 621 | 2,5318 | -44,05411 | 0,007088 | -1,2962E-12 | 0,007088 | 8,389739 | 0,080399 | -57,25616451 | -57,25616451 |
| 621 | 5,0636 | -163,9876 | 0,017656 | -5,3274E-12 | 0,017656 | 8,389739 | 0,080399 | -213,1486304 | -213,1486304 |
| 622 | 0 | 15,59584 | 0,000889 | 2,07095E-12 | 0,000889 | 12,653 | -0,010857 | 20,27637058 | 20,27637058 |
| 622 | 2,51519 | -99,82051 | 0,005556 | -1,2601E-12 | 0,005556 | 12,653 | -0,010857 | -129,75555 | -129,75555 |
| 622 | 5,03038 | -215,2369 | 0,010223 | -4,5912E-12 | 0,010223 | 12,653 | -0,010857 | -279,7874705 | -279,7874705 |
| 623 | 0 | -110,2517 | 0,004247 | -2,7853E-14 | 0,004247 | 13,30054 | -0,051614 | -143,3187108 | -143,3187108 |
| 623 | 2,50441 | -238,0554 | 0,007235 | -2,3759E-12 | 0,007235 | 13,30054 | -0,051614 | -309,4575743 | -309,4575743 |
| 623 | 5,00881 | -365,8591 | 0,010222 | -4,7239E-12 | 0,010222 | 13,30054 | -0,051614 | -475,5964379 | -475,5964379 |
| 624 | 0 | -295,6771 | 0,005981 | -1,5262E-13 | 0,005981 | 10,8966 | -0,065104 | -384,3683016 | -384,3683016 |
| 624 | 2,50014 | -442,8592 | 0,006616 | -2,4318E-12 | 0,006616 | 10,8966 | -0,065104 | -575,7037342 | -575,7037342 |
| 624 | 5,00027 | -590,0413 | 0,00725 | -4,711E-12 | 0,00725 | 10,8966 | -0,065104 | -767,0391667 | -767,0391667 |
| 625 | 0 | -579,0232 | 0,005489 | -4,39E-13 | 0,005489 | 5,423743 | -0,090998 | -752,7191982 | -752,7191982 |
| 625 | 2,50198 | -441,8977 | 0,006392 | -3,5864E-12 | 0,006392 | 5,423743 | -0,090998 | -574,4542875 | -574,4542875 |
| 625 | 5,00396 | -304,7723 | 0,007295 | -6,7338E-12 | 0,007295 | 5,423743 | -0,090998 | -396,1893767 | -396,1893767 |
| 626 | 0 | -373,9682 | 0,010656 | -4,7046E-13 | 0,010656 | -0,753758 | -0,115927 | -486,1373406 | -486,1373406 |
| 626 | 2,50949 | -244,5872 | 0,007312 | -4,1449E-12 | 0,007312 | -0,753758 | -0,115927 | -317,9487239 | -317,9487239 |
| 626 | 5,01897 | -115,2062 | 0,003969 | -7,8193E-12 | 0,003969 | -0,753758 | -0,115927 | -149,7601073 | -149,7601073 |
| 627 | 0 | -239,6223 | 0,009795 | -3,5957E-12 | 0,009795 | -5,796926 | -0,139587 | -311,4893508 | -311,4893508 |
| 627 | 2,52383 | -134,1392 | 0,006688 | -5,9458E-12 | 0,006688 | -5,796926 | -0,139587 | -174,3675677 | -174,3675677 |

| | | | | | | | | | |
|-----|---------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|
| 627 | 5,04766 | -28,65611 | 0,003581 | -8,2959E-12 | 0,003581 | -5,796926 | -0,139587 | -37,24578459 | -37,24578459 |
| 628 | 0 | -178,084 | 0,010379 | -7,3422E-12 | 0,010379 | -8,614553 | -0,15503 | -231,4884638 | -231,4884638 |
| 628 | 2,54435 | -77,69015 | 0,006982 | -7,7264E-12 | 0,006982 | -8,614553 | -0,15503 | -100,983232 | -100,983232 |
| 628 | 5,0887 | 22,70371 | 0,003585 | -8,1105E-12 | 0,003585 | -8,614553 | -0,15503 | 29,52199984 | 29,52199984 |
| 629 | 0 | -345,1496 | 0,054997 | -8,7241E-12 | 0,054997 | 29,93834 | 5,607962 | -448,5844988 | -448,5844988 |
| 629 | 2,67282 | -540,9374 | -0,011652 | -7,3929E-12 | -0,011652 | 29,93834 | 5,607962 | -703,2418632 | -703,2418632 |
| 629 | 5,34564 | -736,7251 | -0,0783 | -6,0617E-12 | -0,0783 | 29,93834 | 5,607962 | -957,8992276 | -957,8992276 |
| 630 | 0 | -241,2313 | 0,004482 | 1,58667E-12 | 0,004482 | 19,00265 | 0,025024 | -313,5916892 | -313,5916892 |
| 630 | 2,50218 | -50,32585 | 0,009512 | 4,13718E-13 | 0,009512 | 19,00265 | 0,025024 | -65,40458632 | -65,40458632 |
| 630 | 5,00437 | 140,5796 | 0,014542 | -7,5924E-13 | 0,014542 | 19,00265 | 0,025024 | 182,7825166 | 182,7825166 |
| 631 | 0 | -237,188 | 0,022984 | 1,17992E-12 | 0,022984 | 6,971641 | 0,022161 | -308,2983793 | -308,2983793 |
| 631 | 2,50669 | -31,41235 | 0,015358 | 1,19844E-13 | 0,015358 | 6,971641 | 0,022161 | -40,80533544 | -40,80533544 |
| 631 | 5,01338 | 174,3633 | 0,007731 | -9,4023E-13 | 0,007731 | 6,971641 | 0,022161 | 226,6877084 | 226,6877084 |
| 632 | 0 | -172,6633 | 0,020076 | 7,68418E-13 | 0,020076 | -4,591554 | 0,031164 | -224,4221038 | -224,4221038 |
| 632 | 2,51369 | 2,013348 | 0,011411 | -2,2811E-13 | 0,011411 | -4,591554 | 0,031164 | 2,640173533 | 2,640173533 |
| 632 | 5,02738 | 176,69 | 0,002745 | -1,2246E-12 | 0,002745 | -4,591554 | 0,031164 | 229,7024508 | 229,7024508 |
| 633 | 0 | -145,2418 | 0,015667 | -1,9915E-13 | 0,015667 | -11,49554 | 0,045945 | -188,7830164 | -188,7830164 |
| 633 | 2,52356 | 28,18973 | 0,010432 | -7,07E-13 | 0,010432 | -11,49554 | 0,045945 | 36,66750912 | 36,66750912 |
| 633 | 5,04711 | 201,6213 | 0,005196 | -1,2149E-12 | 0,005196 | -11,49554 | 0,045945 | 262,1180346 | 262,1180346 |
| 634 | 0 | -98,90139 | 0,020776 | -1,1631E-12 | 0,020776 | -15,76065 | 0,010298 | -128,5302504 | -128,5302504 |
| 634 | 2,53756 | 83,0251 | 0,013063 | -1,0371E-12 | 0,013063 | -15,76065 | 0,010298 | 107,9587569 | 107,9587569 |
| 634 | 5,07513 | 264,9516 | 0,00535 | -9,1105E-13 | 0,00535 | -15,76065 | 0,010298 | 344,4477642 | 344,4477642 |
| 635 | 0 | -8,480741 | 0,025259 | -1,7511E-12 | 0,025259 | -17,33318 | -0,193338 | -10,97444568 | -10,97444568 |
| 635 | 2,55129 | 197,1537 | 0,006138 | -7,2224E-13 | 0,006138 | -17,33318 | -0,193338 | 256,3120988 | 256,3120988 |
| 635 | 5,10258 | 402,7882 | -0,012983 | 3,06639E-13 | -0,012983 | -17,33318 | -0,193338 | 523,5986432 | 523,5986432 |
| 636 | 0 | 178,221 | 0,00663 | -1,1245E-12 | 0,00663 | -13,626 | -0,225702 | 231,7006065 | 231,7006065 |
| 636 | 2,56719 | 423,5269 | -0,001784 | 7,99073E-13 | -0,001784 | -13,626 | -0,225702 | 550,5813832 | 550,5813832 |
| 636 | 5,13438 | 668,8327 | -0,010199 | 2,72262E-12 | -0,010199 | -13,626 | -0,225702 | 869,4621599 | 869,4621599 |
| 637 | 0 | 546,9595 | 0,003074 | 1,45345E-12 | 0,003074 | -47,69112 | 1,389588 | 711,0534975 | 711,0534975 |
| 637 | 2,58604 | 847,7704 | -0,0242 | 4,42341E-12 | -0,0242 | -47,69112 | 1,389588 | 1102,053097 | 1102,053097 |
| 637 | 5,17207 | 1148,581 | -0,051474 | 7,39336E-12 | -0,051474 | -47,69112 | 1,389588 | 1493,052696 | 1493,052696 |
| 771 | 0 | 4,028175 | 0,005677 | 4,60323E-12 | 0,005677 | -2,729768 | -0,02347 | 5,247980403 | 5,247980403 |
| 771 | 2,53756 | 3,375505 | 0,009215 | 4,34424E-12 | 0,009215 | -2,729768 | -0,02347 | 4,406585992 | 4,406585992 |
| 771 | 5,07513 | 2,722834 | 0,012753 | 4,08525E-12 | 0,012753 | -2,729768 | -0,02347 | 3,565191582 | 3,565191582 |
| 772 | 0 | -1,434229 | -0,01238 | -1,8015E-12 | -0,01238 | 3,014477 | 0,040162 | -1,889256561 | -1,889256561 |
| 772 | 2,52356 | -2,999254 | -0,007791 | -3,4975E-12 | -0,007791 | 3,014477 | 0,040162 | -3,91461252 | -3,91461252 |
| 772 | 5,04711 | -4,564278 | -0,003203 | -5,193E-12 | -0,003203 | 3,014477 | 0,040162 | -5,939968479 | -5,939968479 |

TABEL MOMEN KOLOM TEPI ARAH X

| FRAME | STA | MD | ML | | | ML TOT | | ME | | COMB1 | | COMB 2 | | COMB 3 | |
|-------|---------|-----------|-----------|-----------------|-----------|-----------|-----------|-------------------|------------------------|------------------------|------------------------|------------------------|-------------------|------------------------|------------------------|
| | | | ML merata | ML...Koef kejut | ML | ME X | ME Y | 1,3MD + 2 (MQ+MP) | 1,3MD + 2 (MQ+MP)+1MEX | 1,3MD + 2 (MQ+MP)+1MEY | 1,3MD + 2 (MQ+MP)+1MEX | 1,3MD + 2 (MQ+MP)+1MEY | | | |
| | | | | | | | | | | | | | 1,3MD + 2 (MQ+MP) | 1,3MD + 2 (MQ+MP)+1MEX | 1,3MD + 2 (MQ+MP)+1MEY |
| 1 | 0 | -12,32855 | -7,430324 | -0,864050919 | -8,294375 | 3,43786 | 2,317717 | -32,61586146 | -29,17800097 | -30,2981443 | | | | | |
| 1 | 5,5 | 54,91055 | 41,10308 | 4,831326889 | 45,93441 | -19,44532 | -0,054645 | 163,2525326 | 143,8072085 | 163,1978879 | | | | | |
| 1 | 11 | 122,1496 | 89,63649 | 10,5267047 | 100,1632 | 42,32851 | -2,427007 | 359,1209267 | 316,792418 | 356,69392 | | | | | |
| 2 | 0 | 351,9071 | 134,3226 | -55,71288746 | 78,60971 | 24,95277 | -4,138213 | 614,6987167 | 639,6514828 | 610,5605037 | | | | | |
| 2 | 2,811 | -73,35192 | -50,59479 | -9,179562112 | -59,77435 | 15,03838 | -0,334843 | -214,9062054 | -199,8678292 | -215,2410485 | | | | | |
| 2 | 5,622 | -498,611 | -235,5122 | 37,35376324 | -198,1584 | 5,123986 | 3,468527 | -1044,511127 | -1039,387141 | -1041,042601 | | | | | |
| 12 | 0 | -186,5724 | -159,3829 | -62,54338357 | -221,9263 | -13,87263 | -3,343033 | -686,3967154 | -700,2693421 | -689,7397485 | | | | | |
| 12 | 3,683 | -9,902498 | -135,5795 | -29,72483368 | -165,3044 | 10,06463 | -2,425317 | -343,4819618 | -333,4173366 | -345,907279 | | | | | |
| 12 | 7,366 | 166,7674 | -111,7762 | 3,093716205 | -108,6824 | 34,00188 | -1,507601 | -0,567208145 | 33,43466885 | -2,074809433 | | | | | |
| 41 | 0 | 484,5538 | 241,1783 | -36,3615964 | 204,8167 | -10,58501 | -6,352913 | 1039,553364 | 1028,968354 | 1033,200452 | | | | | |
| 41 | 2,811 | 29,577 | 19,84363 | 5,5822226028 | 25,42586 | 0,683702 | 0,708107 | 89,30180958 | 88,6181076 | 90,00991654 | | | | | |
| 41 | 5,622 | -425,3998 | -201,4911 | 47,52604846 | -153,965 | 9,217606 | 7,769127 | -860,9497453 | -851,732139 | -853,1806185 | | | | | |
| 128 | 0 | -167,1265 | -102,6896 | -3,126135935 | -105,8157 | 13,25789 | 0,152549 | -428,8959849 | -415,6380912 | -428,7434362 | | | | | |
| 128 | 0,17956 | -21,67135 | -15,62273 | -0,699430725 | -16,32216 | 1,515236 | -0,032119 | -60,81707129 | -59,30183499 | -60,84919072 | | | | | |
| 128 | 0,35913 | 123,7838 | 71,44415 | 1,727274486 | 73,17142 | -10,22742 | -0,216788 | 307,2618423 | 297,0344213 | 307,0450548 | | | | | |
| 137 | 0 | 275,369 | 95,18608 | -7,283528479 | 87,90256 | 13,48678 | -1,194682 | 533,7847946 | 547,2715704 | 532,5901124 | | | | | |
| 137 | 0,43763 | 20,34911 | 4,607113 | -1,011953254 | 3,59516 | 1,32062 | -0,155774 | 33,64416329 | 34,97622491 | 33,48838913 | | | | | |
| 137 | 0,87525 | -234,6708 | -85,97186 | 5,259621972 | -80,71224 | -10,82265 | 0,883134 | -466,4964681 | -477,3191206 | -465,6133341 | | | | | |
| 151 | 0 | 773,6482 | 732,9062 | 115,7997006 | 848,7059 | -0,510704 | -0,593815 | 2703,15445 | 2702,643746 | 2702,560635 | | | | | |
| 151 | 1,70381 | 23,46576 | 24,51722 | 4,37838697 | 28,89561 | 0,031956 | -0,038112 | 88,29670881 | 88,32866445 | 88,25859696 | | | | | |
| 151 | 3,40763 | -726,7167 | -683,8718 | -107,0429267 | -790,9147 | 0,574615 | 0,517591 | -2526,561032 | -2525,986417 | -2526,043441 | | | | | |
| 153 | 0 | 478,3091 | 798,7079 | 177,291316 | 975,9993 | -0,273976 | -0,401475 | 2573,800416 | 2573,52644 | 2573,398941 | | | | | |
| 153 | 2,28788 | 6,520122 | 17,06084 | 3,889231957 | 20,95008 | 0,207465 | -0,02492 | 50,37631125 | 50,5837764 | 50,35139076 | | | | | |
| 153 | 4,57575 | -465,2689 | -764,5863 | -169,5128521 | -934,0991 | 0,688907 | 0,351634 | -2473,047794 | -2472,358887 | -2472,69616 | | | | | |
| 155 | 0 | 679,7809 | 776,1518 | 148,1358677 | 924,2876 | 0,560093 | -0,373528 | 2732,290506 | 2732,850599 | 2731,916978 | | | | | |
| 155 | 2,94644 | 9,378212 | 31,94165 | 8,191219797 | 40,13287 | -0,999118 | 0,270337 | 92,45741019 | 91,4582926 | 92,72774749 | | | | | |
| 155 | 5,89288 | -661,0245 | -712,2685 | -131,7534282 | -844,0219 | -2,558328 | 0,914203 | -2547,375686 | -2549,934014 | -2546,461483 | | | | | |
| 274 | 0 | 76,5308 | 41,17801 | 8,601587048 | 49,7796 | -0,31915 | 5,304075 | 199,0492332 | 198,7300834 | 204,3533081 | | | | | |
| 274 | 0,45128 | -3,371271 | -1,61434 | -0,439982325 | -2,054323 | 0,015605 | -0,330945 | -8,491298285 | -8,475693259 | -8,822243012 | | | | | |
| 274 | 0,90256 | -83,27334 | -44,40669 | -9,481551697 | -53,88824 | 0,35036 | -5,965964 | -216,0318297 | -215,6814699 | -221,9977941 | | | | | |
| 275 | 0 | 224,5641 | 88,64336 | 53,88093923 | 142,5243 | -4,493425 | -1,979524 | 576,9819674 | 572,4885426 | 575,0024433 | | | | | |
| 275 | 0,50025 | 4,08185 | 1,851 | 1,012544246 | 2,863545 | -0,176377 | -0,144656 | 11,03349372 | 10,85711637 | 10,88883796 | | | | | |
| 275 | 1,0005 | -216,4004 | -84,94136 | -51,85585074 | -136,7972 | 4,14067 | 1,690213 | -554,9149799 | -550,7743099 | -553,2247673 | | | | | |
| 278 | 0 | 774,1314 | 316,3808 | 94,59702171 | 410,9778 | -13,08392 | 10,75008 | 1828,326433 | 1815,242516 | 1839,076518 | | | | | |
| 278 | 0,67222 | 43,06111 | 18,45246 | 5,961173571 | 24,41363 | -1,0903 | 1,131486 | 104,8067041 | 103,7164039 | 105,9381899 | | | | | |

| | | | | | | | | | |
|-----|---------|-----------|-----------|--------------|-----------|------------|--------------|--------------|--------------|
| 281 | 0 | -883,6291 | -362,7178 | -51,48206768 | 10,905324 | -6,48/1124 | -1618,713025 | -1607,809708 | -1627,200138 |
| 281 | 0,96769 | 45,41364 | 19,89983 | 2,782499259 | 22,68233 | -1,122426 | -1977,117495 | -1964,270218 | -1988,173351 |
| 281 | 1,93538 | 974,4564 | 402,5174 | 57,0470662 | 459,5645 | -15,09213 | 104,4024041 | 103,2799781 | 105,5836331 |
| 283 | 0 | -930,7277 | -386,4098 | -18,11763524 | -404,5275 | 12,91343 | 2185,922303 | 2170,830174 | 2199,340617 |
| 283 | 1,38866 | 31,17961 | 14,30799 | 0,037613073 | 14,3456 | -0,906768 | -2019,001017 | -2006,087585 | -2023,492614 |
| 283 | 2,77731 | 993,087 | 415,0258 | 18,19286138 | 433,2187 | -14,72697 | 69,22469223 | 68,31792384 | 69,45569325 |
| 285 | 0 | -864,2637 | -367,4134 | 12,28955519 | -355,1238 | 11,8834 | 2157,450401 | 2142,723432 | 2162,404 |
| 285 | 1,93663 | 14,49492 | 7,68839 | -1,504527992 | 6,183862 | -0,676268 | -1833,79047 | -1821,907069 | -1833,123775 |
| 285 | 3,87325 | 893,2535 | 382,7902 | -15,29861117 | 337,4915 | -13,23594 | 31,21111835 | 30,53484992 | 31,07548305 |
| 287 | 0 | -733,1564 | -327,9832 | 37,13078625 | -290,8524 | 10,69033 | 1896,212707 | 1882,976769 | 1895,274741 |
| 287 | 2,61659 | 0,319431 | 2,059944 | -2,17260314 | -0,112659 | -0,420298 | -1534,808012 | -1524,117683 | -1531,884034 |
| 287 | 5,23319 | 733,7952 | 332,103 | -41,47599253 | 290,6271 | -11,53093 | 0,189942871 | -0,230355352 | -0,008354 |
| 294 | 0 | -547,3431 | -273,6453 | 55,41424789 | -218,2311 | 9,040467 | 1535,187898 | 1523,656972 | 1531,867326 |
| 294 | 3,43206 | -7,974995 | -0,986754 | -2,220064588 | -3,206818 | -0,671701 | -1148,008271 | -1138,967805 | -1144,359349 |
| 294 | 6,86413 | 531,3932 | 271,6716 | -59,85437706 | 211,8175 | -10,38387 | -16,7811307 | -17,45283183 | -16,92957262 |
| 296 | 0 | -326,098 | -204,2202 | 51,98316321 | -152,237 | 11,2111 | 1114,44601 | 1104,062141 | 1110,500204 |
| 296 | 4,39053 | -27,53258 | -9,841019 | -1,667153304 | -11,50817 | 1,740331 | -728,4013794 | -717,1902842 | -724,5512207 |
| 296 | 8,78106 | 271,0328 | 184,5381 | -55,31746982 | 129,2207 | -7,730433 | -58,80870234 | -57,068371 | -58,98234638 |
| 301 | 0 | 894,5761 | 378,004 | 53,14144537 | 431,1455 | -11,09797 | 610,7839748 | 603,0535422 | 606,586528 |
| 301 | 1,05088 | -32,22026 | -14,54114 | -1,532338896 | -16,07348 | 0,817336 | 2025,239828 | 2014,141859 | 2024,267304 |
| 301 | 2,10175 | -959,0166 | -407,0863 | -56,20612317 | -463,2924 | 12,73264 | -74,03330372 | -73,21596799 | -73,86033915 |
| 303 | 0 | 807,3135 | 346,7986 | 96,15787135 | 442,9565 | -10,37385 | -2173,306436 | -2160,573795 | -2171,987982 |
| 303 | 0,72584 | -44,16069 | -19,64088 | -5,883582413 | -25,52446 | 0,919101 | 1935,42056 | 1925,046708 | 1937,32447 |
| 303 | 1,45169 | -895,6349 | -386,0804 | -107,9250362 | -494,0054 | 12,21206 | -108,4578104 | -107,5387089 | -108,5140988 |
| 307 | 0 | -362,9898 | -163,2564 | -69,60013703 | -232,8566 | 4,850336 | -2152,336181 | -2140,124125 | -2154,352667 |
| 307 | 0,52481 | -8,220028 | -3,858926 | -1,478411635 | -5,337338 | 0,177632 | -937,5998732 | -932,7495371 | -941,7874427 |
| 307 | 1,04963 | 346,5497 | 155,5386 | 66,64331376 | 222,1819 | -4,495073 | -21,36071155 | -21,18307989 | -21,49002769 |
| 309 | 0 | -763,0809 | -310,0639 | 25,26123094 | -284,8027 | 10,77578 | 894,8784501 | 890,3833774 | 898,8073873 |
| 309 | 2,09044 | -2,909172 | -0,975743 | 1,769524903 | 0,793782 | 0,582883 | -1561,610506 | -1550,834724 | -1559,482226 |
| 309 | 4,18088 | 757,2626 | 308,1124 | -21,72218113 | 286,3902 | -9,610017 | -2,19435934 | -1,611476565 | -2,21749428 |
| 311 | 0 | -867,3832 | -374,4657 | -7,887166208 | -382,3529 | 11,86462 | 1557,221788 | 1547,611771 | 1555,047237 |
| 311 | 1,50441 | -10,39921 | -5,667978 | 1,571265032 | -4,096713 | 0,581932 | -1892,303913 | -1880,439289 | -1889,995423 |
| 311 | 3,00881 | 846,5848 | 363,1298 | 11,02969627 | 374,1595 | -10,70076 | -21,71239654 | -21,13046468 | -21,49283907 |
| 321 | 0 | 899,1074 | 411,3815 | -7,358506694 | 404,023 | 5,631016 | 1848,87912 | 1838,17836 | 1847,009745 |
| 321 | 0,77469 | 54,84197 | 23,09299 | -0,942206642 | 22,15078 | 0,521231 | 1976,88565 | 1982,516666 | 1976,186397 |
| 321 | 1,54938 | -789,4235 | -365,1956 | 5,47409341 | -359,7215 | -4,588554 | 115,5961187 | 116,1173496 | 115,5458245 |
| 385 | 0 | 412,6119 | 272,3784 | -43,95094816 | 228,4274 | -43,63127 | -1745,693413 | -1750,281967 | -1745,094748 |
| 385 | 4,39053 | 10,23141 | -3,017403 | 0,156528185 | -2,860875 | 4,331471 | 993,2503884 | 949,6191139 | 993,8581244 |
| | | | | | | | 7,579082976 | 11,91055357 | 7,565743356 |

| | | | | | | | | | | |
|-----|---------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 385 | 8,78106 | -392,1491 | -278,4132 | 44,26400453 | -234,1492 | 52,29422 | -0,634415 | -978,0922225 | -925,7980068 | -978,7266377 |
| 386 | 0 | -652,8297 | -366,5822 | 48,66673586 | -317,9154 | 55,56962 | -0,735536 | -1484,509549 | -1428,939932 | -1485,245085 |
| 386 | 3,43206 | 6,027071 | -0,446972 | 2,05161424 | 1,604642 | 1,34642 | -0,039141 | 11,04447774 | 12,39089726 | 11,00533688 |
| 386 | 6,86413 | 664,8839 | 365,6882 | 44,56350738 | 321,1247 | -52,87678 | 0,657254 | 1506,598504 | 1453,721727 | 1507,255759 |
| 389 | 0 | 834,012 | 407,6061 | -27,73793723 | 379,8681 | -48,67873 | 0,548704 | 1843,951814 | 1795,27308 | 1844,500518 |
| 389 | 2,61659 | -5,562436 | -5,988222 | 1,710695522 | -4,277527 | 2,27732 | -0,012353 | -15,78622055 | -13,50890076 | -15,79857308 |
| 389 | 5,23319 | -845,1368 | -419,5825 | 31,15932827 | -388,4232 | 53,23337 | -0,573409 | -1875,524255 | -1822,290882 | -1876,097664 |
| 393 | 0 | 940,6439 | 428,9105 | -5,036608008 | 423,8739 | -41,23425 | 0,490926 | 2070,584831 | 2029,350585 | 2071,075757 |
| 393 | 1,93663 | -19,34677 | -11,38935 | 1,069315901 | -10,32003 | 2,425796 | -0,022196 | -45,79085691 | -43,36506115 | -45,8130528 |
| 393 | 3,87325 | -979,3374 | -451,6892 | 7,175239809 | -444,514 | 46,08584 | -0,535318 | -2162,166545 | -2116,080707 | -2162,701863 |
| 398 | 0 | -1040,17 | -455,373 | -22,93934833 | -478,3123 | 33,91664 | -0,529404 | -2308,846106 | -2274,92947 | -2309,375509 |
| 398 | 1,38866 | -34,96931 | -17,34553 | -0,393230803 | -17,73876 | 2,343768 | -0,030778 | -80,93761558 | -78,59384802 | -80,96839333 |
| 398 | 2,77731 | 970,2317 | 420,6819 | 22,15288672 | 442,8348 | -29,2291 | 0,467848 | 2146,970875 | 2117,741774 | 2147,438723 |
| 401 | 0 | 876,5092 | 360,5052 | 51,2597436 | 411,7649 | -11,28802 | 0,424368 | 1962,991784 | 1951,703767 | 1963,416152 |
| 401 | 0,96769 | -46,34588 | -20,7625 | -2,886836892 | -23,64934 | 1,46951 | -0,03584 | -107,5483164 | -106,0788067 | -107,5841565 |
| 401 | 1,93538 | -969,201 | -402,0302 | -57,03341739 | -459,0636 | 14,22704 | -0,496048 | -2178,088417 | -2163,861381 | -2178,584465 |
| 411 | 0 | 142,9639 | 22,4965 | 44,52933514 | 67,02583 | 25,39158 | 0,226081 | 319,9047164 | 345,2963008 | 320,1307978 |
| 411 | 0,50025 | -2,293716 | -0,205519 | -0,81809468 | -1,023614 | -0,59651 | -0,007821 | -5,029058341 | -5,625568411 | -5,036878965 |
| 411 | 1,0005 | -147,5513 | -22,90754 | -46,1655245 | -69,07306 | -26,5846 | -0,241723 | -329,9628331 | -356,5474377 | -330,2045558 |
| 412 | 0 | 181,406 | 125,7782 | 19,01443421 | 144,7926 | -38,84679 | -0,180331 | 525,4130979 | 486,5663045 | 525,2327668 |
| 412 | 0,45128 | 5,684261 | 3,70793 | 0,684436652 | 4,392367 | -1,010336 | -0,004274 | 16,17427191 | 15,16393596 | 16,16999815 |
| 412 | 0,90256 | -170,0375 | -118,3623 | -17,6455609 | -136,0079 | 36,82612 | 0,171784 | -493,0645541 | -456,2384325 | -492,8927705 |
| 414 | 0 | 464,3576 | 234,9416 | 77,9642387 | 312,9059 | -38,4447 | -0,068085 | 1229,476549 | 1191,031848 | 1229,408465 |
| 414 | 0,52481 | 10,49254 | 5,272266 | 1,642549166 | 6,914816 | -0,836729 | 0,001343 | 27,46993254 | 26,63320315 | 27,47127536 |
| 414 | 1,04963 | -443,3725 | -224,3971 | -74,67914037 | -299,0762 | 36,77124 | 0,07077 | -1174,536684 | -1137,765442 | -1174,465914 |
| 416 | 0 | -695,6537 | -259,004 | -87,85977902 | -346,8637 | -14,50526 | -0,461034 | -1598,07729 | -1612,582552 | -1598,538324 |
| 416 | 0,67472 | -38,26585 | -15,35899 | -5,59327008 | -20,95226 | -0,40597 | -0,036911 | -91,65013691 | -92,05610736 | -91,68704626 |
| 416 | 1,34944 | 619,122 | 228,286 | 76,67323886 | 304,9592 | 13,69332 | 0,387211 | 1414,777017 | 1428,470337 | 1415,164228 |
| 436 | 0 | -980,4283 | -498,0382 | -2,760533578 | -500,7988 | 34,67908 | 0,103117 | -2276,154356 | -2241,475274 | -2276,051239 |
| 436 | 0,77469 | -66,49069 | -33,45044 | -0,252177106 | -33,70262 | 4,154832 | 0,007083 | -153,8431336 | -149,6883011 | -153,8360504 |
| 436 | 1,54938 | 847,4469 | 431,1374 | 2,256179366 | 433,3935 | -26,36942 | -0,088951 | 1968,468089 | 1942,098672 | 1968,379138 |
| 438 | 0 | -230,0607 | -90,26345 | 7,92509514 | -82,33836 | -16,46035 | 0,026323 | -463,7556407 | -480,2159886 | -463,7293174 |
| 438 | 0,43763 | -22,31011 | -8,738571 | 0,54981868 | -8,188753 | 0,39154 | 0,002296 | -45,38065424 | -44,98911441 | -45,37835777 |
| 438 | 0,87525 | 185,4405 | 72,78631 | -6,825457779 | 65,96085 | 17,24343 | -0,02173 | 372,9943322 | 390,2377598 | 372,9726019 |
| 440 | 0 | 253,8306 | 146,9573 | 8,346010707 | 155,3033 | -34,31822 | -0,016555 | 640,586297 | 606,2680729 | 640,5697422 |
| 440 | 0,17956 | 27,42219 | 17,21493 | 0,903466883 | 18,1184 | -2,427686 | -0,001622 | 71,88564492 | 69,45795931 | 71,88402269 |
| 440 | 0,35913 | -198,9862 | -112,5274 | -6,539077046 | -119,0665 | 29,46285 | 0,01331 | -496,8150072 | -467,3521542 | -496,8016968 |
| 442 | 0 | -693,2191 | -992,1769 | -200,0131374 | -1192,19 | 91,58904 | -0,092776 | -3285,564925 | -3193,97588 | -3285,657701 |
| 442 | 2,28788 | -13,28786 | -22,82726 | -4,555023431 | -27,38228 | 2,406834 | -0,018336 | -72,03879053 | -69,6319561 | -72,05712639 |

| | | | | | | | | | | |
|-----|--------------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 442 | 4, b / b / b | 666,6434 | 946,5224 | 190,9030906 | 1137,425 | -86,77538 | 0,056104 | 3141,487344 | 3054,711968 | 3141,543448 |
| 444 | 0 | -991,2727 | -920,5782 | -137,8398171 | -1058,418 | 89,0647 | 0,138766 | -3405,49049 | -3316,425791 | -3405,351724 |
| 444 | 1,70381 | -39,65823 | -37,04164 | -5,832105599 | -42,87374 | 5,714061 | 0,014249 | -137,3031867 | -131,5891259 | -137,2889381 |
| 444 | 3,40763 | 911,9563 | 846,4949 | 126,1756059 | 972,6705 | -77,63658 | -0,110269 | 3130,884116 | 3053,247539 | 3130,773848 |
| 446 | 0 | -1403,652 | -768,1303 | -32,70384183 | -800,8342 | 70,87216 | 0,170443 | -3426,416125 | -3355,543961 | -3426,245682 |
| 446 | 1,19375 | -72,55794 | -39,27663 | -2,615696834 | -41,89232 | 5,505348 | 0,013862 | -178,109965 | -172,6046167 | -178,0961034 |
| 446 | 2,3875 | 1258,536 | 689,5771 | 27,47244816 | 717,0495 | -59,86147 | -0,14272 | 3070,196195 | 3010,334728 | 3070,053475 |
| 453 | 0 | 764,8062 | 831,5969 | 145,7848635 | 977,3818 | -53,94062 | -0,284268 | 2949,011561 | 2895,070939 | 2948,727292 |
| 453 | 2,94644 | -59,85714 | -68,32574 | -12,42452815 | -80,75027 | 17,77715 | -0,150966 | -239,3148137 | -221,537668 | -239,4657802 |
| 453 | 5,89288 | -884,5205 | -968,2484 | -170,6339198 | -1138,882 | 89,49491 | -0,017665 | -3427,641188 | -3338,146275 | -3427,658853 |
| 457 | 0 | 776,2176 | 735,4942 | 69,46920299 | 804,9634 | -321,6576 | -1,246365 | 2619,009756 | 2297,352119 | 2617,763391 |
| 457 | 3,683 | 368,6288 | 385,4755 | 58,89280514 | 444,3683 | -126,1353 | 1,026849 | 1367,953997 | 1241,818699 | 1368,980845 |
| 457 | 7,366 | -38,96009 | 35,45677 | 48,3164073 | 83,77318 | 69,38704 | 3,300063 | 116,8982369 | 186,2852792 | 120,1982994 |
| 462 | 0 | -711,6903 | -258,8967 | 27,78747002 | -231,1092 | -16,18418 | -1,067806 | -1387,415901 | -1403,600083 | -1388,483707 |
| 462 | 2,09044 | 4,808931 | 1,640558 | -1,701561783 | -0,061004 | -0,798345 | 0,207038 | 6,129602841 | 5,331257378 | 6,336640432 |
| 462 | 4,18088 | 721,3082 | 262,1778 | -31,19059359 | 230,9872 | 14,58749 | 1,481882 | 1399,675106 | 1414,262598 | 1401,156988 |
| 465 | 0 | 1004,304 | 422,7678 | 57,81816458 | 480,586 | -18,0991 | 0,509338 | 2266,7675 | 2248,668399 | 2267,276837 |
| 465 | 1,05088 | 31,91237 | 13,32415 | 1,377822315 | 14,70198 | -0,138775 | 0,033636 | 70,89002721 | 70,75125203 | 70,923666304 |
| 465 | 2,10175 | -940,4796 | -396,1195 | -55,06251995 | -451,182 | 17,82155 | -0,442066 | -2124,987445 | -2107,165895 | -2125,429511 |
| 467 | 0 | 857,5201 | 349,1313 | 4,628952271 | 353,7603 | 2,66719 | 0,964248 | 1822,296779 | 1824,963968 | 1823,261026 |
| 467 | 1,50441 | 6,158451 | 1,889748 | -2,024744148 | -0,134996 | 1,291876 | 0,034556 | 7,735994786 | 9,027870432 | 7,770550725 |
| 467 | 3,00881 | -845,2032 | -345,3519 | -8,678440567 | -354,0303 | -0,083439 | -0,895136 | -1806,824789 | -1806,908227 | -1807,719925 |
| 472 | 0 | 1011,575 | 457,632 | 116,1740712 | 573,8061 | -44,77328 | 0,17277 | 2462,660097 | 2417,886815 | 2462,832867 |
| 472 | 0,72584 | 48,99008 | 22,18899 | 6,172674157 | 28,36166 | -2,04201 | 0,022416 | 120,4104246 | 118,3684144 | 120,4328403 |
| 472 | 1,45169 | -913,5951 | -413,2541 | -103,8287228 | -517,0828 | 40,68926 | -0,127939 | -2221,839248 | -2181,149987 | -2221,967187 |
| 535 | 0 | 1229,696 | 615,0378 | 14,75195677 | 629,7898 | 1,0903 | -0,621163 | 2858,184232 | 2859,274532 | 2857,56307 |
| 535 | 1,19375 | 57,09697 | 26,87145 | 1,177843517 | 28,0493 | 0,16616 | -0,04532 | 130,3246575 | 130,4908178 | 130,2793377 |
| 535 | 2,3875 | -1115,502 | -561,2949 | -12,39626974 | -573,6912 | -0,757979 | 0,530523 | -2597,534917 | -2598,292896 | -2597,004394 |

TABEL MOMEN KOLOM TEPI ARAH Y

| FRAME | STA | MD | | ML | | ML TOT | ME | | COMB1 1,3MD + 2 (MQ+MP) | COMB 2 1,3MD + 2 (MQ+MP)+1MEX | COMB 3 1,3MD + 2 (MQ+MP)+1MEY |
|-------|--------|-----------|---------------|-------------|-----------|-----------|-----------|--------------|----------------------------|----------------------------------|----------------------------------|
| | | ML merata | ML.Koef kejut | ME X | ME Y | | | | | | |
| 1 | 0 | -52,46692 | -186,3618 | -78,9972815 | -265,3591 | 6,139451 | 31,13674 | -598,9251634 | -592,7857121 | -567,7884199 | |
| 1 | 5,5 | -532,3145 | -50,49348 | -21,4635561 | -71,95704 | 1,669253 | -46,1218 | -835,9229214 | -834,2536688 | -882,0447182 | |
| 1 | 11 | -1012,162 | 85,37483 | 36,07016924 | 121,445 | -2,800946 | -123,3803 | -1072,920679 | -1075,721626 | -1196,301016 | |
| 2 | 0 | 22,15596 | -16,85733 | 0,242867944 | -16,61446 | -1,404459 | 62,48673 | -4,426179615 | -5,830639112 | 58,060553 | |
| 2 | 2,811 | 25,12017 | 64,6727 | 1,749962418 | 66,42266 | 0,000953 | 13,55305 | 165,5015549 | 165,502508 | 179,0546026 | |
| 2 | 5,622 | 28,08439 | 146,2027 | 3,257056891 | 149,4598 | 1,406366 | -35,38064 | 335,4292895 | 336,8356551 | 300,0486522 | |
| 12 | 0 | -396,3559 | -243,7897 | -99,7918162 | -343,5815 | -0,133993 | 33,36893 | -1202,425642 | -1202,559635 | -1169,056714 | |
| 12 | 3,683 | -191,1895 | -74,79025 | -30,5455362 | -105,3358 | 0,645569 | -111,2324 | -459,2179594 | -458,5723907 | -570,4503204 | |
| 12 | 7,366 | 13,97683 | 94,20918 | 38,70074385 | 132,9099 | 1,42513 | -255,8337 | 283,9897231 | 285,4148535 | 28,1560729 | |
| 41 | 0 | -22,21453 | -146,034 | -3,38228547 | -149,4163 | -0,624046 | 34,89477 | -327,7114784 | -328,3355244 | -292,8167058 | |
| 41 | 2,811 | -15,62891 | -64,38513 | -1,75414378 | -66,13928 | 0,009502 | -13,5799 | -152,5961337 | -152,5866318 | -166,1760302 | |
| 41 | 5,622 | -9,043289 | 17,26375 | -0,1260021 | 17,13774 | 0,64305 | -62,05457 | 22,51921105 | 23,16226076 | -39,5353546 | |
| 128 | 0 | 92,37026 | 83,01429 | -0,32646119 | 82,68782 | 2,092493 | 5,752789 | 285,4569877 | 287,5494807 | 291,2097768 | |
| 128 | 0,1796 | 114,8099 | 102,2417 | -0,15938604 | 102,0824 | 1,293348 | 0,365481 | 353,4175304 | 354,7108786 | 353,7830112 | |
| 128 | 0,3591 | 137,2495 | 121,4692 | 0,007689099 | 121,4769 | 0,494203 | -5,021827 | 421,3780731 | 421,8722764 | 416,3562456 | |
| 137 | 0 | 30,46111 | 35,32383 | -1,6868845 | 33,63697 | 1,299397 | -9,270333 | 106,8733736 | 108,1727705 | 97,60304081 | |
| 137 | 0,4376 | 134,9441 | 110,086 | -0,61930413 | 109,4667 | -0,274328 | -3,290486 | 394,3607048 | 394,086377 | 391,0702184 | |
| 137 | 0,8753 | 239,4271 | 184,8482 | 0,448256234 | 185,2964 | -1,848053 | 2,68936 | 681,848036 | 679,9999835 | 684,5373961 | |
| 151 | 0 | -88,84967 | -27,46778 | -8,41737132 | -35,88515 | 3,2838 | -0,588869 | -187,2748784 | -183,9910785 | -187,8637474 | |
| 151 | 1,7038 | 129,6554 | 102,9816 | 39,38254544 | 142,3641 | 0,733699 | -0,002894 | 453,2803121 | 454,0140109 | 453,2774179 | |
| 151 | 3,4076 | 348,1605 | 233,4309 | 87,1824622 | 320,6134 | -1,816402 | 0,583081 | 1093,835503 | 1092,0191 | 1094,418583 | |
| 153 | 0 | -65,14393 | -20,69814 | -7,55016649 | -28,24831 | 2,244248 | -6,534765 | -141,1837224 | -138,9394745 | -147,7184879 | |
| 153 | 2,2879 | 99,94184 | 98,52003 | 10,7893247 | 109,3094 | 0,572913 | -0,788924 | 348,5431067 | 349,1160196 | 347,754183 | |
| 153 | 4,5758 | 265,0276 | 217,7382 | 29,12881589 | 246,867 | -1,098422 | 4,956918 | 838,2699358 | 837,1715137 | 843,2268538 | |
| 155 | 0 | -39,85342 | -25,79207 | -5,80673325 | -31,5988 | 1,282932 | -0,829392 | -115,0070555 | -113,7241234 | -115,836447 | |
| 155 | 2,9464 | 88,57312 | 88,53703 | 8,833262175 | 97,37029 | 0,221634 | 1,939838 | 309,8856356 | 310,1072693 | 311,8254735 | |
| 155 | 5,8929 | 216,9997 | 202,8661 | 23,4732576 | 226,3394 | -0,839665 | 4,709067 | 734,7783266 | 733,9386619 | 739,4873939 | |
| 274 | 0 | -131,6272 | -111,8977 | -54,1220768 | -166,0198 | -0,391064 | 3,516348 | -503,1549272 | -503,5459909 | -499,6385795 | |
| 274 | 0,4513 | -125,2207 | -69,29957 | -35,035216 | -104,3331 | -0,123608 | -1,522748 | -371,4531303 | -371,576738 | -372,9758786 | |
| 274 | 0,9026 | -118,8142 | -26,70146 | -15,9449664 | -42,64643 | 0,143848 | -6,561844 | -239,7513334 | -239,6074851 | -246,3131776 | |
| 275 | 0 | -44,88203 | 12,1791 | -1,24550754 | 10,93359 | -0,104542 | -79,07698 | -36,47946648 | -36,58400872 | -115,5564431 | |
| 275 | 0,5002 | 93,02456 | 60,77316 | 11,83118037 | 72,60434 | 0,005033 | -15,86741 | 266,1406028 | 266,1456356 | 250,273192 | |
| 275 | 1,0005 | 230,9312 | 109,3672 | 24,90786829 | 134,2751 | 0,114608 | 47,34215 | 568,7606722 | 568,8752799 | 616,1028271 | |
| 278 | 0 | -40,71836 | 26,3884 | -9,33913054 | 17,04927 | -0,094933 | -103,3426 | -18,8353392 | -18,93027269 | -122,1779833 | |

| | | | | | | | | | | |
|-----|--------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 278 | 0,6722 | 141,4949 | 94,82141 | 0,876691494 | 95,69811 | -0,137806 | -28,75091 | 375,3395794 | 375,2017729 | 346,5886708 |
| 278 | 1,3444 | 323,7082 | 163,2544 | 11,09251353 | 174,3469 | -0,180679 | 45,84083 | 769,514498 | 769,3338185 | 815,353249 |
| 281 | 0 | -316,2366 | -157,8583 | -3,85617666 | -161,7144 | 0,191014 | 12,98966 | -734,5365071 | -734,3454928 | -721,5468439 |
| 281 | 0,9677 | -112,7611 | -77,46142 | 1,479429212 | -75,98199 | 0,043697 | -9,551112 | -298,5534773 | -298,5097802 | -308,1045896 |
| 281 | 1,9354 | 90,71436 | 2,935408 | 6,815035082 | 9,750443 | -0,10362 | -32,09189 | 137,4295524 | 137,3259324 | 105,3376648 |
| 283 | 0 | -312,6574 | -159,4479 | -1,36549472 | -160,8134 | 0,153776 | 10,82024 | -728,0813417 | -727,9275659 | -717,2611031 |
| 283 | 1,3887 | -106,811 | -74,67027 | 0,533986303 | -74,13628 | 0,018 | -7,86416 | -287,1268693 | -287,1088697 | -294,9910288 |
| 283 | 2,7773 | 99,03534 | 10,10736 | 2,433467322 | 12,54083 | -0,11777 | -26,54856 | 153,8276032 | 153,7098265 | 127,2790454 |
| 285 | 0 | -292,2697 | -156,1093 | 0,293170787 | -155,8162 | 0,114967 | 2,556305 | -691,5829434 | -691,4679765 | -689,0266381 |
| 285 | 1,9366 | -102,8428 | -73,05029 | 0,158385148 | -72,89191 | 0,008721 | -2,160371 | -279,4795171 | -279,4707963 | -281,639888 |
| 285 | 3,8733 | 86,584 | 10,00875 | 0,023599508 | 10,03235 | -0,097525 | -6,877047 | 132,62339091 | 132,5263839 | 125,746862 |
| 287 | 0 | -259,5046 | -151,1424 | 1,239653778 | -149,9028 | 0,072484 | -0,653773 | -637,1615782 | -637,0890945 | -637,8153511 |
| 287 | 2,6166 | -99,17251 | -70,64045 | 0,166391696 | -70,47405 | -0,000895 | -0,641406 | -269,872376 | -269,8732714 | -270,5137824 |
| 287 | 5,2332 | 61,15959 | 9,861552 | -0,90687039 | 8,954681 | -0,074274 | -0,62904 | 97,41682621 | 97,34255178 | 96,78778625 |
| 294 | 0 | -210,6806 | -144,4475 | 0,02247626 | -144,425 | -0,055587 | -4,105084 | -562,7347307 | -562,7903173 | -566,8398142 |
| 294 | 3,4321 | -102,405 | -66,08704 | -0,63695588 | -66,724 | -0,035684 | 0,563611 | -266,5745308 | -266,6102149 | -266,0109194 |
| 294 | 6,8641 | 5,87051 | 12,27339 | -1,29638802 | 10,977 | -0,015782 | 5,232306 | 29,58566909 | 29,56988751 | 34,81797545 |
| 296 | 0 | -143,4808 | -135,4073 | -19,7568549 | -155,1642 | 0,318402 | -5,070565 | -496,8534899 | -496,535088 | -501,9240546 |
| 296 | 4,3905 | -140,8176 | -56,78399 | -7,82235113 | -64,60634 | 0,120045 | 4,93206 | -312,2755287 | -312,1554832 | -307,3423229 |
| 296 | 8,7811 | -138,1543 | 21,83937 | 4,112152625 | 25,95152 | -0,078311 | 14,93698 | -127,6975675 | -127,7758785 | -112,7605913 |
| 301 | 0 | -301,9939 | -160,1263 | -3,24628858 | -163,3726 | -1,059342 | 1,279883 | -719,3372871 | -720,3966295 | -718,0574036 |
| 301 | 1,0509 | -105,6728 | -77,98031 | 1,464867861 | -76,51544 | 0,397507 | -0,817407 | -290,4054657 | -290,0079582 | -291,2228729 |
| 301 | 2,1018 | 90,64836 | 4,165721 | 6,176024305 | 10,34175 | 1,854357 | -2,914698 | 138,5263556 | 140,380713 | 135,6116579 |
| 303 | 0 | -327,7593 | -169,4455 | -12,0276446 | -181,4731 | -0,607721 | 3,107658 | -789,0332954 | -789,6410168 | -785,9256376 |
| 303 | 0,7258 | -138,7565 | -96,31755 | -1,41336103 | -97,73092 | 0,241185 | -3,89262 | -375,8453233 | -375,6041379 | -379,7379433 |
| 303 | 1,4517 | 50,24619 | -23,18962 | 9,200922497 | -13,9887 | 1,090092 | -10,8929 | 37,34264885 | 38,43274095 | 26,44975091 |
| 307 | 0 | -51,97023 | 9,056842 | -2,0235247 | 7,033318 | -0,312604 | 16,01418 | -53,49466392 | -53,80726768 | -37,4804839 |
| 307 | 0,5248 | 90,05771 | 59,94221 | 11,63590808 | 71,57811 | 0,049214 | 3,860451 | 260,2312478 | 260,2804622 | 264,0916988 |
| 307 | 1,0496 | 232,0856 | 110,8276 | 25,29534086 | 136,1229 | 0,411033 | -8,293278 | 573,9571595 | 574,3681921 | 565,6638815 |
| 309 | 0 | -25,73626 | -9,952704 | -0,26712041 | -10,21982 | -1,444929 | -29,42467 | -53,89678541 | -55,3417142 | -83,32145991 |
| 309 | 2,0904 | 156,2808 | 68,73095 | 3,550978063 | 72,28193 | -0,324353 | -7,298919 | 347,7288995 | 347,4045468 | 340,42998 |
| 309 | 4,1809 | 338,2979 | 147,4146 | 7,36907654 | 154,7837 | 0,796223 | 14,82684 | 749,3545844 | 750,1508078 | 764,18142 |
| 311 | 0 | -74,64234 | -9,492589 | -1,7138544 | -11,20644 | -2,210702 | -6,25023 | -119,4479227 | -121,658625 | -125,6981525 |
| 311 | 1,5044 | 98,46348 | 74,56551 | -1,14187775 | 73,42364 | -0,51188 | -1,704537 | 274,8498009 | 274,3379206 | 273,1452639 |
| 311 | 3,0088 | 271,5693 | 158,6236 | -0,56990111 | 158,0537 | 1,186942 | 2,841156 | 669,1475245 | 670,3344662 | 671,9886804 |
| 321 | 0 | -65,71436 | -18,25202 | -4,32957019 | -22,58159 | 3,364487 | -0,338345 | -130,5918331 | -127,2273457 | -130,9301783 |
| 321 | 0,7747 | 124,652 | 107,7531 | -0,44748343 | 107,3056 | 0,417715 | -0,136719 | 376,6588687 | 377,0765836 | 376,5221501 |
| 321 | 1,5494 | 315,0184 | 233,7582 | 3,434603333 | 237,1928 | -2,529058 | 0,064908 | 883,9095706 | 881,3805129 | 883,9744786 |

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|-----|--------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 385 | 0 | -140,9666 | -137,6808 | -20,0361031 | -157,7169 | 1,543134 | -4,43169 | -498,6903749 | -497,1472411 | -503,1220653 |
| 385 | 4,3905 | -140,5879 | -57,43398 | -7,89832736 | -65,3323 | 0,425067 | 4,974908 | -313,4288666 | -313,0037997 | -308,4539585 |
| 385 | 8,7811 | -140,2092 | 22,81283 | 4,239448407 | 27,05228 | -0,693 | 14,38151 | -128,1673583 | -128,8603583 | -113,7858517 |
| 386 | 0 | -5,259206 | -13,03891 | 1,181348349 | -11,85756 | 0,665219 | -4,560064 | -30,55209777 | -29,8868784 | -35,11216226 |
| 386 | 3,4321 | 99,89333 | 65,68259 | 0,588096421 | 66,27069 | 0,237192 | -0,642767 | 262,6398954 | 262,6398954 | 261,7599368 |
| 386 | 6,8641 | 205,0459 | 144,4041 | -0,00515551 | 144,3989 | -0,190836 | 3,274531 | 555,3575052 | 555,1666692 | 558,6320358 |
| 389 | 0 | -256,6085 | -152,0085 | 1,106698706 | -150,9018 | 0,823477 | -0,455895 | -635,3947076 | -634,5712302 | -635,8506028 |
| 389 | 2,6166 | -96,17954 | -70,4298 | 0,193406187 | -70,2364 | -0,113549 | -0,300299 | -265,5061952 | -265,6197439 | -265,8064941 |
| 389 | 5,2332 | 64,24945 | 11,1489 | -0,71988633 | 10,42902 | -1,050575 | -0,144703 | 104,3823173 | 103,3317425 | 104,2376146 |
| 393 | 0 | -291,9659 | -157,4025 | 0,101737807 | -157,3007 | 1,095512 | 0,083629 | -694,1571933 | -693,0616808 | -694,0735639 |
| 393 | 1,9366 | -99,28762 | -72,93244 | 0,17707322 | -72,75536 | -0,05548 | -0,145722 | -274,5846366 | -274,6401168 | -274,7303586 |
| 393 | 3,8733 | 93,3907 | 11,5376 | 0,252408633 | 11,79 | -1,206473 | -0,375073 | 144,9879202 | 143,7814473 | 144,6128467 |
| 398 | 0 | -109,6949 | -11,7677 | -2,70819791 | -14,47597 | 1,195151 | 0,017861 | -171,555368 | -170,3602166 | -171,5375073 |
| 398 | 1,3887 | 102,1676 | 74,50609 | -0,56649336 | 73,9396 | 0,041624 | 0,034402 | 280,6971005 | 280,7387242 | 280,7315024 |
| 398 | 2,7773 | 314,0302 | 160,78 | 1,57521119 | 162,3552 | -1,111904 | 0,050943 | 732,9495689 | 731,8376649 | 733,0005122 |
| 401 | 0 | -318,7312 | -158,9868 | -4,0662525 | -163,053 | 0,892814 | -0,058333 | -740,4565578 | -739,5637435 | -740,5148911 |
| 401 | 0,9677 | -105,7999 | -77,15114 | 1,54864151 | -75,6025 | -0,030693 | -0,008261 | -288,7449063 | -288,7755997 | -288,7531675 |
| 401 | 1,9354 | 107,1313 | 4,684475 | 7,163535519 | 11,84801 | -0,954201 | 0,041811 | 162,9667453 | 162,012544 | 163,0085561 |
| 411 | 0 | -125,0322 | -107,026 | -24,4387391 | -131,4647 | -0,653274 | 0,048708 | -425,4713295 | -426,124604 | -425,4226214 |
| 411 | 0,5002 | -111,0683 | -59,19165 | -11,5035675 | -70,69521 | -0,321795 | 0,012579 | -285,7792219 | -286,1010165 | -285,7666427 |
| 411 | 1,0005 | -97,1044 | -11,3573 | 1,431604239 | -9,925697 | 0,009685 | -0,02355 | -146,0871143 | -146,0774289 | -146,110664 |
| 412 | 0 | -17,59897 | 26,46153 | 15,85152731 | 42,31305 | -0,319071 | 0,010675 | 61,74745112 | 61,42838049 | 61,75812596 |
| 412 | 0,4513 | 104,9542 | 69,1311 | 34,97001921 | 104,1011 | 0,073555 | -0,031708 | 344,6426997 | 344,7162551 | 344,6109919 |
| 412 | 0,9026 | 227,5074 | 111,8007 | 54,08851111 | 165,8892 | 0,466181 | -0,074091 | 627,5379484 | 628,0041298 | 627,4638579 |
| 414 | 0 | -37,99579 | 9,253392 | -2,05131655 | 7,202075 | -0,785165 | -0,002495 | -34,99037871 | -35,77554322 | -34,9928736 |
| 414 | 0,5248 | 93,54202 | 60,7566 | 11,70698443 | 72,46358 | -0,360213 | -0,029637 | 266,5317914 | 266,1715789 | 266,502154 |
| 414 | 1,0496 | 225,0798 | 112,2598 | 25,46528541 | 137,7251 | 0,064739 | -0,05678 | 568,0539615 | 568,1187009 | 567,9971817 |
| 416 | 0 | -67,362 | 24,00346 | -9,79827057 | 14,20519 | 0,446386 | 0,012468 | -59,16020919 | -58,71382366 | -59,14774161 |
| 416 | 0,6747 | 131,7083 | 92,82612 | 0,560816197 | 93,38694 | 0,380352 | 0,004754 | 357,9946827 | 358,3750351 | 357,9994371 |
| 416 | 1,3494 | 330,7786 | 161,6488 | 10,91990297 | 172,5687 | 0,314319 | -0,002959 | 775,1495747 | 775,4638939 | 775,1466158 |
| 436 | 0 | -84,25862 | -15,38471 | -4,24119772 | -19,62591 | 4,404602 | 0,245045 | -148,7880292 | -144,3834271 | -148,5429838 |
| 436 | 0,7747 | 109,7803 | 109,0825 | -0,29705669 | 108,7854 | -0,147842 | 0,053581 | 360,2851967 | 360,1373548 | 360,3387775 |
| 436 | 1,5494 | 303,8191 | 233,5497 | 3,647084333 | 237,1968 | -4,700286 | -0,137884 | 869,3584226 | 864,6581366 | 869,2205388 |
| 438 | 0 | 15,33115 | 34,83105 | -1,83490374 | 32,99615 | 2,884454 | 0,037373 | 85,9227878 | 88,80724163 | 85,96016083 |
| 438 | 0,4376 | 119,0843 | 107,7909 | -0,86408609 | 106,9268 | 0,750728 | -0,001345 | 368,6632273 | 369,413955 | 368,6618826 |
| 438 | 0,8753 | 222,8375 | 180,7507 | 0,106731557 | 180,8575 | -1,382998 | -0,040062 | 651,4036668 | 650,0206685 | 651,3636044 |
| 440 | 0 | 74,79745 | 76,98182 | -1,04170637 | 75,94011 | 4,697865 | 0,001864 | 249,1169068 | 253,814772 | 249,1187711 |
| 440 | 0,1796 | 98,76525 | 95,47709 | -0,93175495 | 94,54533 | 4,262843 | -0,003046 | 317,4854884 | 321,7483314 | 317,4824427 |

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|-----|--------|-----------|-----------|-------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 440 | 0,3591 | 122,7331 | 113,9724 | -0,82180353 | 113,1506 | 3,827821 | -0,007956 | 385,8540701 | 389,6818908 | 385,8461143 |
| 442 | 0 | -41,75668 | -20,231 | -7,69634356 | -27,92735 | 3,959964 | -6,554674 | -110,1383791 | -106,1784155 | -116,6930532 |
| 442 | 2,2879 | 90,31896 | 98,08599 | 10,72957206 | 108,8156 | 0,861274 | -0,769093 | 335,045771 | 335,9070455 | 334,2766783 |
| 442 | 4,5758 | 222,3946 | 216,403 | 29,15548768 | 245,5585 | -2,237415 | 5,016489 | 780,2299211 | 777,9925065 | 785,2464099 |
| 444 | 0 | -93,13152 | -26,73092 | -8,60514465 | -35,33606 | 5,561881 | -0,677829 | -191,7431003 | -186,181219 | -192,4209294 |
| 444 | 1,7038 | 114,8071 | 103,5183 | 39,43074208 | 142,9491 | 0,617821 | -0,010399 | 435,1474018 | 435,7652233 | 435,1370027 |
| 444 | 3,4076 | 322,7458 | 233,7676 | 87,46662881 | 321,2342 | -4,326238 | 0,657031 | 1062,037904 | 1057,711666 | 1062,694935 |
| 446 | 0 | -116,6081 | -31,80272 | -3,38611543 | -35,18884 | 6,052943 | 0,647559 | -221,9682314 | -215,9152885 | -221,3206722 |
| 446 | 1,1938 | 96,31488 | 105,7072 | 13,60365667 | 119,3108 | 0,40742 | 0,157974 | 363,8310392 | 364,2384588 | 363,9890133 |
| 446 | 2,3875 | 309,2379 | 243,2171 | 30,59342876 | 273,8105 | -5,238104 | -0,331611 | 949,6303098 | 944,3922061 | 949,2986988 |
| 453 | 0 | -169,5857 | -206,693 | -24,0218117 | -230,7148 | 3,582904 | -4,732068 | -681,8910076 | -678,3081034 | -686,6230756 |
| 453 | 2,9464 | -98,55563 | -90,15992 | -9,02153076 | -99,18145 | 0,51636 | -1,941682 | -326,485224 | -325,9688638 | -328,4269059 |
| 453 | 5,8929 | -27,52552 | 26,37311 | 5,978750147 | 32,35186 | -2,550184 | 0,848704 | 28,9205596 | 26,37037576 | 29,76926387 |
| 457 | 0 | 234,0883 | -94,74838 | -38,7398509 | -133,4882 | -1,36156 | 255,8095 | 37,33829658 | 35,97673638 | 293,1477491 |
| 457 | 3,683 | 296,3274 | 74,60425 | 30,5297411 | 105,134 | -0,620735 | 111,2151 | 595,4935875 | 594,8728525 | 706,7086469 |
| 457 | 7,366 | 358,5665 | 243,9569 | 99,79933315 | 343,7562 | 0,12009 | -33,37933 | 1153,648878 | 1153,768969 | 1120,269545 |
| 462 | 0 | -341,5318 | -144,9575 | -6,98667757 | -151,9442 | -2,836226 | -14,14812 | -747,879657 | -750,7158831 | -762,0277733 |
| 462 | 2,0904 | -159,0894 | -68,10181 | -3,47325545 | -7,0102 | 0,021553 | 7,426556 | -349,9447456 | -349,9447456 | -342,5397432 |
| 462 | 4,1809 | 23,35309 | 8,753855 | 0,04016667 | 8,794021 | 2,879333 | 29,00123 | 47,94705888 | 50,82639189 | 76,94828688 |
| 465 | 0 | -79,031 | -2,576353 | -5,91675529 | -8,493109 | -3,566148 | -0,380382 | -119,7265165 | -123,2926644 | -120,106899 |
| 465 | 1,0509 | 111,8077 | 78,42853 | -1,41832733 | 77,0102 | -0,612173 | -0,249796 | 299,3704262 | 298,7582529 | 299,1206298 |
| 465 | 2,1018 | 302,6464 | 159,4334 | 3,080100623 | 162,5135 | 2,341801 | -0,11921 | 718,4673689 | 720,8091702 | 718,3481587 |
| 467 | 0 | -67,3106 | -7,97391 | -1,43281858 | -9,406729 | -4,021828 | -6,874154 | -106,3172423 | -110,3390708 | -113,191396 |
| 467 | 1,5044 | 103,5555 | 75,1608 | -1,07729362 | 74,0835 | -0,795377 | -2,096347 | 282,789219 | 281,9938425 | 280,6928721 |
| 467 | 3,0088 | 274,4217 | 158,2955 | -0,72176866 | 157,5737 | 2,431075 | 2,68146 | 671,8956802 | 674,3267557 | 674,5771402 |
| 472 | 0 | -31,60529 | 24,5959 | -9,03653739 | 15,55937 | -2,422799 | -0,136726 | -9,968146369 | -12,39094586 | -10,10487247 |
| 472 | 0,7258 | 149,1355 | 97,97642 | 1,58037576 | 99,5568 | -1,006306 | -0,060186 | 392,9897384 | 391,9834326 | 392,9295526 |
| 472 | 1,4517 | 329,8763 | 171,3569 | 12,19728891 | 183,5542 | 0,410188 | 0,016355 | 795,9476232 | 796,357811 | 795,9639777 |
| 535 | 0 | -100,0734 | -33,6431 | -3,29602171 | -36,93912 | 4,028996 | 1,238985 | -203,9736167 | -199,9446204 | -202,7346316 |
| 535 | 1,1938 | 112,1168 | 104,6013 | 13,49072358 | 118,092 | 0,779164 | 0,326251 | 381,9359333 | 382,7150977 | 382,2621847 |
| 535 | 2,3875 | 324,307 | 242,8457 | 30,27746888 | 273,1232 | -2,470667 | -0,586482 | 967,8454833 | 965,3748158 | 967,259001 |

MOMEN RENCANA KOLOM TEPI ARAH X

| | Kolom | 128 dan 440 | 137 dan 438 | 321 dan 438 | 535 dan 446 | 151 dan 444 | 153 dan 442 | 155 dan 453 | 12 dan 457 |
|-------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| Bawah | Mux | 640,58 | 547,27 | 2276,15 | 2859,27 | 2703,15 | 2573,8 | 2732,29 | 416,89 |
| Atas | Mux | 496,81 | 477,31 | 1968,46 | 2598,29 | 2526,56 | 2473,04 | 2549,93 | 2619 |
| | Mu x Pakai | 496,81 | 477,31 | 1968,46 | 2598,29 | 2526,56 | 2473,04 | 2549,93 | 416,89 |

| | Kolom | 41 dan 2 | 309 dan 462 | 311 dan 467 | 301 dan 465 | 303 dan 472 | 307 dan 414 | 274 dan 412 | 275 dan 411 |
|-------|------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Bawah | Mux | 1039,53 | 1561,61 | 1892,39 | 2267,27 | 2462,83 | 1229,47 | 525,41 | 575 |
| Atas | Mux | 860,94 | 1557,22 | 1822,29 | 2125,42 | 2221,96 | 1174,53 | 493,06 | 553,22 |
| | Mu x Pakai | 860,94 | 1557,22 | 1822,29 | 2125,42 | 2221,96 | 1174,53 | 493,06 | 553,22 |

| | Kolom | 278 dan 416 | 281 dan 401 | 283 dan 398 | 285 dan 393 | 287 dan 389 | 294 dan 386 | 296 dan 385 | 1 |
|-------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|
| Bawah | Mux | 1839,07 | 1988,17 | 2309,37 | 2071,07 | 1844,55 | 1485,24 | 995,85 | 32,61 |
| Atas | Mux | 1627,2 | 2199,34 | 2147,43 | 2162,7 | 1876,09 | 1507,25 | 978,72 | 359,12 |
| | Mu x Pakai | 1627,2 | 1988,17 | 2147,43 | 2071,07 | 1844,55 | 1485,24 | 978,72 | 359,12 |

MOMEN RENCANA KOLOM TEPI ARAH Y

| | Kolom | 128 dan 440 | 137 dan 438 | 321 dan 436 | 535 dan 446 | 151 dan 444 | 153 dan 442 | 155 dan 453 | 12 dan 457 |
|-------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| Bawah | Muy | 287,54 | 97,6 | 130,93 | 203,97 | 194,74 | 147,71 | 115,83 | 1202,55 |
| Atas | Muy | 421,87 | 684,53 | 883,97 | 967,84 | 1062,03 | 843,22 | 739,48 | 285,41 |
| | Mu y Pakai | 287,54 | 97,6 | 130,93 | 203,97 | 194,74 | 147,71 | 115,83 | 1202,55 |

| | Kolom | 41 dan 2 | 309 dan 462 | 311 dan 467 | 301 dan 465 | 303 dan 472 | 307 dan 414 | 274 dan 412 | 275 dan 411 |
|-------|------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Bawah | Muy | 5,83 | 83,32 | 113,19 | 123,29 | 12,39 | 53,8 | 61,42 | 115,55 |
| Atas | Muy | 336,83 | 764,18 | 674,57 | 720,8 | 796,35 | 574,36 | 628 | 616,1 |
| | Mu y Pakai | 5,83 | 83,32 | 113,19 | 123,29 | 12,39 | 53,8 | 61,42 | 115,55 |

| | Kolom | 278 dan 416 | 281 dan 401 | 283 dan 398 | 285 dan 393 | 287 dan 389 | 294 dan 386 | 296 dan 385 | 1 |
|-------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|
| Bawah | Muy | 59,14 | 740,51 | 171,53 | 694,15 | 637,81 | 566,83 | 503,12 | 567,78 |
| Atas | Muy | 775,14 | 163 | 733 | 144,98 | 97,41 | 34,81 | 113,78 | 1196,3 |
| | Mu y Pakai | 59,14 | 163 | 171,53 | 144,98 | 97,41 | 34,81 | 113,78 | 567,78 |

TABEL MOMEN KOLOM TENGAH ARAH X

| FRAME | STA | MD | ML | | ML TOT | ME | | COMB1 | | COMB 2 | | COMB 3 |
|-------|--------|-----------|-----------|---------------|-----------|-----------|-----------|-------------------|------------------------|------------------------|-------------------|--------|
| | | | ML merata | ML Koef kejut | | ME X | ME Y | 1,3MD + 2 (MQ+MP) | 1,3MD + 2 (MQ+MP)+1MEX | 1,3MD + 2 (MQ+MP)+1MEY | | |
| | | | | | | | | | | | 1,3MD + 2 (MQ+MP) | |
| 4 | 0 | 645,3292 | 153,0746 | -63,73564152 | 89,33892 | 15,64235 | 11,20323 | 1017,60575 | 1033,248099 | 1028,808981 | | |
| 4 | 2,811 | -65,22685 | -52,21791 | -10,15021652 | -62,36812 | 16,92504 | 0,710934 | -209,5311484 | -192,6061089 | -208,820214 | | |
| 4 | 5,622 | -775,7829 | -257,5104 | 43,43520849 | -214,0752 | 18,20773 | -9,781362 | -1436,668047 | -1418,460317 | -1446,449409 | | |
| 43 | 0 | 779,0878 | 266,3785 | -42,80593027 | 223,5726 | -18,06086 | 14,49683 | 1459,959209 | 1441,898353 | 1474,456039 | | |
| 43 | 2,811 | 31,45468 | 20,7357 | 6,381801965 | 27,11751 | -1,432865 | -1,082272 | 95,12609121 | 93,6932262 | 94,0438196 | | |
| 43 | 5,622 | -716,1784 | -224,9071 | 55,5695342 | -169,3375 | 15,19513 | -16,66137 | -1269,707026 | -1254,5119 | -1286,3684 | | |
| 543 | 0 | -10,4498 | -9,084312 | -1,119678055 | -10,20399 | 4,595542 | -3,98938 | -33,99272105 | -29,39717911 | -37,98210088 | | |
| 543 | 5,5 | 45,20391 | 42,65039 | 5,052785192 | 47,70318 | -20,60381 | -0,545955 | 154,1714318 | 133,5676176 | 153,625477 | | |
| 543 | 11 | 100,8576 | 94,38509 | 11,22524844 | 105,6103 | -45,80317 | 2,89747 | 342,3355846 | 296,5324144 | 345,233055 | | |
| 544 | 0 | -198,3835 | -178,6674 | -82,89131764 | -261,5588 | -27,97468 | 7,54946 | -781,0160832 | -808,990765 | -773,4666228 | | |
| 544 | 3,683 | -54,09265 | -144,7206 | -38,16159565 | -182,8822 | 17,07566 | 2,169142 | -436,0848126 | -419,009149 | -433,9156708 | | |
| 544 | 7,366 | 90,19823 | -110,7737 | 6,568126349 | -104,2056 | 62,12601 | -3,211177 | -91,15354203 | -29,02753309 | -94,36471882 | | |
| 551 | 0 | -205,7339 | -119,3156 | -2,226598001 | -121,5422 | 23,31953 | -0,401161 | -510,5383938 | -487,2188621 | -510,9395545 | | |
| 551 | 0,1796 | -24,28483 | -16,60517 | -0,656323294 | -17,26149 | 2,544541 | -0,066278 | -66,09327071 | -63,54872993 | -66,15954914 | | |
| 551 | 0,3591 | 157,1642 | 86,10523 | 0,913951413 | 87,01918 | -18,23045 | 0,268604 | 378,3518524 | 360,1214023 | 378,6204562 | | |
| 555 | 0 | 381,2318 | 155,56 | -9,132812358 | 146,4271 | 29,95666 | 0,237055 | 788,4555738 | 818,4122345 | 788,6926293 | | |
| 555 | 0,4376 | 28,78109 | 10,00029 | -1,202632729 | 8,797659 | 2,754415 | 0,001135 | 55,01073497 | 57,76514992 | 55,01186968 | | |
| 555 | 0,8753 | -323,6696 | -135,5594 | 6,727546901 | -128,8318 | -24,44783 | -0,234786 | -678,4341039 | -702,8819346 | -678,6688899 | | |
| 560 | 0 | 1056,305 | 819,451 | 155,4749516 | 974,9259 | 14,60137 | -0,289913 | 3323,048537 | 3337,649908 | 3322,758624 | | |
| 560 | 1,7038 | 30,36896 | 25,19753 | 5,670795578 | 30,86833 | 0,556265 | -0,022452 | 101,2163012 | 101,7725662 | 101,193849 | | |
| 560 | 3,4076 | -995,5672 | -769,0559 | -144,1333605 | -913,1893 | -13,48884 | 0,245009 | -3120,615935 | -3134,104775 | -3120,370926 | | |
| 561 | 0 | 803,766 | 874,1121 | 245,67341 | 1119,786 | 12,97114 | -0,33006 | 3284,466815 | 3297,437955 | 3284,136755 | | |
| 561 | 2,2879 | 11,39622 | 16,4268 | 4,625070314 | 21,05187 | 0,64864 | 0,009128 | 56,91883471 | 57,56747511 | 56,92796311 | | |
| 561 | 4,5758 | -780,9736 | -841,2585 | -236,4232694 | -1077,682 | -11,67386 | 0,348317 | -3170,629146 | -3182,303005 | -3170,280829 | | |
| 562 | 0 | 1017,644 | 848,1796 | 202,2797711 | 1050,459 | 10,40349 | 2,762838 | 3423,856223 | 3434,259717 | 3426,619061 | | |
| 562 | 2,9464 | 21,90441 | 32,64131 | 11,36662618 | 44,00793 | -1,591933 | 0,096917 | 116,4916018 | 114,8996687 | 116,5885186 | | |
| 562 | 5,8929 | -973,8354 | -782,897 | -179,5465187 | -962,4435 | -13,58736 | -2,569004 | -3190,87302 | -3204,46038 | -3193,442024 | | |
| 585 | 0 | 93,97171 | 43,06722 | 10,19009908 | 53,25732 | -2,159552 | -8,175421 | 228,6778567 | 226,5183044 | 220,5024353 | | |
| 585 | 0,4513 | -3,82052 | -1,634742 | -0,529507309 | -2,164249 | 0,05972 | 0,144107 | -9,295174209 | -9,235454452 | -9,151067257 | | |
| 585 | 0,9026 | -101,6127 | -46,3367 | -11,2491137 | -57,58582 | 2,278992 | 8,463635 | -247,2682051 | -244,9892133 | -238,8045698 | | |
| 586 | 0 | 290,3034 | 105,1274 | 77,50307584 | 182,6305 | -4,002678 | 1,219743 | 742,6553633 | 738,6526849 | 743,8751059 | | |
| 586 | 0,5002 | 5,659692 | 2,236934 | 1,244401052 | 3,481336 | -0,177437 | -0,007082 | 14,32027111 | 14,14283375 | 14,31318862 | | |
| 586 | 1,0005 | -278,984 | -100,6536 | -75,01427373 | -175,6678 | 3,647804 | -1,233908 | -714,0148211 | -710,3670174 | -715,2487287 | | |

| | | | | | | | | | | |
|-----|--------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 587 | 0 | 967,5643 | 364,9026 | 123,1019026 | 488,0045 | -14,34205 | -17,72401 | 2233,842712 | 2219,50066 | 2216,118703 |
| 587 | 0,6722 | 51,33949 | 20,27488 | 7,315887782 | 27,59077 | -1,186914 | -0,916281 | 121,9228807 | 120,7359666 | 121,0066001 |
| 587 | 1,3444 | -864,8853 | -324,3529 | -108,470127 | -432,823 | 11,96822 | 15,89145 | -1989,996951 | -1978,028726 | -1974,105502 |
| 588 | 0 | -1088,559 | -411,5675 | -56,88714478 | -468,4546 | 15,12698 | 21,52715 | -2352,035373 | -2336,908396 | -2330,508223 |
| 588 | 0,9677 | 53,0762 | 21,25782 | 2,712604424 | 23,97042 | -1,297058 | -1,036704 | 116,9398992 | 115,6428412 | 115,9031949 |
| 588 | 1,9354 | 1194,711 | 454,0831 | 62,31235363 | 516,3955 | -17,72109 | -23,60056 | 2585,915171 | 2568,194079 | 2562,314613 |
| 589 | 0 | -1137,182 | -428,5087 | -12,3446519 | -440,8534 | 15,77624 | 11,13949 | -2360,042831 | -2344,266594 | -2348,903342 |
| 589 | 1,3887 | 35,31522 | 14,59801 | -0,580388195 | 14,01762 | -1,086851 | -0,314276 | 73,94503092 | 72,85817986 | 73,63075532 |
| 589 | 2,7773 | 1207,812 | 457,7047 | 11,18387551 | 468,8886 | -17,94994 | -11,76804 | 2507,932893 | 2489,982954 | 2496,164863 |
| 590 | 0 | -1071,29 | -399,5625 | 22,45481604 | -377,1077 | 14,97611 | -0,095701 | -2146,892002 | -2131,915888 | -2146,987703 |
| 590 | 1,9366 | 16,09088 | 7,240991 | -2,120520165 | 5,12047 | -0,835375 | 0,220991 | 31,15908895 | 30,32371376 | 31,3800795 |
| 590 | 3,8733 | 1103,471 | 414,0445 | -26,69585637 | 387,3487 | -16,64686 | 0,537682 | 2209,21018 | 2192,563316 | 2209,747862 |
| 591 | 0 | -964,5691 | -353,0131 | 48,81255489 | -304,2005 | 13,84177 | -5,53995 | -1862,340825 | -1848,499053 | -1867,880775 |
| 591 | 2,6166 | 0,978995 | 1,308868 | -2,665752315 | -1,356884 | -0,552694 | 0,372206 | -1,441075005 | -1,993768899 | -1,068868758 |
| 591 | 5,2332 | 966,527 | 355,6308 | -54,14405952 | 301,4868 | -14,94716 | 6,284363 | 1859,458675 | 1844,511515 | 1865,743038 |
| 596 | 0 | -836,2973 | -295,0806 | 67,96979143 | -227,1109 | 12,11448 | -7,527676 | -1541,408265 | -1529,293788 | -1548,935941 |
| 596 | 3,4321 | -8,416978 | 1,859137 | -2,712179099 | -4,571316 | -0,772372 | 0,318015 | -20,08470376 | -20,85707577 | -19,7666892 |
| 596 | 6,8641 | 819,4634 | 291,3624 | -73,39414963 | 217,9682 | -13,65922 | 8,163705 | 1501,238858 | 1487,579637 | 1509,402563 |
| 597 | 0 | -652,8631 | -222,7161 | 57,94641278 | -164,7697 | 13,9399 | -9,48978 | -1178,261406 | -1164,321505 | -1187,751187 |
| 597 | 4,3905 | -23,09643 | -10,6052 | -0,859822042 | -11,46502 | 1,666413 | 0,60667 | -52,95539448 | -51,28898159 | -52,34872442 |
| 597 | 8,7811 | 606,6702 | 201,5057 | -59,66605687 | 141,8397 | -10,60708 | 10,70312 | 1072,350617 | 1061,743541 | 1083,053738 |
| 601 | 0 | 1146,528 | 431,794 | 61,439073 | 493,2331 | -19,32349 | 0,773369 | 2476,952729 | 2457,629243 | 2477,726098 |
| 601 | 1,0509 | -38,85542 | -15,5024 | -1,288170863 | -16,79057 | 1,184632 | -0,261448 | -84,09319654 | -82,90856503 | -84,35464439 |
| 601 | 2,1018 | -1224,239 | -462,7988 | -64,01541473 | -526,8142 | 21,69275 | -1,296264 | -2645,139122 | -2623,446373 | -2646,435386 |
| 602 | 0 | 1037,374 | 398,8779 | 126,5699255 | 525,4478 | -17,20495 | -4,490371 | 2399,481266 | 2382,27632 | 2394,990894 |
| 602 | 0,7258 | -52,99359 | -21,16092 | -7,134539757 | -28,29546 | 1,309176 | 0,062086 | -125,4825814 | -124,1734055 | -125,420495 |
| 602 | 1,4517 | -1143,361 | -441,1997 | -140,8390051 | -582,0387 | 19,8233 | 4,614544 | -2650,446429 | -2630,623131 | -2645,831884 |
| 605 | 0 | -463,9363 | -183,9186 | -96,598131 | -280,4785 | 8,140974 | 7,52725 | -1164,074168 | -1155,933194 | -1156,546918 |
| 605 | 0,5248 | -10,33489 | 4,271714 | -1,787864356 | -6,059578 | 0,25408 | 0,108656 | -25,55451844 | -25,30043796 | -25,44586216 |
| 605 | 1,0496 | 443,2666 | 175,3752 | 92,98408439 | 268,3593 | -7,632813 | -7,309938 | 1112,965131 | 1105,332318 | 1105,655193 |
| 606 | 0 | -1113,945 | -344,2182 | 34,27461115 | -309,9436 | 19,24403 | -4,354168 | -2068,015767 | -2048,771742 | -2072,369935 |
| 606 | 2,0904 | -10,56979 | 0,02601 | 2,047066005 | 2,073076 | 0,822439 | -0,213463 | -9,594580235 | -8,772141373 | -9,808043654 |
| 606 | 4,1809 | 1092,806 | 344,2702 | -30,18047914 | 314,0897 | -17,59915 | 3,927241 | 2048,826607 | 2031,227459 | 2052,753848 |
| 607 | 0 | -1125,082 | -421,3379 | -1,049510846 | -422,3874 | 21,21219 | -2,729463 | -2307,381488 | -2286,169298 | -2310,110951 |
| 607 | 1,5044 | -12,18428 | -5,675832 | 2,420073175 | -3,255759 | 0,825586 | -0,306834 | -22,35108679 | -21,52550106 | -22,65792072 |
| 607 | 3,0088 | 1100,714 | 409,9862 | 5,889657195 | 415,8759 | -19,56102 | 2,115795 | 2262,679314 | 2243,118296 | 2264,79511 |
| 613 | 0 | 1128,769 | 521,5481 | -18,97441181 | 502,5737 | 22,74055 | 0,255979 | 2472,547349 | 2495,287897 | 2472,803327 |

| | | | | | | | | | | |
|-----|--------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 613 | 0,7747 | 65,43539 | 28,58255 | -1,736753974 | 26,84579 | 1,656684 | 0,01432 | 138,7575994 | 140,4142833 | 138,7719199 |
| 613 | 1,5494 | -997,8985 | -464,383 | 15,50090387 | -448,8821 | -19,42718 | -0,227338 | -2195,03215 | -2214,45933 | -2195,259488 |
| 641 | 0 | 722,7517 | 290,2343 | -50,0384046 | 240,1959 | -46,10868 | 0,545242 | 1419,968943 | 1373,860267 | 1420,514185 |
| 641 | 4,3905 | 9,019812 | -2,688234 | -0,715318956 | -3,403553 | 4,775016 | -0,071334 | 4,918648743 | 9,693664695 | 4,847314941 |
| 641 | 8,7811 | -704,7121 | -295,6107 | 48,60776668 | -247,003 | 55,65871 | -0,68791 | -1410,131646 | -1354,472938 | -1410,819556 |
| 642 | 0 | -915,5178 | -383,9242 | 62,55024357 | -321,3739 | 57,6957 | 1,455743 | -1832,920995 | -1775,225296 | -1831,465252 |
| 642 | 3,4321 | 7,050786 | 0,539826 | 2,557196303 | 3,097022 | 1,414064 | 0,032643 | 15,36006507 | 16,7741286 | 15,39270833 |
| 642 | 6,8641 | 929,6194 | 385,0038 | -57,43585096 | 327,568 | -54,86757 | -1,390457 | 1863,641125 | 1808,773554 | 1862,250668 |
| 643 | 0 | 1044,246 | 429,9254 | -39,82844721 | 390,097 | -50,23579 | -1,274835 | 2137,71369 | 2087,477899 | 2136,438855 |
| 643 | 2,6166 | -4,992103 | -5,136781 | 2,214706792 | -2,922074 | 2,400666 | 0,043545 | -12,3338825 | -9,933216615 | -12,29033759 |
| 643 | 5,2332 | -1054,23 | -440,199 | 44,25786079 | -395,9411 | 55,03712 | 1,361925 | -2162,381455 | -2107,344332 | -2161,01953 |
| 644 | 0 | 1131,57 | 457,4097 | -15,71193749 | 441,6978 | -42,24367 | -0,868125 | 2354,436413 | 2312,192744 | 2353,568288 |
| 644 | 1,9366 | -19,81564 | -10,78393 | 1,703817626 | -9,080109 | 2,540622 | 0,040411 | -43,92055428 | -41,37993247 | 2353,568288 |
| 644 | 3,8733 | -1171,201 | -478,9776 | 19,11957274 | -459,858 | 47,32491 | 0,948948 | -2442,277522 | -2394,952609 | -43,88014283 |
| 648 | 0 | -1245,858 | -492,7697 | -15,27759124 | -508,0473 | 34,35106 | 0,76604 | -2635,710522 | -2601,359462 | -2441,328573 |
| 648 | 1,3887 | -38,31902 | -17,40868 | 0,250460469 | -17,15822 | 2,443815 | 0,041363 | -84,13116152 | -2601,359462 | -2634,944483 |
| 648 | 2,7773 | 1169,22 | 457,9524 | 15,77851218 | 473,7309 | -29,46343 | -0,683314 | 2467,448199 | -81,68734645 | -84,089799 |
| 649 | 0 | 1084,669 | 403,0541 | 55,99680148 | 459,0509 | -10,18401 | -0,542322 | 2328,171271 | 2437,984769 | 2466,764885 |
| 649 | 0,9677 | -54,0729 | -21,81701 | -2,790621438 | -24,60763 | 1,51422 | 0,042648 | -119,5100401 | 2317,987256 | 2327,628949 |
| 649 | 1,9354 | -1192,815 | -446,6881 | -61,57804436 | -508,2661 | 13,21246 | 0,627617 | -2567,191351 | -117,9958197 | -119,4673924 |
| 652 | 0 | 205,1202 | 33,05893 | 67,07454622 | 100,1335 | 28,72043 | -0,229208 | 466,9232745 | -2553,978896 | -2566,563734 |
| 652 | 0,5002 | -3,812065 | -0,543718 | -1,045487255 | -1,589206 | -0,622879 | 0,007096 | 466,9232745 | 495,6437018 | 466,6940663 |
| 652 | 1,0005 | -212,7444 | -34,14637 | -69,16552073 | -103,3119 | -29,96619 | 0,243401 | -8,134095348 | -8,756974329 | -8,126998912 |
| 653 | 0 | 196,1996 | 133,1564 | 21,55814359 | 154,7146 | -44,17147 | 0,21501 | -483,1914652 | -513,1576505 | -482,9480642 |
| 653 | 0,4513 | 6,067612 | 3,741934 | 0,77939328 | 4,521327 | -1,077121 | 0,004426 | 564,4885944 | 520,3171255 | 564,7036042 |
| 653 | 0,9026 | -184,0643 | -125,6726 | -19,99935703 | -145,6719 | 42,01723 | -0,206158 | 16,93055043 | 15,85342982 | 16,93497619 |
| 654 | 0 | 545,8464 | 260,8422 | 105,7623309 | 366,6045 | -45,82114 | 0,142307 | -530,6274936 | -488,6102658 | -530,8336518 |
| 654 | 0,5248 | 11,87797 | 5,70946 | 1,960155656 | 7,669616 | -0,963471 | 0,000224 | 1442,809374 | 1396,988232 | 1442,951681 |
| 654 | 1,0496 | -522,0905 | -249,4233 | -101,8420195 | -351,2653 | 43,8942 | -0,141858 | 30,78059681 | 29,81712547 | 30,78082127 |
| 655 | 0 | -902,0661 | -299,2897 | -115,5175961 | -414,8073 | -17,6502 | 0,49697 | -1381,248181 | -1337,353981 | -1381,990038 |
| 655 | 0,6747 | -48,08167 | -16,98707 | -6,935669377 | -23,92274 | -0,407722 | 0,038013 | -2002,300416 | -2019,950618 | -2001,803446 |
| 655 | 1,3494 | 805,9028 | 265,3155 | 101,6462574 | 366,9618 | 16,83476 | -0,420945 | -110,3516463 | -110,7593685 | -110,3136338 |
| 661 | 0 | -1223,887 | -610,6381 | 8,357779132 | -602,2803 | 20,7163 | -0,203247 | 1781,597123 | 1798,431881 | 1781,176179 |
| 661 | 0,7747 | -76,94453 | -39,0248 | 0,464654013 | -38,56015 | 3,704325 | -0,010539 | -2795,614148 | -2774,897849 | -2795,817395 |
| 661 | 1,5494 | 1069,998 | 532,5885 | -7,428471106 | 525,16 | -13,30765 | 0,182169 | -177,1481855 | -173,4438607 | -177,1587248 |
| 662 | 0 | -379,1772 | -152,057 | 9,413217987 | -142,6438 | -30,39668 | -0,144329 | 2441,317777 | 2428,010128 | 2441,499946 |
| 662 | 0,4376 | -34,27643 | -14,67638 | 0,606574435 | -14,06981 | -0,104031 | -0,009713 | -778,2179485 | -808,6146257 | -778,3622773 |
| | | | | | | | | -72,69898305 | -72,80301442 | -72,70869597 |

| | | | | | | | | | | |
|-----|--------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 662 | 0,8753 | 310,6243 | 122,7042 | -8,200069118 | 114,5042 | 30,18861 | 0,124903 | 632,8199824 | 663,0085969 | 632,9448854 |
| 663 | 0 | 247,249 | 159,6526 | 6,923753583 | 166,5764 | -41,98008 | -0,06605 | 654,5763679 | 612,5962878 | 654,5103174 |
| 663 | 0,1796 | 24,56607 | 17,34899 | 0,70708227 | 18,05607 | -2,548364 | -0,005854 | 68,04803692 | 65,49967286 | 68,04218272 |
| 663 | 0,3591 | -198,1168 | -124,9546 | -5,509589042 | -130,4642 | 36,88335 | 0,054342 | -518,480294 | -481,5969421 | -518,425952 |
| 664 | 0 | -1010,68 | -1071,157 | -268,8772829 | -1340,034 | 80,67447 | 0,575622 | -3993,952248 | -3913,277778 | -3993,376626 |
| 664 | 2,2879 | -17,48917 | -21,9792 | -5,299042349 | -27,27824 | 2,184074 | -0,001311 | -77,2924035 | -75,10832934 | -77,29371458 |
| 664 | 4,5758 | 975,7012 | 1027,199 | 258,2791982 | 1285,478 | -76,30632 | -0,578244 | 3839,367441 | 3763,061119 | 3838,789197 |
| 665 | 0 | -1259,976 | -1013,111 | -178,3073801 | -1191,418 | 77,59632 | 0,430129 | -4020,805272 | -3943,208952 | -4020,375143 |
| 665 | 1,7038 | -43,91105 | -37,6596 | -7,173743577 | -44,83335 | 5,699467 | 0,027141 | -146,7510605 | -141,0515933 | -146,7239198 |
| 665 | 3,4076 | 1172,154 | 937,7917 | 163,9598929 | 1101,752 | -66,19739 | -0,375848 | 3727,303151 | 3661,105765 | 3726,927303 |
| 666 | 0 | -1650,116 | -878,9981 | -23,4610627 | -902,4591 | 58,51246 | -0,112417 | -3950,069646 | -3891,557183 | -3950,182064 |
| 666 | 1,1938 | -77,43565 | -42,11072 | -2,957648771 | -45,06837 | 5,282985 | -0,000402 | -190,8030748 | -185,52009 | -190,8034768 |
| 666 | 2,3875 | 1495,245 | 794,7766 | 17,54576515 | 812,3224 | -47,94649 | 0,111613 | 3568,463497 | 3520,517004 | 3568,57511 |
| 670 | 0 | 1101,985 | 905,7612 | 193,9448601 | 1099,706 | -44,20061 | 2,426955 | 3631,992575 | 3587,791967 | 3634,419531 |
| 670 | 2,9464 | -61,62195 | -69,27669 | -15,7788203 | -85,05558 | 19,91963 | -0,092437 | -250,2196849 | -230,300057 | -250,3121223 |
| 670 | 5,8929 | -1225,229 | -1044,315 | -225,5026241 | -1269,817 | 84,03986 | -2,61183 | -4132,431945 | -4048,392081 | -4135,043775 |
| 673 | 0 | 593,8801 | 741,1919 | 69,3846802 | 810,5765 | -37,9575 | 1,392256 | 2393,197174 | 2015,239635 | 2394,58943 |
| 673 | 3,683 | 326,6817 | 397,7528 | 68,50781762 | 466,2606 | -142,366 | -2,031007 | 1357,207496 | 1214,841475 | 1355,17649 |
| 673 | 7,366 | 59,48332 | 54,3138 | 67,63095505 | 121,9448 | 93,2255 | -5,45427 | 321,2178188 | 414,443315 | 315,7635493 |
| 676 | 0 | -1045,727 | -293,8419 | 35,68348629 | -258,1584 | -2,049117 | 0,874925 | -1875,76176 | -1877,810877 | -1874,886834 |
| 676 | 2,0904 | 11,2831 | 0,439403 | -1,977182627 | -1,53778 | -1,202947 | -0,097872 | 11,59247223 | 10,3895253 | 11,49460046 |
| 676 | 4,1809 | 1068,293 | 294,7207 | -39,63785154 | 255,0828 | -0,356777 | -1,070669 | 1898,946704 | 1898,589927 | 1897,876035 |
| 678 | 0 | 1249,187 | 483,0259 | 66,7992995 | 549,8252 | -35,2821 | -0,930983 | 2723,593589 | 2688,311488 | 2722,662606 |
| 678 | 1,0509 | 37,74541 | 14,30185 | 1,163035548 | 15,46489 | -0,788161 | -0,067744 | 79,99880076 | 79,21064021 | 79,93105719 |
| 678 | 2,1018 | -1173,696 | -454,4222 | -64,4732284 | -518,8954 | 33,70578 | 0,795496 | -2563,595988 | -2529,890208 | -2562,800492 |
| 679 | 0 | 1105,894 | 397,7122 | -1,275022139 | 396,4372 | -14,57249 | -2,107703 | 2230,53636 | 2215,963875 | 2228,428658 |
| 679 | 1,5044 | 8,325524 | 1,850295 | -2,859247118 | -1,008952 | 0,866342 | -0,081458 | 8,805277576 | 9,671619266 | 8,723819867 |
| 679 | 3,0088 | -1089,243 | -394,0116 | -4,443472098 | -398,4551 | 16,30517 | 1,944787 | -2212,925805 | -2196,620636 | -2210,981018 |
| 682 | 0 | 1227,932 | 520,6126 | 150,4849695 | 671,0976 | -60,41829 | -0,104761 | 2938,506821 | 2878,088532 | 2938,40206 |
| 682 | 0,7258 | 55,73494 | 23,7376 | 7,451118124 | 31,18872 | -2,684888 | -0,019599 | 134,832859 | 132,147971 | 134,8132604 |
| 682 | 1,4517 | -1116,462 | -473,1374 | -135,5827333 | -608,7202 | 55,04851 | 0,065564 | -2668,841103 | -2613,79259 | -2668,775539 |
| 773 | 0 | 1482,544 | 720,3612 | 4,702582934 | 725,0638 | 17,51537 | 0,109893 | 3377,435402 | 3394,950768 | 3377,545294 |
| 773 | 1,1938 | 63,89287 | 29,68045 | 1,455861952 | 31,13631 | 0,980709 | 0,000258 | 145,3333429 | 146,314052 | 145,3336006 |
| 773 | 2,3875 | -1354,759 | -661,0003 | -1,790859029 | -662,7912 | -15,55395 | -0,109377 | -3086,768716 | -3102,322664 | -3086,878093 |

TABEL MOMEN KOLOM TENGAH ARAH Y

| FRAME | STA | MD | ML | | ML TOT | ME | | COMB1 | COMB2 | COMB3 |
|-------|---------|----------|-----------|---------------|----------|----------|----------|-------------------|------------------------|--------------|
| | | | ML merata | ML Koef kejut | | ME X | ME Y | | | |
| 4 | 0 | 48,89875 | 0,1526956 | -2,91863E-12 | 0,152696 | 3,08E-12 | -2,6E-10 | 1,3MD + 2 (MQ+MP) | 1,3MD + 2 (MQ+MP)+1MEY | 63,8737707 |
| 4 | 2,811 | 2,51238 | -0,441351 | 9,29008E-13 | -0,44135 | -1,2E-12 | -2,8E-11 | 63,8737707 | 63,8737707 | 63,8737707 |
| 4 | 5,622 | -43,874 | -1,035399 | 4,77664E-12 | -1,0354 | -5,5E-12 | 2,01E-10 | 2,383391141 | 2,383391141 | 2,383391141 |
| 43 | 0 | 48,29093 | -0,082084 | 2,44035E-11 | -0,08208 | -1,7E-12 | 5,5E-10 | -59,10698842 | -59,10698842 | -59,10698842 |
| 43 | 2,811 | 5,801396 | -0,043481 | 4,34559E-12 | -0,04348 | -3,7E-13 | -8,8E-11 | 62,61404055 | 62,61404055 | 62,61404055 |
| 43 | 5,622 | -36,6881 | -0,004878 | -1,57123E-11 | -0,00488 | 9,15E-13 | -7,2E-10 | 7,454853047 | 7,454853047 | 7,454853047 |
| 543 | 0 | 388,1707 | -0,089056 | 7,47712E-12 | -0,08906 | -5,1E-14 | -6,5E-11 | -47,70433446 | -47,70433446 | -47,70433446 |
| 543 | 5,5 | -381,858 | -0,052197 | -4,86622E-12 | -0,0522 | 1,13E-12 | 6,7E-11 | 504,443774 | 504,443774 | 504,443774 |
| 543 | 11 | -1151,89 | -0,015338 | -1,72096E-11 | -0,01534 | 2,31E-12 | 1,99E-10 | -496,5199087 | -496,5199087 | -496,5199087 |
| 544 | 0 | 34,63655 | -0,104472 | 3,24185E-12 | -0,10447 | -5,2E-15 | 2,09E-10 | -1497,483591 | -1497,483591 | -1497,483591 |
| 544 | 3,683 | -59,4283 | -0,053942 | 1,06998E-11 | -0,05394 | -8,2E-13 | -4,2E-10 | 44,81857022 | 44,81857022 | 44,81857022 |
| 544 | 7,366 | -153,493 | -0,003413 | 1,81577E-11 | -0,00341 | -1,6E-12 | -1,1E-09 | -77,36468622 | -77,36468622 | -77,36468622 |
| 551 | 0 | -0,11332 | -0,011584 | -2,51889E-13 | -0,01158 | 8,32E-14 | 1,6E-13 | -199,5479427 | -199,5479427 | -199,5479427 |
| 551 | 0,17956 | -0,13487 | -0,003112 | -2,65346E-13 | -0,00311 | 8,69E-14 | 4,42E-14 | -0,170481729 | -0,170481729 | -0,170481729 |
| 551 | 0,35913 | -0,15643 | 0,0053595 | -2,78804E-13 | 0,00536 | 9,05E-14 | -7,2E-14 | -0,18156008 | -0,18156008 | -0,18156008 |
| 555 | 0 | 0,136751 | 0,0414748 | 1,9627E-14 | 0,041475 | 1,43E-13 | 9,56E-14 | -0,192638431 | -0,192638431 | -0,192638431 |
| 555 | 0,43763 | 0,267368 | 0,0760864 | 1,47896E-13 | 0,076086 | 2,7E-13 | -4,4E-13 | 0,260725371 | 0,260725371 | 0,260725371 |
| 555 | 0,87525 | 0,397985 | 0,110698 | 2,76164E-13 | 0,110698 | 3,97E-13 | -9,8E-13 | 0,499751225 | 0,499751225 | 0,499751225 |
| 560 | 0 | -0,83879 | 0,0159203 | -1,78411E-12 | 0,01592 | 4,93E-16 | 6,66E-12 | 0,738777079 | 0,738777079 | 0,738777079 |
| 560 | 1,70381 | 0,022952 | 0,0732323 | 5,39915E-13 | 0,073232 | -2,8E-14 | -2,4E-12 | -1,058581549 | -1,058581549 | -1,058581549 |
| 560 | 3,40763 | 0,884691 | 0,1305443 | 2,86394E-12 | 0,130544 | -5,6E-14 | -1,1E-11 | 0,176302788 | 0,176302788 | 0,176302788 |
| 561 | 0 | -0,06385 | 0,0020713 | -2,90956E-12 | 0,002071 | 8,81E-14 | 2,47E-11 | 1,411187125 | 1,411187125 | 1,411187125 |
| 561 | 2,28788 | 0,034258 | 0,0487131 | 6,23132E-13 | 0,048713 | -3E-14 | -8E-13 | -0,078860689 | -0,078860689 | -0,078860689 |
| 561 | 4,57575 | 0,132364 | 0,095355 | 4,15582E-12 | 0,095355 | -1,5E-13 | -2,6E-11 | 0,141961041 | 0,141961041 | 0,141961041 |
| 562 | 0 | 8,183996 | 0,0209156 | -4,91369E-12 | 0,020916 | 2,76E-13 | 1,09E-10 | 0,362782771 | 0,362782771 | 0,362782771 |
| 562 | 2,94644 | 3,669156 | -0,029934 | 1,3669E-13 | -0,02993 | 2,63E-14 | 2,89E-11 | 10,68102537 | 10,68102537 | 10,68102537 |
| 562 | 5,89288 | -0,84568 | -0,080783 | 5,18707E-12 | -0,08078 | -2,2E-13 | -5,1E-11 | 4,710036288 | 4,710036288 | 4,710036288 |
| 585 | 0 | 43,59872 | -0,067372 | -1,70739E-11 | -0,06737 | -1,3E-12 | 2,08E-12 | -1,260952796 | -1,260952796 | -1,260952796 |
| 585 | 0,45128 | 3,65995 | -0,044789 | -9,7389E-12 | -0,04479 | -7,6E-13 | -3,3E-12 | 56,54359444 | 56,54359444 | 56,54359444 |
| 585 | 0,90256 | -36,2788 | -0,022207 | -2,40386E-12 | -0,02221 | -2E-13 | -8,6E-12 | 4,668356618 | 4,668356618 | 4,668356618 |
| 586 | 0 | -4,12807 | 0,0147043 | 5,05327E-13 | 0,014704 | 9,92E-14 | 1,42E-11 | -47,20688121 | -47,20688121 | -47,20688121 |
| 586 | 0,50025 | -5,62239 | 0,0381364 | 1,2662E-11 | 0,038136 | 1,19E-12 | 3,17E-12 | -5,337079236 | -5,337079236 | -5,337079236 |
| 586 | 1,0005 | -7,11671 | 0,0615684 | 2,48187E-11 | 0,061568 | 2,28E-12 | -7,9E-12 | -7,232831648 | -7,232831648 | -7,232831648 |
| | | | | | | | | -9,12858406 | -9,12858406 | -9,12858406 |

| | | | | | | | | | | |
|-----|---------|----------|-----------|--------------|----------|----------|----------|--------------|--------------|--------------|
| 587 | 0 | -11,443 | 0,0326866 | -9,08752E-13 | 0,032687 | -5,8E-14 | 2,55E-11 | -14,81052731 | -14,81052731 | -14,81052731 |
| 587 | 0,67222 | -9,97919 | 0,0641575 | 2,04999E-11 | 0,064158 | 1,99E-12 | 1,1E-11 | -12,84463069 | -12,84463069 | -12,84463069 |
| 587 | 1,34444 | -8,51538 | 0,0956284 | 4,19086E-11 | 0,095628 | 4,03E-12 | -3,6E-12 | -10,87873408 | -10,87873408 | -10,87873408 |
| 588 | 0 | 8,216407 | -0,086386 | -3,02457E-11 | -0,08639 | -3,3E-12 | 7,54E-12 | 10,50855707 | 10,50855707 | 10,50855707 |
| 588 | 0,96769 | 11,18865 | -0,053131 | -1,08362E-11 | -0,05313 | -1,2E-12 | -1,4E-11 | 14,43898899 | 14,43898899 | 14,43898899 |
| 588 | 1,93538 | 14,1609 | -0,019875 | 8,5733E-12 | -0,01988 | 8,65E-13 | -3,7E-11 | 18,36942092 | 18,36942092 | 18,36942092 |
| 589 | 0 | 15,4912 | -0,084757 | -6,48847E-12 | -0,08476 | -1E-12 | 1,36E-12 | 19,96904554 | 19,96904554 | 19,96904554 |
| 589 | 1,38866 | 14,05489 | -0,051089 | -2,08641E-12 | -0,05109 | -3,3E-13 | -1,4E-11 | 18,16917486 | 18,16917486 | 18,16917486 |
| 589 | 2,77731 | 12,61857 | -0,01742 | 2,31565E-12 | -0,01742 | 3,33E-13 | -3E-11 | 16,36930417 | 16,36930417 | 16,36930417 |
| 590 | 0 | 31,91891 | -0,082439 | 1,07718E-11 | -0,08244 | 7,19E-13 | -7,9E-12 | 41,32969973 | 41,32969973 | 41,32969973 |
| 590 | 1,93663 | 16,72286 | -0,049123 | 1,02045E-12 | -0,04912 | 1,17E-14 | -1,4E-11 | 21,64147757 | 21,64147757 | 21,64147757 |
| 590 | 3,87325 | 1,526821 | -0,015806 | -8,73087E-12 | -0,01581 | -7E-13 | -2E-11 | 1,953255398 | 1,953255398 | 1,953255398 |
| 591 | 0 | 64,20887 | -0,080061 | 2,11939E-11 | -0,08006 | 1,64E-12 | -2,1E-11 | 83,31140441 | 83,31140441 | 83,31140441 |
| 591 | 2,61659 | 17,71951 | -0,046749 | 1,30476E-12 | -0,04675 | 4,66E-14 | -1,3E-11 | 22,94186774 | 22,94186774 | 22,94186774 |
| 591 | 5,23319 | -28,7698 | -0,013437 | -1,85843E-11 | -0,01344 | -1,5E-12 | -5,6E-12 | -37,42766894 | -37,42766894 | -37,42766894 |
| 596 | 0 | 119,1722 | -0,077551 | 2,37967E-11 | -0,07755 | 1,71E-12 | -3,8E-11 | 154,7687177 | 154,7687177 | 154,7687177 |
| 596 | 3,43206 | 11,05429 | -0,043676 | 6,38821E-13 | -0,04368 | 6,49E-15 | -1E-11 | 14,28322457 | 14,28322457 | 14,28322457 |
| 596 | 6,86413 | -97,0636 | -0,009802 | -2,25191E-11 | -0,0098 | -1,7E-12 | 1,73E-11 | -126,2022686 | -126,2022686 | -126,2022686 |
| 597 | 0 | 192,4109 | -0,072787 | 1,53797E-11 | -0,07279 | 7,82E-13 | -5E-11 | 249,9886414 | 249,9886414 | 249,9886414 |
| 597 | 4,39053 | -30,6237 | -0,038888 | -4,74243E-13 | -0,03889 | 6,91E-14 | 4,05E-13 | -39,88862557 | -39,88862557 | -39,88862557 |
| 597 | 8,78106 | -253,658 | -0,00499 | -1,63282E-11 | -0,00499 | -6,4E-13 | 5,1E-11 | -329,7658926 | -329,7658926 | -329,7658926 |
| 601 | 0 | 23,54511 | -0,066953 | 1,51131E-11 | -0,06695 | 1,37E-12 | 1,25E-11 | 30,47473833 | 30,47473833 | 30,47473833 |
| 601 | 1,05088 | 21,28271 | -0,04118 | 4,79916E-12 | -0,04118 | 3,79E-13 | 9,63E-14 | 27,58516273 | 27,58516273 | 27,58516273 |
| 601 | 2,10175 | 19,02031 | -0,015406 | -5,51479E-12 | -0,01541 | -6,1E-13 | -1,2E-11 | 24,69558714 | 24,69558714 | 24,69558714 |
| 602 | 0 | 20,80907 | -0,092122 | 4,53701E-12 | -0,09212 | 7,99E-13 | -3,9E-12 | 26,86754278 | 26,86754278 | 26,86754278 |
| 602 | 0,72584 | 19,02082 | -0,060859 | 3,83826E-12 | -0,06086 | 5,02E-13 | -5,2E-12 | 24,60534744 | 24,60534744 | 24,60534744 |
| 602 | 1,45169 | 17,23257 | -0,029596 | 3,13951E-12 | -0,0296 | 2,05E-13 | -6,5E-12 | 22,3431521 | 22,3431521 | 22,3431521 |
| 605 | 0 | -5,00819 | 0,0126511 | -2,91336E-12 | 0,012651 | -2,3E-13 | 2,52E-12 | -6,485343553 | -6,485343553 | -6,485343553 |
| 605 | 0,52481 | -7,72695 | 0,0369577 | 1,91888E-12 | 0,036958 | 3,5E-14 | 2,44E-12 | -9,97111666 | -9,97111666 | -9,97111666 |
| 605 | 1,04963 | -10,4457 | 0,0612643 | 6,75111E-12 | 0,061264 | 3,04E-13 | 2,37E-12 | -13,45688977 | -13,45688977 | -13,45688977 |
| 606 | 0 | 56,41413 | 0,0136043 | 1,35048E-11 | 0,013604 | 1,58E-13 | 1,94E-10 | 73,36558046 | 73,36558046 | 73,36558046 |
| 606 | 2,09044 | -12,3011 | 0,0392714 | -2,88615E-12 | 0,039271 | -4,8E-14 | -1,1E-11 | -15,91294113 | -15,91294113 | -15,91294113 |
| 606 | 4,18088 | -81,0164 | 0,0649384 | -1,92771E-11 | 0,064938 | -2,5E-13 | -2,2E-10 | -105,1914627 | -105,1914627 | -105,1914627 |
| 607 | 0 | -3,3339 | 0,0153286 | 1,09631E-11 | 0,015329 | 7,47E-13 | 3,05E-11 | -4,303414639 | -4,303414639 | -4,303414639 |
| 607 | 1,50441 | -21,6256 | 0,0453581 | -4,57962E-12 | 0,045358 | -8,3E-14 | -1,2E-11 | -28,02261406 | -28,02261406 | -28,02261406 |
| 607 | 3,00881 | -39,9174 | 0,0753875 | -2,01224E-11 | 0,075388 | -9,1E-13 | -5,4E-11 | -51,74181348 | -51,74181348 | -51,74181348 |
| 613 | 0 | -0,25528 | 0,0276348 | -3,65757E-13 | 0,027635 | -6,1E-14 | 7,37E-13 | -0,27659734 | -0,27659734 | -0,27659734 |

| | | | | | | | | | | |
|-----|---------|----------|-----------|--------------|----------|----------|----------|--------------|--------------|--------------|
| 613 | 0,77469 | 0,294499 | 0,0801372 | 4,06221E-13 | 0,080137 | 1,15E-13 | -8,1E-13 | 0,543122826 | 0,543122826 | 0,543122826 |
| 613 | 1,54938 | 0,84428 | 0,1326397 | 1,1782E-12 | 0,13264 | 2,9E-13 | -2,4E-12 | 1,362842993 | 1,362842993 | 1,362842993 |
| 641 | 0 | 201,5351 | -0,074796 | 3,73588E-12 | -0,0748 | 1,5E-13 | -2,4E-11 | 261,8460399 | 261,8460399 | 261,8460399 |
| 641 | 4,39053 | -29,2352 | -0,03915 | -4,94306E-13 | -0,03915 | 1,11E-13 | 5,3E-12 | -38,08411267 | -38,08411267 | -38,08411267 |
| 641 | 8,78106 | -260,006 | -0,003504 | -4,72449E-12 | -0,0035 | 7,18E-14 | 3,49E-11 | -338,0142652 | -338,0142652 | -338,0142652 |
| 642 | 0 | 103,3269 | 0,0076278 | 4,35547E-12 | 0,007628 | 6,14E-13 | -1,2E-11 | 134,3402415 | 134,3402415 | 134,3402415 |
| 642 | 3,43206 | -13,2761 | 0,0439917 | -3,18201E-13 | 0,043992 | -6,1E-14 | 1E-12 | -17,17097068 | -17,17097068 | -17,17097068 |
| 642 | 6,86413 | -129,879 | 0,0803555 | -4,99187E-12 | 0,080356 | -7,3E-13 | 1,44E-11 | -168,6821828 | -168,6821828 | -168,6821828 |
| 643 | 0 | 73,27284 | -0,082943 | 5,17313E-12 | -0,08294 | 1,04E-12 | -7,5E-12 | 95,08880029 | 95,08880029 | 95,08880029 |
| 643 | 2,61659 | 20,54074 | -0,047135 | 6,87628E-13 | -0,04713 | 8,78E-14 | -1,7E-12 | 26,60869289 | 26,60869289 | 26,60869289 |
| 643 | 5,23319 | -32,1914 | -0,011327 | -3,79787E-12 | -0,01133 | -8,7E-13 | 4,1E-12 | -41,87141452 | -41,87141452 | -41,87141452 |
| 644 | 0 | 38,23555 | -0,084932 | 4,19857E-12 | -0,08493 | 1,15E-12 | -3,9E-12 | 49,53634608 | 49,53634608 | 49,53634608 |
| 644 | 1,93663 | 19,86959 | -0,049554 | 7,49788E-13 | -0,04955 | 1,68E-13 | -1,5E-12 | 25,7313543 | 25,7313543 | 25,7313543 |
| 644 | 3,87325 | 1,503627 | -0,014176 | -2,69899E-12 | -0,01418 | -8,1E-13 | 9,33E-13 | 1,926362521 | 1,926362521 | 1,926362521 |
| 648 | 0 | -15,0609 | 0,0162953 | 1,57756E-12 | 0,016295 | 5,94E-13 | 4,01E-13 | -19,54656381 | -19,54656381 | -19,54656381 |
| 648 | 1,38866 | -17,4887 | 0,0515879 | -6,90698E-13 | 0,051588 | -2,7E-13 | 1,24E-12 | -22,63211005 | -22,63211005 | -22,63211005 |
| 648 | 2,77731 | -19,9165 | 0,0868805 | -2,95895E-12 | 0,086881 | -1,1E-12 | 2,08E-12 | -25,71765629 | -25,71765629 | -25,71765629 |
| 649 | 0 | 13,04878 | -0,088419 | 1,97488E-12 | -0,08842 | 1,05E-12 | -1,8E-12 | 16,78657359 | 16,78657359 | 16,78657359 |
| 649 | 0,96769 | 15,6722 | -0,053767 | 6,37188E-13 | -0,05377 | 3,57E-13 | -8,5E-13 | 20,26633254 | 20,26633254 | 20,26633254 |
| 649 | 1,93538 | 18,29563 | -0,019115 | -7,00499E-13 | -0,01911 | -3,3E-13 | 6,45E-14 | 23,74609149 | 23,74609149 | 23,74609149 |
| 652 | 0 | 49,39563 | -0,06216 | 1,11329E-13 | -0,06216 | 1,76E-13 | -7,5E-13 | 64,09000145 | 64,09000145 | 64,09000145 |
| 652 | 0,50025 | 2,361933 | -0,038157 | 1,35014E-13 | -0,03816 | 1,55E-13 | -3,4E-13 | 2,994198398 | 2,994198398 | 2,994198398 |
| 652 | 1,0005 | -44,6718 | -0,014154 | 1,58698E-13 | -0,01415 | 1,34E-13 | 7,11E-14 | -58,10160466 | -58,10160466 | -58,10160466 |
| 653 | 0 | -6,76314 | 0,021953 | -1,3813E-13 | 0,021953 | -1,2E-14 | 1,7E-13 | -8,74817342 | -8,74817342 | -8,74817342 |
| 653 | 0,45128 | -6,69865 | 0,0449666 | -1,94735E-13 | 0,044967 | 6,5E-14 | 3,78E-13 | -8,618309704 | -8,618309704 | -8,618309704 |
| 653 | 0,90256 | -6,63416 | 0,0679803 | -2,51341E-13 | 0,06798 | 1,42E-13 | 5,86E-13 | -8,488445988 | -8,488445988 | -8,488445988 |
| 654 | 0 | -5,56529 | 0,0120298 | 1,20793E-13 | 0,01203 | 2,99E-14 | 1,88E-13 | -7,210812433 | -7,210812433 | -7,210812433 |
| 654 | 0,52481 | -5,06825 | 0,036819 | -2,62264E-15 | 0,036819 | 2,91E-13 | 3,78E-13 | -6,515082146 | -6,515082146 | -6,515082146 |
| 654 | 1,04963 | -4,57121 | 0,0616083 | -1,26038E-13 | 0,061608 | 5,52E-13 | 5,68E-13 | -5,819351859 | -5,819351859 | -5,819351859 |
| 655 | 0 | -10,4032 | 0,032158 | -5,21996E-14 | 0,032158 | -1,8E-13 | 4,01E-13 | -13,45979359 | -13,45979359 | -13,45979359 |
| 655 | 0,67472 | -14,8366 | 0,0647963 | -4,51323E-13 | 0,064796 | -5E-13 | 8,59E-13 | -19,15794207 | -19,15794207 | -19,15794207 |
| 655 | 1,34944 | -19,27 | 0,0974345 | -8,50446E-13 | 0,097435 | -8,2E-13 | 1,32E-12 | -24,85609056 | -24,85609056 | -24,85609056 |
| 661 | 0 | -18,5773 | 0,0193052 | 5,16159E-14 | 0,019305 | 2,67E-13 | -2,5E-13 | -24,11191684 | -24,11191684 | -24,11191684 |
| 661 | 0,77469 | -25,2536 | 0,0785156 | -3,17566E-13 | 0,078516 | -1E-12 | 4,61E-13 | -32,67258573 | -32,67258573 | -32,67258573 |
| 661 | 1,54938 | -31,9298 | 0,1377261 | -6,86748E-13 | 0,137726 | -2,3E-12 | 1,17E-12 | -41,23325462 | -41,23325462 | -41,23325462 |
| 662 | 0 | -24,7137 | 0,0325981 | -7,47193E-14 | 0,032598 | -1,1E-12 | 6,95E-14 | -32,06257965 | -32,06257965 | -32,06257965 |
| 662 | 0,43763 | -23,184 | 0,0800996 | -5,79641E-14 | 0,0801 | -1,7E-12 | 3,35E-13 | -29,97906208 | -29,97906208 | -29,97906208 |

| | | | | | | | | | | |
|-----|---------|----------|-----------|--------------|----------|----------|----------|--------------|--------------|--------------|
| 662 | 0,87525 | -21,6544 | 0,1276012 | -4,12088E-14 | 0,127601 | -2,2E-12 | 6E-13 | -27,89554451 | -27,89554451 | -27,89554451 |
| 663 | 0 | -12,6866 | 0,0643223 | 7,15694E-14 | 0,064322 | -4,9E-13 | 2,5E-14 | -16,3639882 | -16,3639882 | -16,3639882 |
| 663 | 0,17956 | -12,3953 | 0,0805764 | 1,13803E-13 | 0,080576 | -3,3E-13 | 1,02E-13 | -15,95269865 | -15,95269865 | -15,95269865 |
| 663 | 0,35913 | -12,1039 | 0,0968305 | 1,56036E-13 | 0,096831 | -1,7E-13 | 1,79E-13 | -15,54140909 | -15,54140909 | -15,54140909 |
| 664 | 0 | 46,90603 | 0,0097752 | 1,22774E-12 | 0,009775 | 1,15E-12 | -9E-12 | 60,99739499 | 60,99739499 | 60,99739499 |
| 664 | 2,28788 | -17,0343 | 0,0190646 | -2,56165E-13 | 0,019065 | -1,9E-13 | 4,85E-13 | -22,10650801 | -22,10650801 | -22,10650801 |
| 664 | 4,57575 | -80,9747 | 0,0283539 | -1,74007E-12 | 0,028354 | -1,5E-12 | 1E-11 | -105,210411 | -105,210411 | -105,210411 |
| 665 | 0 | 10,58235 | 0,0098615 | 8,093E-13 | 0,009862 | 1,16E-12 | -2,1E-12 | 13,77678178 | 13,77678178 | 13,77678178 |
| 665 | 1,70381 | -23,7866 | 0,0638339 | -3,60104E-13 | 0,063834 | -3,7E-13 | 1,09E-12 | -30,79486151 | -30,79486151 | -30,79486151 |
| 665 | 3,40763 | -58,1555 | 0,1178063 | -1,52951E-12 | 0,117806 | -1,9E-12 | 4,33E-12 | -75,36650481 | -75,36650481 | -75,36650481 |
| 666 | 0 | -9,49634 | 0,0182378 | 4,48327E-13 | 0,018238 | 8,15E-13 | -4,2E-13 | -12,30876472 | -12,30876472 | -12,30876472 |
| 666 | 1,19375 | -25,529 | 0,0771518 | -2,3589E-13 | 0,077152 | -7,7E-13 | 7,25E-13 | -33,03337481 | -33,03337481 | -33,03337481 |
| 666 | 2,3875 | -41,5616 | 0,1360658 | -9,20106E-13 | 0,136066 | -2,4E-12 | 1,87E-12 | -53,7579849 | -53,7579849 | -53,7579849 |
| 670 | 0 | 94,08562 | -0,112978 | 1,83225E-12 | -0,11298 | 7,63E-13 | -1,9E-11 | 122,0853474 | 122,0853474 | 122,0853474 |
| 670 | 2,94644 | -3,4507 | -0,05166 | 5,74684E-14 | -0,05166 | 3,5E-13 | 1,07E-11 | -4,589226909 | -4,589226909 | -4,589226909 |
| 670 | 5,89288 | -100,987 | 0,0096583 | -1,71731E-12 | 0,009658 | -6,3E-14 | 4,05E-11 | -131,2638012 | -131,2638012 | -131,2638012 |
| 673 | 0 | 416,8814 | -0,022354 | 5,845E-12 | -0,02235 | -8,9E-12 | -4E-10 | 541,901135 | 541,901135 | 541,901135 |
| 673 | 3,683 | 158,8436 | 0,0285181 | 2,91561E-12 | 0,028518 | -4,1E-12 | -1,6E-10 | 206,5537065 | 206,5537065 | 206,5537065 |
| 673 | 7,366 | -99,1942 | 0,0793903 | -1,3774E-14 | 0,07939 | 6,91E-13 | 7,97E-11 | -128,7937219 | -128,7937219 | -128,7937219 |
| 676 | 0 | 68,92848 | -0,030335 | -1,70952E-12 | -0,03033 | 4,01E-13 | -9,2E-11 | 89,54634793 | 89,54634793 | 89,54634793 |
| 676 | 2,09044 | 8,789386 | -0,000147 | -3,41111E-13 | -0,00015 | -5,4E-13 | -6,2E-12 | 11,4259077 | 11,4259077 | 11,4259077 |
| 676 | 4,18088 | -51,3497 | 0,0300412 | 1,02729E-12 | 0,030041 | -1,5E-12 | 7,97E-11 | -66,69453253 | -66,69453253 | -66,69453253 |
| 678 | 0 | -18,6584 | 0,0186787 | -8,92451E-13 | 0,018679 | -9,5E-13 | -4,8E-13 | -24,21855016 | -24,21855016 | -24,21855016 |
| 678 | 1,05088 | -16,8028 | 0,0521437 | 1,26986E-13 | 0,052144 | 5,71E-13 | 4,37E-12 | -21,73931266 | -21,73931266 | -21,73931266 |
| 678 | 2,10175 | -14,9471 | 0,0856088 | 1,14642E-12 | 0,085609 | 2,09E-12 | 9,22E-12 | -19,26007516 | -19,26007516 | -19,26007516 |
| 679 | 0 | -6,12692 | 0,0106182 | -1,31159E-12 | 0,010618 | -9,4E-13 | -9,6E-12 | -7,943764722 | -7,943764722 | -7,943764722 |
| 679 | 1,50441 | -17,7016 | 0,0433269 | 3,35351E-13 | 0,043327 | 3,14E-13 | 8,52E-12 | -22,92539257 | -22,92539257 | -22,92539257 |
| 679 | 3,00881 | -29,2762 | 0,0760355 | 1,98229E-12 | 0,076036 | 1,56E-12 | 2,66E-11 | -37,90702042 | -37,90702042 | -37,90702042 |
| 682 | 0 | -11,9052 | 0,0303486 | -1,31178E-13 | 0,030349 | -1,2E-13 | 4,16E-13 | -15,41604675 | -15,41604675 | -15,41604675 |
| 682 | 0,72584 | -13,1188 | 0,0635593 | 8,97739E-14 | 0,063559 | 8,23E-13 | 1,69E-12 | -16,92727391 | -16,92727391 | -16,92727391 |
| 682 | 1,45169 | -14,3323 | 0,0967701 | 3,10726E-13 | 0,09677 | 1,76E-12 | 2,97E-12 | -18,43850106 | -18,43850106 | -18,43850106 |
| 773 | 0 | -0,64421 | 0,0220321 | -1,0101E-12 | 0,022032 | -5,8E-14 | 1,85E-12 | -0,793406256 | -0,793406256 | -0,793406256 |
| 773 | 1,19375 | 0,192253 | 0,0768796 | 4,77099E-13 | 0,07688 | 1,04E-14 | -1,5E-12 | 0,40368797 | 0,40368797 | 0,40368797 |
| 773 | 2,3875 | 1,028714 | 0,1317271 | 1,96429E-12 | 0,131727 | 7,87E-14 | -4,9E-12 | 1,600782195 | 1,600782195 | 1,600782195 |

MOMEN RENCANA KOLOM TENGAH ARAH X

| | Kolom | 551 dan 663 | 555 dan 662 | 613 dan 661 | 773 dan 666 | 560 dan 665 | 561 dan 664 | 562 dan 670 | 544 dan 673 |
|-------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Bawah | Mux | 654,04 | 818,41 | 2795,61 | 3394,95 | 3337,64 | 3297,43 | 3434,25 | 2393,19 |
| Atas | Mux | 518,48 | 702,88 | 2441,31 | 3102,32 | 3134,1 | 3182,3 | 3204,46 | 321,21 |
| | Mu x Pakai | 518,48 | 702,88 | 2441,31 | 3102,32 | 3134,1 | 3182,3 | 3204,46 | 321,21 |

| | Kolom | 43 dan 4 | 606 dan 676 | 607 dan 679 | 601 dan 678 | 602 dan 682 | 605 dan 654 | 585 dan 653 | 586 dan 652 |
|-------|------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Bawah | Mux | 1474,45 | 2072,36 | 2286,16 | 2723,59 | 2938,5 | 1442,95 | 564,7 | 742,65 |
| Atas | Mux | 1286,36 | 2052,75 | 2243,11 | 2563,59 | 2668,84 | 1381,39 | 530,83 | 714,01 |
| | Mu x Pakai | 1286,36 | 2052,75 | 2243,11 | 2563,59 | 2668,84 | 1381,39 | 530,83 | 714,01 |

| | Kolom | 587 dan 655 | 588 dan 649 | 589 dan 648 | 590 dan 644 | 591 dan 642 | 596 dan 642 | 597 dan 641 | 543 |
|-------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------|
| Bawah | Mux | 2233,84 | 2352,03 | 2635,71 | 2354,43 | 1867,88 | 1831,46 | 1420,51 | 37,98 |
| Atas | Mux | 1989,99 | 2585,91 | 2467,44 | 2442,27 | 1865,74 | 1862,25 | 1410,81 | 345,23 |
| | Mu x Pakai | 1989,99 | 2585,91 | 2467,44 | 2442,27 | 1865,74 | 1862,25 | 1410,81 | 345,23 |

MOMEN RENCANA KOLOM TENGAH ARAH Y

| | Kolom | 551 dan 663 | 555 dan 662 | 613 dan 661 | 773 dan 666 | 560 dan 665 | 561 dan 664 | 562 dan 670 | 544 dan 673 |
|-------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Bawah | Muy | 16,36 | 32,06 | 24,11 | 12,3 | 13,77 | 60,99 | 122,08 | 541,9 |
| Atas | Muy | 15,54 | 27,89 | 41,23 | 33,03 | 75,36 | 105,21 | 131,26 | 128,79 |
| | Mu y Pakai | 15,54 | 27,89 | 41,23 | 33,03 | 75,36 | 105,21 | 131,26 | 128,79 |

| | Kolom | 43 dan 4 | 606 dan 676 | 607 dan 679 | 601 dan 678 | 602 dan 682 | 605 dan 654 | 585 dan 653 | 586 dan 652 |
|-------|------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Bawah | Muy | 62,61 | 73,36 | 4,3 | 30,47 | 26,86 | 6,48 | 56,54 | 64,09 |
| Atas | Muy | 47,7 | 105,19 | 51,74 | 24,69 | 22,34 | 13,45 | 47,2 | 58,1 |
| | Mu y Pakai | 47,7 | 73,36 | 51,74 | 24,69 | 22,34 | 13,45 | 47,2 | 58,1 |

| | Kolom | 587 dan 655 | 588 dan 649 | 589 dan 648 | 590 dan 644 | 591 dan 642 | 596 dan 642 | 597 dan 641 | 543 |
|-------|------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------|
| Bawah | Muy | 13,45 | 16,78 | 19,54 | 49,53 | 95,08 | 154,76 | 261,84 | 504,44 |
| Atas | Muy | 24,85 | 23,74 | 25,71 | 1092 | 41,87 | 126,2 | 338,01 | 1497,48 |
| | Mu y Pakai | 13,45 | 16,78 | 19,54 | 49,53 | 41,87 | 126,2 | 261,84 | 504,44 |

LAMPIRAN

OUTPUT SAP :

GAYA GESER BALOK INDUK TEPI

GAYA GESER INDUK TENGAH

GAYA GESER BALOK ANAK

GAYA GESER BALOK LINTANG

GAYA GESER BALOK LENGKUNG TEPI

GAYA GESER BALOK LENGKUNG TENGAH

GAYA GESER KOLOM TEPI

GAYA GESER KOLOM TENGAH

TABEL GAYA GESER BALOK INDUK TEPI

| FRAME | STA | VD | VL | | VL TOT | VE |
|-------|----------|----------|-----------|---------------|----------|----------|
| | | | VL merata | VL.Koef kejut | | |
| 124 | 0 | 40,41009 | 59,92033 | 0,362706816 | 60,28304 | -2,73371 |
| 124 | 2,501127 | 110,9526 | 59,92033 | 0,362706816 | 60,28304 | -2,73371 |
| 124 | 5,002253 | 181,4951 | 59,92033 | 0,362706816 | 60,28304 | -2,73371 |
| 134 | 0 | -285,956 | -103,31 | 1,044055028 | -102,266 | 0,065875 |
| 134 | 2,501127 | -215,413 | -103,31 | 1,044055028 | -102,266 | 0,065875 |
| 134 | 5,002253 | -144,871 | -103,31 | 1,044055028 | -102,266 | 0,065875 |
| 135 | 0 | -214,377 | -65,0216 | 1,193290768 | -63,8283 | -0,55757 |
| 135 | 2,501127 | -143,835 | -65,0216 | 1,193290768 | -63,8283 | -0,55757 |
| 135 | 5,002253 | -73,2924 | -65,0216 | 1,193290768 | -63,8283 | -0,55757 |
| 136 | 0 | -103,211 | -8,70161 | 0,997601059 | -7,70401 | -1,85234 |
| 136 | 2,501127 | -32,6685 | -8,70161 | 0,997601059 | -7,70401 | -1,85234 |
| 136 | 5,002253 | 37,87397 | -8,70161 | 0,997601059 | -7,70401 | -1,85234 |
| 146 | 0 | -240,833 | -139,667 | -21,5468804 | -161,214 | -1,73213 |
| 146 | 2,501127 | -170,291 | -139,667 | -21,5468804 | -161,214 | -1,73213 |
| 146 | 5,002253 | -99,748 | -139,667 | -21,5468804 | -161,214 | -1,73213 |
| 147 | 0 | -188,835 | -161,946 | -33,6125137 | -195,558 | 0,369976 |
| 147 | 2,501127 | -118,293 | -161,946 | -33,6125137 | -195,558 | 0,369976 |
| 147 | 5,002253 | -47,7502 | -161,946 | -33,6125137 | -195,558 | 0,369976 |
| 148 | 0 | -112,892 | -144,727 | -36,23851951 | -180,965 | 0,231451 |
| 148 | 2,501127 | -42,3497 | -144,727 | -36,23851951 | -180,965 | 0,231451 |
| 148 | 5,002253 | 28,19278 | -144,727 | -36,23851951 | -180,965 | 0,231451 |
| 149 | 0 | -327,635 | -126,791 | -4,777911961 | -131,568 | 0,259446 |
| 149 | 2,501127 | -257,093 | -126,791 | -4,777911961 | -131,568 | 0,259446 |
| 149 | 5,002253 | -186,55 | -126,791 | -4,777911961 | -131,568 | 0,259446 |
| 247 | 0 | -98,7483 | -10,47 | -15,49729708 | -25,9673 | 0,732056 |
| 247 | 2,501124 | -28,2058 | -10,47 | -15,49729708 | -25,9673 | 0,732056 |
| 247 | 5,002248 | 42,33671 | -10,47 | -15,49729708 | -25,9673 | 0,732056 |
| 248 | 0 | -0,18858 | 32,80813 | 20,09447131 | 52,9026 | -0,77455 |
| 248 | 2,501124 | 70,35392 | 32,80813 | 20,09447131 | 52,9026 | -0,77455 |
| 248 | 5,002248 | 140,8964 | 32,80813 | 20,09447131 | 52,9026 | -0,77455 |
| 272 | 0 | -196,475 | -50,4045 | -20,83834152 | -71,2428 | 2,025596 |
| 272 | 2,501124 | -125,932 | -50,4045 | -20,83834152 | -71,2428 | 2,025596 |
| 272 | 5,002248 | -55,3897 | -50,4045 | -20,83834152 | -71,2428 | 2,025596 |
| 289 | 0 | -229,633 | -68,484 | 5,185188201 | -63,2988 | 2,134266 |
| 289 | 2,501124 | -159,09 | -68,484 | 5,185188201 | -63,2988 | 2,134266 |
| 289 | 5,002248 | -88,548 | -68,484 | 5,185188201 | -63,2988 | 2,134266 |
| 290 | 0 | -251,356 | -75,4063 | -0,197290385 | -75,6036 | 2,391416 |
| 290 | 2,501124 | -180,814 | -75,4063 | -0,197290385 | -75,6036 | 2,391416 |
| 290 | 5,002248 | -110,271 | -75,4063 | -0,197290385 | -75,6036 | 2,391416 |
| 291 | 0 | -260,264 | -77,9258 | -6,822627888 | -84,7484 | 2,585532 |
| 291 | 2,501124 | -189,722 | -77,9258 | -6,822627888 | -84,7484 | 2,585532 |
| 291 | 5,002248 | -119,179 | -77,9258 | -6,822627888 | -84,7484 | 2,585532 |
| 292 | 0 | -247,831 | -72,15 | -14,48553016 | -86,6355 | 2,550496 |
| 292 | 2,501124 | -177,289 | -72,15 | -14,48553016 | -86,6355 | 2,550496 |
| 292 | 5,002248 | -106,746 | -72,15 | -14,48553016 | -86,6355 | 2,550496 |
| 297 | 0 | -133,109 | -48,3854 | 9,792320385 | -38,5931 | 5,816832 |
| 297 | 2,501124 | -62,567 | -48,3854 | 9,792320385 | -38,5931 | 5,816832 |
| 297 | 5,002248 | 7,975536 | -48,3854 | 9,792320385 | -38,5931 | 5,816832 |
| 298 | 0 | -157,567 | -47,4745 | 13,1281898 | -34,3464 | 0,997077 |
| 298 | 2,501124 | -87,024 | -47,4745 | 13,1281898 | -34,3464 | 0,997077 |
| 298 | 5,002248 | -16,4815 | -47,4745 | 13,1281898 | -34,3464 | 0,997077 |
| 299 | 0 | -201,18 | -60,1749 | 9,469988861 | -50,7049 | 2,000337 |

| | | | | | | |
|-----|----------|----------|----------|--------------|----------|----------|
| 299 | 2,501124 | -130,637 | -60,1749 | 9,469988861 | -50,7049 | 2,000337 |
| 299 | 5,002248 | -60,0949 | -60,1749 | 9,469988861 | -50,7049 | 2,000337 |
| 304 | 0 | 82,47812 | 65,61485 | 23,86870385 | 89,48355 | -1,92757 |
| 304 | 2,501124 | 153,0206 | 65,61485 | 23,86870385 | 89,48355 | -1,92757 |
| 304 | 5,002248 | 223,5631 | 65,61485 | 23,86870385 | 89,48355 | -1,92757 |
| 305 | 0 | 113,9749 | 77,42229 | 15,41023153 | 92,83252 | -2,23038 |
| 305 | 2,501124 | 184,5174 | 77,42229 | 15,41023153 | 92,83252 | -2,23038 |
| 305 | 5,002248 | 255,0599 | 77,42229 | 15,41023153 | 92,83252 | -2,23038 |
| 313 | 0 | 109,2943 | 75,28962 | 6,064890516 | 81,35451 | -2,14765 |
| 313 | 2,501124 | 179,8368 | 75,28962 | 6,064890516 | 81,35451 | -2,14765 |
| 313 | 5,002248 | 250,3793 | 75,28962 | 6,064890516 | 81,35451 | -2,14765 |
| 314 | 0 | 82,57529 | 67,46942 | -2,088593843 | 65,38083 | -1,98309 |
| 314 | 2,501124 | 153,1178 | 67,46942 | -2,088593843 | 65,38083 | -1,98309 |
| 314 | 5,002248 | 223,6603 | 67,46942 | -2,088593843 | 65,38083 | -1,98309 |
| 318 | 0 | 84,37251 | 51,26576 | -6,782153761 | 44,48361 | -1,53 |
| 318 | 2,501124 | 154,915 | 51,26576 | -6,782153761 | 44,48361 | -1,53 |
| 318 | 5,002248 | 225,4575 | 51,26576 | -6,782153761 | 44,48361 | -1,53 |
| 319 | 0 | -5,812 | 66,12527 | -6,841896278 | 59,28337 | -3,3675 |
| 319 | 2,501124 | 64,7305 | 66,12527 | -6,841896278 | 59,28337 | -3,3675 |
| 319 | 5,002248 | 135,273 | 66,12527 | -6,841896278 | 59,28337 | -3,3675 |
| 380 | 0 | -133,925 | -49,5845 | 9,648584583 | -39,936 | 6,403562 |
| 380 | 2,501124 | -63,3829 | -49,5845 | 9,648584583 | -39,936 | 6,403562 |
| 380 | 5,002248 | 7,159566 | -49,5845 | 9,648584583 | -39,936 | 6,403562 |
| 381 | 0 | -186,852 | -70,135 | 10,45886916 | -59,6761 | 11,76919 |
| 381 | 2,501124 | -116,31 | -70,135 | 10,45886916 | -59,6761 | 11,76919 |
| 381 | 5,002248 | -45,7672 | -70,135 | 10,45886916 | -59,6761 | 11,76919 |
| 382 | 0 | -222,75 | -77,0682 | 7,477098159 | -69,5911 | 10,05941 |
| 382 | 2,501124 | -152,208 | -77,0682 | 7,477098159 | -69,5911 | 10,05941 |
| 382 | 5,002248 | -81,6652 | -77,0682 | 7,477098159 | -69,5911 | 10,05941 |
| 394 | 0 | -248,229 | -83,1427 | 3,455798726 | -79,6869 | 9,130116 |
| 394 | 2,501124 | -177,687 | -83,1427 | 3,455798726 | -79,6869 | 9,130116 |
| 394 | 5,002248 | -107,144 | -83,1427 | 3,455798726 | -79,6869 | 9,130116 |
| 395 | 0 | -264,203 | -85,8864 | -1,432369044 | -87,3188 | 7,391694 |
| 395 | 2,501124 | -193,661 | -85,8864 | -1,432369044 | -87,3188 | 7,391694 |
| 395 | 5,002248 | -123,118 | -85,8864 | -1,432369044 | -87,3188 | 7,391694 |
| 396 | 0 | -265,071 | -82,5427 | -7,363442067 | -89,9062 | 4,777319 |
| 396 | 2,501124 | -194,528 | -82,5427 | -7,363442067 | -89,9062 | 4,777319 |
| 396 | 5,002248 | -123,986 | -82,5427 | -7,363442067 | -89,9062 | 4,777319 |
| 407 | 0 | -78,8041 | 9,728188 | -13,126129 | -3,39794 | -8,86981 |
| 407 | 2,501124 | -8,26156 | 9,728188 | -13,126129 | -3,39794 | -8,86981 |
| 407 | 5,002248 | 62,28094 | 9,728188 | -13,126129 | -3,39794 | -8,86981 |
| 408 | 0 | 29,16437 | 53,64959 | 22,53063374 | 76,18023 | -10,6107 |
| 408 | 2,501124 | 99,70687 | 53,64959 | 22,53063374 | 76,18023 | -10,6107 |
| 408 | 5,002248 | 170,2494 | 53,64959 | 22,53063374 | 76,18023 | -10,6107 |
| 418 | 0 | -242,765 | -68,7373 | -14,10385884 | -82,8411 | 0,703546 |
| 418 | 2,501124 | -172,222 | -68,7373 | -14,10385884 | -82,8411 | 0,703546 |
| 418 | 5,002248 | -101,68 | -68,7373 | -14,10385884 | -82,8411 | 0,703546 |
| 419 | 0 | -176,537 | -36,6711 | -19,21037609 | -55,8814 | -4,38976 |
| 419 | 2,501124 | -105,994 | -36,6711 | -19,21037609 | -55,8814 | -4,38976 |
| 419 | 5,002248 | -35,4517 | -36,6711 | -19,21037609 | -55,8814 | -4,38976 |
| 433 | 0 | -226,378 | -77,4231 | -0,254212762 | -77,6773 | 5,20384 |
| 433 | 2,501127 | -155,836 | -77,4231 | -0,254212762 | -77,6773 | 5,20384 |
| 433 | 5,002253 | -85,2933 | -77,4231 | -0,254212762 | -77,6773 | 5,20384 |
| 434 | 0 | -92,6374 | -4,48745 | 1,499214429 | -2,98824 | -3,92036 |
| 434 | 2,501127 | -22,0949 | -4,48745 | 1,499214429 | -2,98824 | -3,92036 |

| | | | | | | |
|-----|----------|----------|----------|--------------|----------|----------|
| 434 | 5,002253 | 48,44757 | -4,48745 | 1,499214429 | -2,98824 | -3,92036 |
| 435 | 0 | 79,46051 | 84,73788 | 3,257312975 | 87,99519 | -14,2372 |
| 435 | 2,501127 | 150,003 | 84,73788 | 3,257312975 | 87,99519 | -14,2372 |
| 435 | 5,002253 | 220,5455 | 84,73788 | 3,257312975 | 87,99519 | -14,2372 |
| 449 | 0 | -152,419 | -179,037 | -40,277303 | -219,315 | 16,51266 |
| 449 | 2,501127 | -81,876 | -179,037 | -40,277303 | -219,315 | 16,51266 |
| 449 | 5,002253 | -11,3335 | -179,037 | -40,277303 | -219,315 | 16,51266 |
| 450 | 0 | -365,788 | -158,788 | -8,538475703 | -167,327 | 15,38193 |
| 450 | 2,501127 | -295,245 | -158,788 | -8,538475703 | -167,327 | 15,38193 |
| 450 | 5,002253 | -224,703 | -158,788 | -8,538475703 | -167,327 | 15,38193 |
| 451 | 0 | -313,11 | -126,917 | -1,727342206 | -128,644 | 11,19188 |
| 451 | 2,501127 | -242,568 | -126,917 | -1,727342206 | -128,644 | 11,19188 |
| 451 | 5,002253 | -172,025 | -126,917 | -1,727342206 | -128,644 | 11,19188 |
| 454 | 0 | -220,46 | -136,295 | -21,16344789 | -157,459 | -3,18079 |
| 454 | 2,501127 | -149,917 | -136,295 | -21,16344789 | -157,459 | -3,18079 |
| 454 | 5,002253 | -79,3745 | -136,295 | -21,16344789 | -157,459 | -3,18079 |
| 455 | 0 | -238,926 | -205,821 | -38,76112446 | -244,582 | 21,03489 |
| 455 | 2,501127 | -168,383 | -205,821 | -38,76112446 | -244,582 | 21,03489 |
| 455 | 5,002253 | -97,8409 | -205,821 | -38,76112446 | -244,582 | 21,03489 |
| 459 | 0 | 62,3262 | 32,48349 | -9,040875767 | 23,44262 | 7,798792 |
| 459 | 2,501124 | 132,8687 | 32,48349 | -9,040875767 | 23,44262 | 7,798792 |
| 459 | 5,002248 | 203,4112 | 32,48349 | -9,040875767 | 23,44262 | 7,798792 |
| 460 | 0 | 35,68452 | 92,76318 | -3,805191662 | 88,95799 | -15,1614 |
| 460 | 2,501124 | 106,227 | 92,76318 | -3,805191662 | 88,95799 | -15,1614 |
| 460 | 5,002248 | 176,7695 | 92,76318 | -3,805191662 | 88,95799 | -15,1614 |
| 470 | 0 | 111,1051 | 73,3754 | 5,790721327 | 79,16612 | -0,80749 |
| 470 | 2,501124 | 181,6476 | 73,3754 | 5,790721327 | 79,16612 | -0,80749 |
| 470 | 5,002248 | 252,1901 | 73,3754 | 5,790721327 | 79,16612 | -0,80749 |
| 471 | 0 | 77,64613 | 60,63325 | -2,945577665 | 57,68767 | 1,746558 |
| 471 | 2,501124 | 148,1886 | 60,63325 | -2,945577665 | 57,68767 | 1,746558 |
| 471 | 5,002248 | 218,7311 | 60,63325 | -2,945577665 | 57,68767 | 1,746558 |
| 474 | 0 | 106,4421 | 81,07233 | 25,66182731 | 106,7342 | -9,07888 |
| 474 | 2,501124 | 176,9846 | 81,07233 | 25,66182731 | 106,7342 | -9,07888 |
| 474 | 5,002248 | 247,5271 | 81,07233 | 25,66182731 | 106,7342 | -9,07888 |
| 475 | 0 | 126,547 | 83,63393 | 16,10637485 | 99,7403 | -4,86957 |
| 475 | 2,501124 | 197,0895 | 83,63393 | 16,10637485 | 99,7403 | -4,86957 |
| 475 | 5,002248 | 267,632 | 83,63393 | 16,10637485 | 99,7403 | -4,86957 |

البيانات الواردة

TABEL GAYA GESER BALOK INDUK TENGAH

| FRAME | STA | VO | VL | | VL TOT | VE |
|-------|----------|----------|-----------|---------------|----------|----------|
| | | | VL merata | VL.Koef kejut | | |
| 550 | 0 | 77,525 | 80,38932 | -0,182141701 | 80,20718 | -3,52115 |
| 550 | 2,501127 | 150,9125 | 80,38932 | -0,182141701 | 80,20718 | -3,52115 |
| 550 | 5,002253 | 224,3 | 80,38932 | -0,182141701 | 80,20718 | -3,52115 |
| 552 | 0 | -336,48 | -124,572 | 4,520200039 | -120,051 | -2,64669 |
| 552 | 2,501127 | -263,093 | -124,572 | 4,520200039 | -120,051 | -2,64669 |
| 552 | 5,002253 | -189,705 | -124,572 | 4,520200039 | -120,051 | -2,64669 |
| 553 | 0 | -259,839 | -86,9601 | 2,324737878 | -84,6353 | -3,119 |
| 553 | 2,501127 | -186,451 | -86,9601 | 2,324737878 | -84,6353 | -3,119 |
| 553 | 5,002253 | -113,064 | -86,9601 | 2,324737878 | -84,6353 | -3,119 |
| 554 | 0 | -124,92 | -20,9475 | 0,874656949 | -20,0729 | -4,17595 |
| 554 | 2,501127 | -51,5323 | -20,9475 | 0,874656949 | -20,0729 | -4,17595 |
| 554 | 5,002253 | 21,85515 | -20,9475 | 0,874656949 | -20,0729 | -4,17595 |
| 556 | 0 | -309,467 | -153,16 | -29,67781304 | -182,838 | -4,43635 |
| 556 | 2,501127 | -236,079 | -153,16 | -29,67781304 | -182,838 | -4,43635 |
| 556 | 5,002253 | -162,692 | -153,16 | -29,67781304 | -182,838 | -4,43635 |
| 557 | 0 | -257,198 | -174,5 | -45,35480677 | -219,855 | -1,67833 |
| 557 | 2,501127 | -183,811 | -174,5 | -45,35480677 | -219,855 | -1,67833 |
| 557 | 5,002253 | -110,423 | -174,5 | -45,35480677 | -219,855 | -1,67833 |
| 559 | 0 | -173,499 | -158,061 | -50,98013423 | -209,041 | -2,37136 |
| 559 | 2,501127 | -100,111 | -158,061 | -50,98013423 | -209,041 | -2,37136 |
| 559 | 5,002253 | -26,7233 | -158,061 | -50,98013423 | -209,041 | -2,37136 |
| 559 | 0 | -373,588 | -143,275 | -3,118242991 | -146,394 | -2,47423 |
| 559 | 2,501127 | -300,201 | -143,275 | -3,118242991 | -146,394 | -2,47423 |
| 559 | 5,002253 | -226,813 | -143,275 | -3,118242991 | -146,394 | -2,47423 |
| 580 | 0 | -111,578 | -12,6095 | -23,68854298 | -36,2981 | 0,475215 |
| 580 | 2,501124 | -38,1909 | -12,6095 | -23,68854298 | -36,2981 | 0,475215 |
| 580 | 5,002248 | 35,19662 | -12,6095 | -23,68854298 | -36,2981 | 0,475215 |
| 581 | 0 | 14,38991 | 35,42679 | 28,95080385 | 64,3776 | -1,36527 |
| 581 | 2,501124 | 87,77741 | 35,42679 | 28,95080385 | 64,3776 | -1,36527 |
| 581 | 5,002248 | 161,1649 | 35,42679 | 28,95080385 | 64,3776 | -1,36527 |
| 584 | 0 | -230,133 | -58,3033 | -28,54780112 | -86,8511 | 2,106454 |
| 584 | 2,501124 | -156,746 | -58,3033 | -28,54780112 | -86,8511 | 2,106454 |
| 584 | 5,002248 | -83,3585 | -58,3033 | -28,54780112 | -86,8511 | 2,106454 |
| 592 | 0 | -269,922 | -72,821 | 7,346722942 | -65,4742 | 2,7089 |
| 592 | 2,501124 | -196,534 | -72,821 | 7,346722942 | -65,4742 | 2,7089 |
| 592 | 5,002248 | -123,147 | -72,821 | 7,346722942 | -65,4742 | 2,7089 |
| 593 | 0 | -290,479 | -81,535 | 1,703047207 | -79,832 | 2,942021 |
| 593 | 2,501124 | -217,092 | -81,535 | 1,703047207 | -79,832 | 2,942021 |
| 593 | 5,002248 | -143,704 | -81,535 | 1,703047207 | -79,832 | 2,942021 |
| 594 | 0 | -301,514 | -86,2824 | -6,132787585 | -92,4152 | 3,07818 |
| 594 | 2,501124 | -228,127 | -86,2824 | -6,132787585 | -92,4152 | 3,07818 |
| 594 | 5,002248 | -154,739 | -86,2824 | -6,132787585 | -92,4152 | 3,07818 |
| 595 | 0 | -289,563 | -81,7247 | -17,00725874 | -98,732 | 2,908674 |
| 595 | 2,501124 | -216,176 | -81,7247 | -17,00725874 | -98,732 | 2,908674 |
| 595 | 5,002248 | -142,788 | -81,7247 | -17,00725874 | -98,732 | 2,908674 |
| 598 | 0 | -221,858 | -52,7874 | 8,860408639 | -43,927 | 6,530635 |
| 598 | 2,501124 | -148,471 | -52,7874 | 8,860408639 | -43,927 | 6,530635 |
| 598 | 5,002248 | -75,0834 | -52,7874 | 8,860408639 | -43,927 | 6,530635 |
| 599 | 0 | -223,489 | -50,7616 | 15,7479075 | -35,0137 | 1,555838 |
| 599 | 2,501124 | -150,102 | -50,7616 | 15,7479075 | -35,0137 | 1,555838 |
| 599 | 5,002248 | -76,714 | -50,7616 | 15,7479075 | -35,0137 | 1,555838 |
| 600 | 0 | -249,098 | -63,6724 | 11,76839752 | -51,904 | 2,581032 |

| | | | | | | |
|-----|----------|----------|----------|--------------|----------|----------|
| 659 | 5,002253 | 26,64831 | -16,2734 | 1,410885979 | -14,8625 | -6,26896 |
| 660 | 0 | 102,5251 | 103,7671 | 2,613777634 | 106,3809 | -15,026 |
| 660 | 2,501127 | 175,9126 | 103,7671 | 2,613777634 | 106,3809 | -15,026 |
| 660 | 5,002253 | 249,3001 | 103,7671 | 2,613777634 | 106,3809 | -15,026 |
| 667 | 0 | -210,056 | -193,054 | -55,08722977 | -248,142 | 14,11033 |
| 667 | 2,501127 | -136,668 | -193,054 | -55,08722977 | -248,142 | 14,11033 |
| 667 | 5,002253 | -63,2807 | -193,054 | -55,08722977 | -248,142 | 14,11033 |
| 668 | 0 | -408,056 | -176,103 | -6,984041174 | -183,088 | 13,10724 |
| 668 | 2,501127 | -334,668 | -176,103 | -6,984041174 | -183,088 | 13,10724 |
| 668 | 5,002253 | -261,281 | -176,103 | -6,984041174 | -183,088 | 13,10724 |
| 669 | 0 | -361,829 | -148,649 | 1,679533687 | -146,97 | 8,828648 |
| 669 | 2,501127 | -288,442 | -148,649 | 1,679533687 | -146,97 | 8,828648 |
| 669 | 5,002253 | -215,054 | -148,649 | 1,679533687 | -146,97 | 8,828648 |
| 671 | 0 | -305,867 | -150,381 | -29,29514522 | -179,676 | -6,24824 |
| 671 | 2,501127 | -232,479 | -150,381 | -29,29514522 | -179,676 | -6,24824 |
| 671 | 5,002253 | -159,092 | -150,381 | -29,29514522 | -179,676 | -6,24824 |
| 672 | 0 | -303,34 | -218,315 | -50,52419963 | -268,839 | 19,25037 |
| 672 | 2,501127 | -229,952 | -218,315 | -50,52419963 | -268,839 | 19,25037 |
| 672 | 5,002253 | -156,565 | -218,315 | -50,52419963 | -268,839 | 19,25037 |
| 674 | 0 | 154,8017 | 36,41037 | -9,919007478 | 26,49136 | 5,895406 |
| 674 | 2,501124 | 228,1892 | 36,41037 | -9,919007478 | 26,49136 | 5,895406 |
| 674 | 5,002248 | 301,5767 | 36,41037 | -9,919007478 | 26,49136 | 5,895406 |
| 675 | 0 | 65,41248 | 99,47658 | -4,708003795 | 94,76858 | -19,1497 |
| 675 | 2,501124 | 138,8 | 99,47658 | -4,708003795 | 94,76858 | -19,1497 |
| 675 | 5,002248 | 212,1875 | 99,47658 | -4,708003795 | 94,76858 | -19,1497 |
| 680 | 0 | 152,9211 | 83,04618 | 5,732184824 | 88,77836 | -3,91472 |
| 680 | 2,501124 | 226,3086 | 83,04618 | 5,732184824 | 88,77836 | -3,91472 |
| 680 | 5,002248 | 299,6961 | 83,04618 | 5,732184824 | 88,77836 | -3,91472 |
| 681 | 0 | 117,8452 | 68,4349 | -4,892886042 | 63,54201 | -1,44577 |
| 681 | 2,501124 | 191,2327 | 68,4349 | -4,892886042 | 63,54201 | -1,44577 |
| 681 | 5,002248 | 264,6202 | 68,4349 | -4,892886042 | 63,54201 | -1,44577 |
| 683 | 0 | 136,8314 | 91,31303 | 34,36938986 | 125,6824 | -11,318 |
| 683 | 2,501124 | 210,2189 | 91,31303 | 34,36938986 | 125,6824 | -11,318 |
| 683 | 5,002248 | 283,6064 | 91,31303 | 34,36938986 | 125,6824 | -11,318 |
| 684 | 0 | 167,0417 | 95,42493 | 19,58110192 | 115,006 | -7,80044 |
| 684 | 2,501124 | 240,4292 | 95,42493 | 19,58110192 | 115,006 | -7,80044 |
| 684 | 5,002248 | 313,8167 | 95,42493 | 19,58110192 | 115,006 | -7,80044 |

البنك الاسلامي للتدقيق

TABEL GAYA GESER BALOK ANAK-1

| FRAME | STA | VD | VL | | VL TOT | VE |
|-------|----------|----------|-----------|---------------|----------|----------|
| | | | VL merata | VL.Koef kejut | | |
| 1432 | 0 | -29,3296 | 7,582583 | 0,251359698 | 7,833942 | -0,20559 |
| 1432 | 2,501127 | 21,97785 | 7,582583 | 0,251359698 | 7,833942 | -0,20559 |
| 1432 | 5,002253 | 73,28535 | 7,582583 | 0,251359698 | 7,833942 | -0,20559 |
| 1433 | 0 | -60,5706 | -2,2231 | -0,170989025 | -2,39409 | 0,025992 |
| 1433 | 2,501127 | -9,26314 | -2,2231 | -0,170989025 | -2,39409 | 0,025992 |
| 1433 | 5,002253 | 42,04436 | -2,2231 | -0,170989025 | -2,39409 | 0,025992 |
| 1434 | 0 | -64,8808 | -3,58397 | -0,095858985 | -3,67983 | 0,052318 |
| 1434 | 2,501127 | -13,5733 | -3,58397 | -0,095858985 | -3,67983 | 0,052318 |
| 1434 | 5,002253 | 37,73423 | -3,58397 | -0,095858985 | -3,67983 | 0,052318 |
| 1435 | 0 | -59,0832 | -1,6302 | 0,380502852 | -1,2497 | 0,050072 |
| 1435 | 2,501127 | -7,7757 | -1,6302 | 0,380502852 | -1,2497 | 0,050072 |
| 1435 | 5,002253 | 43,5318 | -1,6302 | 0,380502852 | -1,2497 | 0,050072 |
| 1436 | 0 | -84,4002 | -4,41686 | 3,212207214 | -1,20465 | -0,02773 |
| 1436 | 2,501127 | -33,0927 | -4,41686 | 3,212207214 | -1,20465 | -0,02773 |
| 1436 | 5,002253 | 18,21481 | -4,41686 | 3,212207214 | -1,20465 | -0,02773 |
| 1437 | 0 | -55,7274 | -2,44254 | -7,038906974 | -9,48144 | 0,011309 |
| 1437 | 2,501127 | -4,41988 | -2,44254 | -7,038906974 | -9,48144 | 0,011309 |
| 1437 | 5,002253 | 46,88762 | -2,44254 | -7,038906974 | -9,48144 | 0,011309 |
| 1438 | 0 | -44,1441 | -1,15003 | -20,59931475 | -21,7493 | -0,00012 |
| 1438 | 2,501127 | 7,163417 | -1,15003 | -20,59931475 | -21,7493 | -0,00012 |
| 1438 | 5,002253 | 58,47092 | -1,15003 | -20,59931475 | -21,7493 | -0,00012 |
| 1439 | 0 | -63,9334 | -1,27714 | 15,73102685 | 14,45389 | 0,007615 |
| 1439 | 2,501127 | -12,6259 | -1,27714 | 15,73102685 | 14,45389 | 0,007615 |
| 1439 | 5,002253 | 38,68157 | -1,27714 | 15,73102685 | 14,45389 | 0,007615 |
| 1440 | 0 | -56,1222 | -0,90026 | -23,48648136 | -24,3867 | 0,017662 |
| 1440 | 2,501124 | -4,81466 | -0,90026 | -23,48648136 | -24,3867 | 0,017662 |
| 1440 | 5,002248 | 46,49284 | -0,90026 | -23,48648136 | -24,3867 | 0,017662 |
| 1441 | 0 | -42,7618 | 1,781715 | 25,61002302 | 27,39174 | -0,02588 |
| 1441 | 2,501124 | 8,545706 | 1,781715 | 25,61002302 | 27,39174 | -0,02588 |
| 1441 | 5,002248 | 59,85321 | 1,781715 | 25,61002302 | 27,39174 | -0,02588 |
| 1442 | 0 | -62,18 | -2,06882 | -9,767888353 | -11,8367 | 0,031136 |
| 1442 | 2,501124 | -10,8725 | -2,06882 | -9,767888353 | -11,8367 | 0,031136 |
| 1442 | 5,002248 | 40,43498 | -2,06882 | -9,767888353 | -11,8367 | 0,031136 |
| 1443 | 0 | -53,7233 | -0,42249 | 0,713654168 | 0,291163 | 0,003658 |
| 1443 | 2,501124 | -2,41581 | -0,42249 | 0,713654168 | 0,291163 | 0,003658 |
| 1443 | 5,002248 | 48,89169 | -0,42249 | 0,713654168 | 0,291163 | 0,003658 |
| 1444 | 0 | -54,3767 | -0,5755 | 0,440217635 | -0,13529 | 0,005462 |
| 1444 | 2,501124 | -3,06919 | -0,5755 | 0,440217635 | -0,13529 | 0,005462 |
| 1444 | 5,002248 | 48,23831 | -0,5755 | 0,440217635 | -0,13529 | 0,005462 |
| 1445 | 0 | -55,9924 | -0,9005 | -0,377827665 | -1,27833 | 0,010193 |
| 1445 | 2,501124 | -4,68493 | -0,9005 | -0,377827665 | -1,27833 | 0,010193 |
| 1445 | 5,002248 | 46,62257 | -0,9005 | -0,377827665 | -1,27833 | 0,010193 |
| 1446 | 0 | -58,112 | -1,33832 | -1,835441303 | -3,17376 | 0,017278 |
| 1446 | 2,501124 | -6,80449 | -1,33832 | -1,835441303 | -3,17376 | 0,017278 |
| 1446 | 5,002248 | 44,50301 | -1,33832 | -1,835441303 | -3,17376 | 0,017278 |
| 1447 | 0 | -64,0021 | -2,09948 | 13,49103042 | 11,39155 | 0,075889 |
| 1447 | 2,501124 | -12,6946 | -2,09948 | 13,49103042 | 11,39155 | 0,075889 |
| 1447 | 5,002248 | 38,61286 | -2,09948 | 13,49103042 | 11,39155 | 0,075889 |
| 1448 | 0 | -55,193 | -0,74861 | 1,327430284 | 0,578819 | 0,010232 |
| 1448 | 2,501124 | -3,88548 | -0,74861 | 1,327430284 | 0,578819 | 0,010232 |
| 1448 | 5,002248 | 47,42202 | -0,74861 | 1,327430284 | 0,578819 | 0,010232 |
| 1449 | 0 | -53,8632 | -0,41952 | 0,752787321 | 0,333268 | 0,005129 |

| | | | | | | |
|------|----------|----------|----------|--------------|----------|----------|
| 1449 | 2,501124 | -2,55568 | -0,41952 | 0,752787321 | 0,333268 | 0,005129 |
| 1449 | 5,002248 | 48,75182 | -0,41952 | 0,752787321 | 0,333268 | 0,005129 |
| 1450 | 0 | -39,4266 | 2,338321 | 10,24082341 | 12,57914 | -0,03336 |
| 1450 | 2,501124 | 11,88094 | 2,338321 | 10,24082341 | 12,57914 | -0,03336 |
| 1450 | 5,002248 | 63,18844 | 2,338321 | 10,24082341 | 12,57914 | -0,03336 |
| 1451 | 0 | -45,8585 | 1,037705 | 1,095083381 | 2,132789 | -0,01243 |
| 1451 | 2,501124 | 5,449017 | 1,037705 | 1,095083381 | 2,132789 | -0,01243 |
| 1451 | 5,002248 | 56,75652 | 1,037705 | 1,095083381 | 2,132789 | -0,01243 |
| 1452 | 0 | -46,8374 | 0,747381 | 0,156473924 | 0,903854 | -0,00959 |
| 1452 | 2,501124 | 4,470122 | 0,747381 | 0,156473924 | 0,903854 | -0,00959 |
| 1452 | 5,002248 | 55,77762 | 0,747381 | 0,156473924 | 0,903854 | -0,00959 |
| 1453 | 0 | -35,4772 | 0,083083 | 0,054101158 | 0,137184 | -0,00165 |
| 1453 | 2,501124 | 15,83026 | 0,083083 | 0,054101158 | 0,137184 | -0,00165 |
| 1453 | 5,002248 | 67,13776 | 0,083083 | 0,054101158 | 0,137184 | -0,00165 |
| 1454 | 0 | -95,0703 | 1,978912 | -2,379586298 | -0,40067 | -0,01029 |
| 1454 | 2,501124 | -43,7628 | 1,978912 | -2,379586298 | -0,40067 | -0,01029 |
| 1454 | 5,002248 | 7,544677 | 1,978912 | -2,379586298 | -0,40067 | -0,01029 |
| 1455 | 0 | 7,544677 | 1,978912 | -2,379586298 | -0,40067 | -0,01029 |
| 1455 | 2,501124 | 58,85218 | 1,978912 | -2,379586298 | -0,40067 | -0,01029 |
| 1455 | 5,002248 | 110,1597 | 1,978912 | -2,379586298 | -0,40067 | -0,01029 |
| 1456 | 0 | -63,7085 | -1,98814 | 13,64259629 | 11,65445 | 0,052228 |
| 1456 | 2,501124 | -12,401 | -1,98814 | 13,64259629 | 11,65445 | 0,052228 |
| 1456 | 5,002248 | 38,90646 | -1,98814 | 13,64259629 | 11,65445 | 0,052228 |
| 1457 | 0 | -56,2315 | -1,25269 | 0,647027865 | -0,60567 | 0,11996 |
| 1457 | 2,501124 | -4,92404 | -1,25269 | 0,647027865 | -0,60567 | 0,11996 |
| 1457 | 5,002248 | 46,38346 | -1,25269 | 0,647027865 | -0,60567 | 0,11996 |
| 1458 | 0 | -54,1969 | -0,57105 | 0,546659452 | -0,02439 | 0,037708 |
| 1458 | 2,501124 | -2,88935 | -0,57105 | 0,546659452 | -0,02439 | 0,037708 |
| 1458 | 5,002248 | 48,41815 | -0,57105 | 0,546659452 | -0,02439 | 0,037708 |
| 1459 | 0 | -54,0231 | -0,55819 | 0,529391161 | -0,02879 | 0,032946 |
| 1459 | 2,501124 | -2,71556 | -0,55819 | 0,529391161 | -0,02879 | 0,032946 |
| 1459 | 5,002248 | 48,59194 | -0,55819 | 0,529391161 | -0,02879 | 0,032946 |
| 1460 | 0 | -54,6979 | -0,72359 | 0,240197295 | -0,4834 | 0,037696 |
| 1460 | 2,501124 | -3,39045 | -0,72359 | 0,240197295 | -0,4834 | 0,037696 |
| 1460 | 5,002248 | 47,91705 | -0,72359 | 0,240197295 | -0,4834 | 0,037696 |
| 1461 | 0 | -56,2753 | -1,05511 | -0,582921861 | -1,63803 | 0,044747 |
| 1461 | 2,501124 | -4,96783 | -1,05511 | -0,582921861 | -1,63803 | 0,044747 |
| 1461 | 5,002248 | 46,33967 | -1,05511 | -0,582921861 | -1,63803 | 0,044747 |
| 1462 | 0 | -54,7657 | -0,09862 | -22,40183678 | -22,5005 | -0,15567 |
| 1462 | 2,501124 | -3,45817 | -0,09862 | -22,40183678 | -22,5005 | -0,15567 |
| 1462 | 5,002248 | 47,84933 | -0,09862 | -22,40183678 | -22,5005 | -0,15567 |
| 1463 | 0 | -40,7282 | 2,584732 | 26,68257432 | 29,26731 | -0,20162 |
| 1463 | 2,501124 | 10,57934 | 2,584732 | 26,68257432 | 29,26731 | -0,20162 |
| 1463 | 5,002248 | 61,88684 | 2,584732 | 26,68257432 | 29,26731 | -0,20162 |
| 1464 | 0 | -58,7116 | -1,51162 | -2,085072648 | -3,59669 | 0,049134 |
| 1464 | 2,501124 | -7,40408 | -1,51162 | -2,085072648 | -3,59669 | 0,049134 |
| 1464 | 5,002248 | 43,90342 | -1,51162 | -2,085072648 | -3,59669 | 0,049134 |
| 1465 | 0 | -61,209 | -1,75144 | -9,324621259 | -11,0761 | -0,03521 |
| 1465 | 2,501124 | -9,90154 | -1,75144 | -9,324621259 | -11,0761 | -0,03521 |
| 1465 | 5,002248 | 41,40596 | -1,75144 | -9,324621259 | -11,0761 | -0,03521 |
| 1466 | 0 | -66,786 | -4,40464 | -1,199581743 | -5,60422 | 0,231671 |
| 1466 | 2,501127 | -15,4785 | -4,40464 | -1,199581743 | -5,60422 | 0,231671 |
| 1466 | 5,002253 | 35,82898 | -4,40464 | -1,199581743 | -5,60422 | 0,231671 |
| 1467 | 0 | -58,9716 | -1,60882 | 0,36471274 | -1,24411 | 0,054435 |
| 1467 | 2,501127 | -7,66408 | -1,60882 | 0,36471274 | -1,24411 | 0,054435 |

| | | | | | | |
|------|----------|----------|----------|--------------|----------|----------|
| 1467 | 5,002253 | 43,64342 | -1,60882 | 0,36471274 | -1,24411 | 0,054435 |
| 1468 | 0 | -25,1617 | 9,602397 | 2,987585289 | 12,58998 | -0,66288 |
| 1468 | 2,501127 | 26,14576 | 9,602397 | 2,987585289 | 12,58998 | -0,66288 |
| 1468 | 5,002253 | 77,45326 | 9,602397 | 2,987585289 | 12,58998 | -0,66288 |
| 1469 | 0 | -45,0872 | -1,47526 | -21,09075089 | -22,566 | 0,077291 |
| 1469 | 2,501127 | 6,220286 | -1,47526 | -21,09075089 | -22,566 | 0,077291 |
| 1469 | 5,002253 | 57,52779 | -1,47526 | -21,09075089 | -22,566 | 0,077291 |
| 1470 | 0 | -65,0477 | -1,75153 | 15,09976591 | 13,34824 | 0,110238 |
| 1470 | 2,501127 | -13,7402 | -1,75153 | 15,09976591 | 13,34824 | 0,110238 |
| 1470 | 5,002253 | 37,56728 | -1,75153 | 15,09976591 | 13,34824 | 0,110238 |
| 1471 | 0 | -61,9632 | -2,82203 | -0,982118668 | -3,80415 | 0,156026 |
| 1471 | 2,501127 | -10,6557 | -2,82203 | -0,982118668 | -3,80415 | 0,156026 |
| 1471 | 5,002253 | 40,6518 | -2,82203 | -0,982118668 | -3,80415 | 0,156026 |
| 1472 | 0 | -83,761 | -4,22366 | 3,452656222 | -0,77101 | -0,05887 |
| 1472 | 2,501127 | -32,4535 | -4,22366 | 3,452656222 | -0,77101 | -0,05887 |
| 1472 | 5,002253 | 18,85404 | -4,22366 | 3,452656222 | -0,77101 | -0,05887 |
| 1473 | 0 | -57,9416 | -3,50625 | -8,386778777 | -11,893 | 0,2326 |
| 1473 | 2,501127 | -6,6341 | -3,50625 | -8,386778777 | -11,893 | 0,2326 |
| 1473 | 5,002253 | 44,6734 | -3,50625 | -8,386778777 | -11,893 | 0,2326 |
| 1474 | 0 | -94,7958 | 2,039475 | -2,2967662 | -0,25729 | -0,02701 |
| 1474 | 2,501124 | -43,4883 | 2,039475 | -2,2967662 | -0,25729 | -0,02701 |
| 1474 | 5,002248 | 7,819233 | 2,039475 | -2,2967662 | -0,25729 | -0,02701 |
| 1475 | 0 | 7,819233 | 2,039475 | -2,2967662 | -0,25729 | -0,02701 |
| 1475 | 2,501124 | 59,12673 | 2,039475 | -2,2967662 | -0,25729 | -0,02701 |
| 1475 | 5,002248 | 110,4342 | 2,039475 | -2,2967662 | -0,25729 | -0,02701 |
| 1476 | 0 | -47,2065 | 0,553638 | -0,084616417 | 0,469022 | 0,025562 |
| 1476 | 2,501124 | 4,101028 | 0,553638 | -0,084616417 | 0,469022 | 0,025562 |
| 1476 | 5,002248 | 55,40653 | 0,553638 | -0,084616417 | 0,469022 | 0,025562 |
| 1477 | 0 | -36,4183 | -0,28677 | -0,47606509 | -0,76284 | 0,081359 |
| 1477 | 2,501124 | 14,88923 | -0,28677 | -0,47606509 | -0,76284 | 0,081359 |
| 1477 | 5,002248 | 66,19673 | -0,28677 | -0,47606509 | -0,76284 | 0,081359 |
| 1478 | 0 | -38,9876 | 2,621978 | 10,61699449 | 13,23897 | -0,09859 |
| 1478 | 2,501124 | 12,31991 | 2,621978 | 10,61699449 | 13,23897 | -0,09859 |
| 1478 | 5,002248 | 63,62741 | 2,621978 | 10,61699449 | 13,23897 | -0,09859 |
| 1479 | 0 | -46,2554 | 0,852689 | 0,815082667 | 1,667772 | 0,029413 |
| 1479 | 2,501124 | 5,052135 | 0,852689 | 0,815082667 | 1,667772 | 0,029413 |
| 1479 | 5,002248 | 56,35964 | 0,852689 | 0,815082667 | 1,667772 | 0,029413 |

الجمهورية الجزائرية الديمقراطية الشعبية

TABEL GAYA GESER BALOK LINTANG STRUKTUR ATAS

| FRAME | STA | VL | | | VL TOT | VE |
|-------|---------|----------|-----------|---------------|----------|----------|
| | | VD | VL merata | VL.Koef kejut | | |
| 8 | 0 | -161,635 | -119,159 | -0,142822775 | -119,301 | 0,010996 |
| 8 | 1,03125 | -161,635 | -88,1758 | -0,142822775 | -88,3186 | 0,010996 |
| 8 | 2,0625 | -161,635 | -57,6342 | -0,142822775 | -57,777 | 0,010996 |
| 9 | 0 | -64,475 | -57,9401 | -0,104831154 | -58,045 | 0,011613 |
| 9 | 1,03125 | -64,475 | -27,3986 | -0,104831154 | -27,5034 | 0,011613 |
| 9 | 2,0625 | -64,475 | 3,143024 | -0,104831154 | 3,038193 | 0,011613 |
| 10 | 0 | 34,03758 | 3,567086 | -0,075933814 | 3,491152 | 0,001633 |
| 10 | 1,03125 | 34,03758 | 34,10867 | -0,075933814 | 34,03274 | 0,001633 |
| 10 | 2,0625 | 34,03758 | 64,65026 | -0,075933814 | 64,57432 | 0,001633 |
| 11 | 0 | 135,1252 | 64,29793 | -0,024636547 | 64,2733 | 0,003524 |
| 11 | 1,03125 | 135,1252 | 65,81306 | -0,024636547 | 65,78842 | 0,003524 |
| 11 | 2,0625 | 135,1252 | 65,81306 | -0,024636547 | 65,78842 | 0,003524 |
| 16 | 0 | -134,075 | -65,9243 | 0,024636547 | -65,8997 | -0,00352 |
| 16 | 1,03125 | -134,075 | -65,9243 | 0,024636547 | -65,8997 | -0,00352 |
| 16 | 2,0625 | -134,075 | -64,283 | 0,024636547 | -64,2583 | -0,00352 |
| 17 | 0 | -31,7626 | -64,6353 | 0,075933814 | -64,5593 | -0,00163 |
| 17 | 1,03125 | -31,7626 | -34,0937 | 0,075933814 | -34,0177 | -0,00163 |
| 17 | 2,0625 | -31,7626 | -3,55209 | 0,075933814 | -3,47616 | -0,00163 |
| 18 | 0 | 66,82361 | -3,12805 | 0,104831154 | -3,02322 | -0,01161 |
| 18 | 1,03125 | 66,82361 | 27,41353 | 0,104831154 | 27,51836 | -0,01161 |
| 18 | 2,0625 | 66,82361 | 57,95512 | 0,104831154 | 58,05995 | -0,01161 |
| 21 | 0 | 163,053 | 57,64906 | 0,142822775 | 57,79188 | -0,011 |
| 21 | 1,03125 | 163,053 | 88,19064 | 0,142822775 | 88,33346 | -0,011 |
| 21 | 2,0625 | 163,053 | 119,1735 | 0,142822775 | 119,3163 | -0,011 |
| 22 | 0 | -156,269 | -118,239 | 0,164211027 | -118,075 | 0,005282 |
| 22 | 1,03125 | -156,269 | -87,2565 | 0,164211027 | -87,0923 | 0,005282 |
| 22 | 2,0625 | -156,269 | -56,715 | 0,164211027 | -56,5507 | 0,005282 |
| 23 | 0 | -59,6228 | -57,2408 | 0,171105506 | -57,0697 | 0,007966 |
| 23 | 1,03125 | -59,6228 | -26,6992 | 0,171105506 | -26,5281 | 0,007966 |
| 23 | 2,0625 | -59,6228 | 3,842379 | 0,171105506 | 4,013484 | 0,007966 |
| 24 | 0 | 37,7944 | 3,871563 | 0,148310649 | 4,019874 | 0,003601 |
| 24 | 1,03125 | 37,7944 | 34,41315 | 0,148310649 | 34,56146 | 0,003601 |
| 24 | 2,0625 | 37,7944 | 64,95474 | 0,148310649 | 65,10305 | 0,003601 |
| 25 | 0 | 138,3674 | 64,43658 | 0,158441613 | 64,59502 | 0,007724 |
| 25 | 1,03125 | 138,3674 | 65,9517 | 0,158441613 | 66,11015 | 0,007724 |
| 25 | 2,0625 | 138,3674 | 65,9517 | 0,158441613 | 66,11015 | 0,007724 |
| 26 | 0 | -133,251 | -66,0626 | -0,158441613 | -66,221 | -0,00772 |
| 26 | 1,03125 | -133,251 | -66,0626 | -0,158441613 | -66,221 | -0,00772 |
| 26 | 2,0625 | -133,251 | -64,4212 | -0,158441613 | -64,5796 | -0,00772 |
| 27 | 0 | -31,3489 | -64,9393 | -0,148310649 | -65,0876 | -0,0036 |
| 27 | 1,03125 | -31,3489 | -34,3977 | -0,148310649 | -34,5461 | -0,0036 |
| 27 | 2,0625 | -31,3489 | -3,85616 | -0,148310649 | -4,00447 | -0,0036 |
| 28 | 0 | 66,20116 | -3,82696 | -0,171105506 | -3,99807 | -0,00797 |
| 28 | 1,03125 | 66,20116 | 26,71462 | -0,171105506 | 26,54352 | -0,00797 |
| 28 | 2,0625 | 66,20116 | 57,25621 | -0,171105506 | 57,0851 | -0,00797 |
| 29 | 0 | 161,855 | 56,73028 | -0,164211027 | 56,56607 | -0,00528 |
| 29 | 1,03125 | 161,855 | 87,27186 | -0,164211027 | 87,10765 | -0,00528 |
| 29 | 2,0625 | 161,855 | 118,2548 | -0,164211027 | 118,0905 | -0,00528 |
| 30 | 0 | -148,638 | -117,281 | 0,613558847 | -116,667 | 0,000862 |
| 30 | 1,03125 | -148,638 | -86,2981 | 0,613558847 | -85,6848 | 0,000862 |
| 30 | 2,0625 | -148,638 | -55,7565 | 0,613558847 | -55,143 | 0,000862 |
| 31 | 0 | -52,1393 | -56,3666 | 0,426946098 | -55,9397 | 0,00586 |

| | | | | | | |
|----|---------|----------|----------|--------------|----------|----------|
| 31 | 1,03125 | -52,1393 | -25,825 | 0,426946098 | -25,3981 | 0,00586 |
| 31 | 2,0625 | -52,1393 | 4,716553 | 0,426946098 | 5,143499 | 0,00586 |
| 32 | 0 | 44,54432 | 4,467977 | 0,010517335 | 4,478494 | 0,004395 |
| 32 | 1,03125 | 44,54432 | 35,00956 | 0,010517335 | 35,02008 | 0,004395 |
| 32 | 2,0625 | 44,54432 | 65,55115 | 0,010517335 | 65,56167 | 0,004395 |
| 33 | 0 | 144,8824 | 64,94606 | -0,129806775 | 64,81625 | 0,010637 |
| 33 | 1,03125 | 144,8824 | 66,46119 | -0,129806775 | 66,33138 | 0,010637 |
| 33 | 2,0625 | 144,8824 | 66,46119 | -0,129806775 | 66,33138 | 0,010637 |
| 34 | 0 | -131,53 | -66,5717 | 0,129806775 | -66,4419 | -0,01064 |
| 34 | 1,03125 | -131,53 | -66,5717 | 0,129806775 | -66,4419 | -0,01064 |
| 34 | 2,0625 | -131,53 | -64,9303 | 0,129806775 | -64,8005 | -0,01064 |
| 35 | 0 | -29,8761 | -65,5354 | -0,010517335 | -65,5459 | -0,00439 |
| 35 | 1,03125 | -29,8761 | -34,9938 | -0,010517335 | -35,0043 | -0,00439 |
| 35 | 2,0625 | -29,8761 | -4,45224 | -0,010517335 | -4,46276 | -0,00439 |
| 36 | 0 | 66,85321 | -4,70079 | -0,426946098 | -5,12774 | -0,00586 |
| 36 | 1,03125 | 66,85321 | 25,8408 | -0,426946098 | 25,41385 | -0,00586 |
| 36 | 2,0625 | 66,85321 | 56,38238 | -0,426946098 | 55,95544 | -0,00586 |
| 37 | 0 | 162,2149 | 55,77221 | -0,613558847 | 55,15865 | -0,00086 |
| 37 | 1,03125 | 162,2149 | 86,3138 | -0,613558847 | 85,70024 | -0,00086 |
| 37 | 2,0625 | 162,2149 | 117,2967 | -0,613558847 | 116,6831 | -0,00086 |
| 38 | 0 | -136,436 | -115,651 | 1,205384586 | -114,446 | -0,02289 |
| 38 | 1,03125 | -136,436 | -84,6684 | 1,205384586 | -83,463 | -0,02289 |
| 38 | 2,0625 | -136,436 | -54,1268 | 1,205384586 | -52,9214 | -0,02289 |
| 39 | 0 | -40,0929 | -54,9516 | 0,591493269 | -54,3601 | -0,01491 |
| 39 | 1,03125 | -40,0929 | -24,41 | 0,591493269 | -23,8185 | -0,01491 |
| 39 | 2,0625 | -40,0929 | 6,131545 | 0,591493269 | 6,723038 | -0,01491 |
| 46 | 0 | -67,8337 | -152,066 | 0,018983613 | -152,047 | -1,99466 |
| 46 | 1,03125 | -67,8337 | -116,541 | 0,018983613 | -116,522 | -1,99466 |
| 46 | 2,0625 | -67,8337 | -72,0433 | 0,018983613 | -72,0243 | -1,99466 |
| 47 | 0 | -3,21333 | -61,177 | 0,169232564 | -61,0078 | -0,67001 |
| 47 | 1,03125 | -3,21333 | -16,6793 | 0,169232564 | -16,5101 | -0,67001 |
| 47 | 2,0625 | -3,21333 | 27,81835 | 0,169232564 | 27,98758 | -0,67001 |
| 48 | 0 | 61,89422 | 37,41917 | 0,170310533 | 37,58948 | 0,955456 |
| 48 | 1,03125 | 61,89422 | 81,91684 | 0,170310533 | 82,08715 | 0,955456 |
| 48 | 2,0625 | 61,89422 | 126,4145 | 0,170310533 | 126,5848 | 0,955456 |
| 49 | 0 | 136,8933 | 141,7784 | 0,284492911 | 142,0629 | 2,251831 |
| 49 | 1,03125 | 136,8933 | 143,9849 | 0,284492911 | 144,2694 | 2,251831 |
| 49 | 2,0625 | 136,8933 | 143,9849 | 0,284492911 | 144,2694 | 2,251831 |
| 50 | 0 | -136,008 | -144,134 | -0,284492911 | -144,418 | -2,25183 |
| 50 | 1,03125 | -136,008 | -144,134 | -0,284492911 | -144,418 | -2,25183 |
| 50 | 2,0625 | -136,008 | -141,743 | -0,284492911 | -142,028 | -2,25183 |
| 51 | 0 | -60,928 | -126,386 | -0,170310533 | -126,556 | -0,95546 |
| 51 | 1,03125 | -60,928 | -81,8879 | -0,170310533 | -82,0582 | -0,95546 |
| 51 | 2,0625 | -60,928 | -37,3902 | -0,170310533 | -37,5605 | -0,95546 |
| 52 | 0 | 4,260222 | -27,7924 | -0,169232564 | -27,9617 | 0,670007 |
| 52 | 1,03125 | 4,260222 | 16,70524 | -0,169232564 | 16,53601 | 0,670007 |
| 52 | 2,0625 | 4,260222 | 61,20292 | -0,169232564 | 61,03369 | 0,670007 |
| 53 | 0 | 69,13037 | 72,06987 | -0,018983613 | 72,05089 | 1,99466 |
| 53 | 1,03125 | 69,13037 | 116,5675 | -0,018983613 | 116,5486 | 1,99466 |
| 53 | 2,0625 | 69,13037 | 152,0921 | -0,018983613 | 152,0732 | 1,99466 |
| 54 | 0 | -110,381 | -84,6005 | -0,191863498 | -84,7924 | -0,13933 |
| 54 | 1,03125 | -110,381 | -84,6005 | -0,191863498 | -84,7924 | -0,13933 |
| 54 | 2,0625 | -110,381 | -82,2101 | -0,191863498 | -82,402 | -0,13933 |
| 55 | 0 | -36,582 | -98,5174 | -0,039302843 | -98,5567 | -0,20438 |
| 55 | 1,03125 | -36,582 | -54,0197 | -0,039302843 | -54,059 | -0,20438 |

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|----|---------|----------|----------|--------------|----------|----------|
| 55 | 2,0625 | -36,582 | -9,52205 | -0,039302843 | -9,56135 | -0,20438 |
| 56 | 0 | 36,73415 | -21,4577 | -0,009616871 | -21,4673 | -0,07513 |
| 56 | 1,03125 | 36,73415 | 23,04 | -0,009616871 | 23,03039 | -0,07513 |
| 56 | 2,0625 | 36,73415 | 67,53768 | -0,009616871 | 67,52806 | -0,07513 |
| 57 | 0 | 113,299 | 56,09348 | 0,067311701 | 56,16079 | -0,12909 |
| 57 | 1,03125 | 113,299 | 100,5912 | 0,067311701 | 100,6585 | -0,12909 |
| 57 | 2,0625 | 113,299 | 136,1157 | 0,067311701 | 136,1831 | -0,12909 |
| 58 | 0 | -110,292 | -84,5902 | -0,191863498 | -84,7821 | -0,13933 |
| 58 | 1,03125 | -110,292 | -84,5902 | -0,191863498 | -84,7821 | -0,13933 |
| 58 | 2,0625 | -110,292 | -82,1998 | -0,191863498 | -82,3917 | -0,13933 |
| 59 | 0 | -36,6505 | -98,5196 | -0,039302843 | -98,5589 | -0,20438 |
| 59 | 1,03125 | -36,6505 | -54,0219 | -0,039302843 | -54,0612 | -0,20438 |
| 59 | 2,0625 | -36,6505 | -9,52424 | -0,039302843 | -9,56354 | -0,20438 |
| 60 | 0 | 36,66113 | -21,4666 | -0,009616871 | -21,4762 | -0,07513 |
| 60 | 1,03125 | 36,66113 | 23,03108 | -0,009616871 | 23,02147 | -0,07513 |
| 60 | 2,0625 | 36,66113 | 67,52876 | -0,009616871 | 67,51914 | -0,07513 |
| 61 | 0 | 113,3032 | 56,08443 | 0,067311701 | 56,15174 | -0,12909 |
| 61 | 1,03125 | 113,3032 | 100,5821 | 0,067311701 | 100,6494 | -0,12909 |
| 61 | 2,0625 | 113,3032 | 136,1067 | 0,067311701 | 136,174 | -0,12909 |
| 62 | 0 | -150,341 | -156,008 | 0,195185261 | -155,813 | 0,474622 |
| 62 | 1,03125 | -150,341 | -120,483 | 0,195185261 | -120,288 | 0,474622 |
| 62 | 2,0625 | -150,341 | -75,9856 | 0,195185261 | -75,7904 | 0,474622 |
| 63 | 0 | -59,3641 | -79,9816 | -0,073676932 | -80,0552 | 0,246437 |
| 63 | 1,03125 | -59,3641 | -35,4839 | -0,073676932 | -35,5576 | 0,246437 |
| 63 | 2,0625 | -59,3641 | 9,013793 | -0,073676932 | 8,940116 | 0,246437 |
| 64 | 0 | 32,76507 | 4,674078 | -0,570414575 | 4,103663 | 0,014676 |
| 64 | 1,03125 | 32,76507 | 49,17175 | -0,570414575 | 48,60134 | 0,014676 |
| 64 | 2,0625 | 32,76507 | 93,66943 | -0,570414575 | 93,09901 | 0,014676 |
| 65 | 0 | 128,6021 | 89,62237 | -0,745693157 | 88,87668 | -0,20976 |
| 65 | 1,03125 | 128,6021 | 91,82886 | -0,745693157 | 91,08317 | -0,20976 |
| 65 | 2,0625 | 128,6021 | 91,82886 | -0,745693157 | 91,08317 | -0,20976 |
| 66 | 0 | -128,933 | -91,9845 | 0,745693157 | -91,2388 | 0,209763 |
| 66 | 1,03125 | -128,933 | -91,9845 | 0,745693157 | -91,2388 | 0,209763 |
| 66 | 2,0625 | -128,933 | -89,5941 | 0,745693157 | -88,8484 | 0,209763 |
| 67 | 0 | -32,9993 | -93,6498 | 0,570414575 | -93,0793 | -0,01468 |
| 67 | 1,03125 | -32,9993 | -49,1521 | 0,570414575 | -48,5817 | -0,01468 |
| 67 | 2,0625 | -32,9993 | -4,65441 | 0,570414575 | -4,08399 | -0,01468 |
| 68 | 0 | 59,11064 | -8,99907 | 0,073676932 | -8,92539 | -0,24644 |
| 68 | 1,03125 | 59,11064 | 35,49861 | 0,073676932 | 35,57229 | -0,24644 |
| 68 | 2,0625 | 59,11064 | 79,99628 | 0,073676932 | 80,06996 | -0,24644 |
| 69 | 0 | 150,0184 | 75,9989 | -0,195185261 | 75,80372 | -0,47462 |
| 69 | 1,03125 | 150,0184 | 120,4966 | -0,195185261 | 120,3014 | -0,47462 |
| 69 | 2,0625 | 150,0184 | 156,0212 | -0,195185261 | 155,826 | -0,47462 |
| 70 | 0 | -168,14 | -168,499 | 0,377556902 | -168,121 | 0,431737 |
| 70 | 1,03125 | -168,14 | -132,974 | 0,377556902 | -132,597 | 0,431737 |
| 70 | 2,0625 | -168,14 | -88,4768 | 0,377556902 | -88,0992 | 0,431737 |
| 71 | 0 | -68,6591 | -86,9879 | -0,499177511 | -87,4871 | 0,241298 |
| 71 | 1,03125 | -68,6591 | -42,4902 | -0,499177511 | -42,9894 | 0,241298 |
| 71 | 2,0625 | -68,6591 | 2,007439 | -0,499177511 | 1,508261 | 0,241298 |
| 72 | 0 | 32,37126 | 4,813791 | -1,463235286 | 3,350555 | 0,011795 |
| 72 | 1,03125 | 32,37126 | 49,31147 | -1,463235286 | 47,84823 | 0,011795 |
| 72 | 2,0625 | 32,37126 | 93,80914 | -1,463235286 | 92,34591 | 0,011795 |
| 73 | 0 | 137,1619 | 95,38848 | -2,173799167 | 93,21468 | -0,1746 |
| 73 | 1,03125 | 137,1619 | 97,59497 | -2,173799167 | 95,42118 | -0,1746 |
| 73 | 2,0625 | 137,1619 | 97,59497 | -2,173799167 | 95,42118 | -0,1746 |

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|----|---------|----------|----------|--------------|----------|----------|
| 74 | 0 | -137,645 | -97,7618 | 2,173799167 | -95,588 | 0,174596 |
| 74 | 1,03125 | -137,645 | -97,7618 | 2,173799167 | -95,588 | 0,174596 |
| 74 | 2,0625 | -137,645 | -95,3714 | 2,173799167 | -93,1976 | 0,174596 |
| 75 | 0 | -32,6957 | -93,7901 | 1,463235286 | -92,3268 | -0,01179 |
| 75 | 1,03125 | -32,6957 | -49,2924 | 1,463235286 | -47,8292 | -0,01179 |
| 75 | 2,0625 | -32,6957 | -4,79471 | 1,463235286 | -3,33148 | -0,01179 |
| 76 | 0 | 68,3543 | -1,98771 | 0,499177511 | -1,48854 | -0,2413 |
| 76 | 1,03125 | 68,3543 | 42,50996 | 0,499177511 | 43,00914 | -0,2413 |
| 76 | 2,0625 | 68,3543 | 87,00764 | 0,499177511 | 87,50681 | -0,2413 |
| 77 | 0 | 167,7633 | 88,49656 | -0,377556902 | 88,11901 | -0,43174 |
| 77 | 1,03125 | 167,7633 | 132,9942 | -0,377556902 | 132,6167 | -0,43174 |
| 77 | 2,0625 | 167,7633 | 168,5188 | -0,377556902 | 168,1413 | -0,43174 |
| 78 | 0 | -159,889 | -168,083 | -14,3669862 | -182,45 | 0,347685 |
| 78 | 1,03125 | -159,889 | -132,559 | -14,3669862 | -146,926 | 0,347685 |
| 78 | 2,0625 | -159,889 | -88,0609 | -14,3669862 | -102,428 | 0,347685 |
| 79 | 0 | -67,9916 | -87,4803 | -7,076702969 | -94,557 | 0,207984 |
| 79 | 1,03125 | -67,9916 | -42,9826 | -7,076702969 | -50,0593 | 0,207984 |
| 79 | 2,0625 | -67,9916 | 1,51503 | -7,076702969 | -5,56167 | 0,207984 |
| 80 | 0 | 30,34795 | 3,718866 | 3,863876964 | 7,582743 | 0,012987 |
| 80 | 1,03125 | 30,34795 | 48,21654 | 3,863876964 | 52,08042 | 0,012987 |
| 80 | 2,0625 | 30,34795 | 92,71422 | 3,863876964 | 96,57809 | 0,012987 |
| 81 | 0 | 127,2082 | 93,23365 | 11,14391349 | 104,3776 | -0,12001 |
| 81 | 1,03125 | 127,2082 | 95,44015 | 11,14391349 | 106,5841 | -0,12001 |
| 81 | 2,0625 | 127,2082 | 95,44015 | 11,14391349 | 106,5841 | -0,12001 |
| 82 | 0 | -127,728 | -95,6052 | -11,14391349 | -106,749 | 0,120009 |
| 82 | 1,03125 | -127,728 | -95,6052 | -11,14391349 | -106,749 | 0,120009 |
| 82 | 2,0625 | -127,728 | -93,2148 | -11,14391349 | -104,359 | 0,120009 |
| 83 | 0 | -30,6515 | -92,6952 | -3,863876964 | -96,5591 | -0,01299 |
| 83 | 1,03125 | -30,6515 | -48,1976 | -3,863876964 | -52,0614 | -0,01299 |
| 83 | 2,0625 | -30,6515 | -3,69989 | -3,863876964 | -7,56377 | -0,01299 |
| 84 | 0 | 67,71972 | -1,49491 | 7,076702969 | 5,581792 | -0,20798 |
| 84 | 1,03125 | 67,71972 | 43,00276 | 7,076702969 | 50,07947 | -0,20798 |
| 84 | 2,0625 | 67,71972 | 87,50044 | 7,076702969 | 94,57714 | -0,20798 |
| 85 | 0 | 159,4863 | 88,08167 | 14,3669862 | 102,4487 | -0,34768 |
| 85 | 1,03125 | 159,4863 | 132,5793 | 14,3669862 | 146,9463 | -0,34768 |
| 85 | 2,0625 | 159,4863 | 168,1039 | 14,3669862 | 182,4709 | -0,34768 |
| 86 | 0 | -187,363 | -164,708 | -56,42588427 | -221,133 | 0,260442 |
| 86 | 1,03125 | -187,363 | -129,183 | -56,42588427 | -185,609 | 0,260442 |
| 86 | 2,0625 | -187,363 | -84,6853 | -56,42588427 | -141,111 | 0,260442 |
| 87 | 0 | -71,0716 | -85,6355 | -17,76510358 | -103,401 | 0,161476 |
| 87 | 1,03125 | -71,0716 | -41,1378 | -17,76510358 | -58,9029 | 0,161476 |
| 87 | 2,0625 | -71,0716 | 3,359861 | -17,76510358 | -14,4052 | 0,161476 |
| 88 | 0 | 39,49746 | 3,61016 | 14,66567412 | 18,27583 | 0,004992 |
| 88 | 1,03125 | 39,49746 | 48,10784 | 14,66567412 | 62,77351 | 0,004992 |
| 88 | 2,0625 | 39,49746 | 92,60551 | 14,66567412 | 107,2712 | 0,004992 |
| 89 | 0 | 159,9151 | 91,60142 | 52,65085524 | 144,2523 | -0,08677 |
| 89 | 1,03125 | 159,9151 | 93,80791 | 52,65085524 | 146,4588 | -0,08677 |
| 89 | 2,0625 | 159,9151 | 93,80791 | 52,65085524 | 146,4588 | -0,08677 |
| 90 | 0 | -160,371 | -93,9754 | -52,65085524 | -146,626 | 0,086773 |
| 90 | 1,03125 | -160,371 | -93,9754 | -52,65085524 | -146,626 | 0,086773 |
| 90 | 2,0625 | -160,371 | -91,585 | -52,65085524 | -144,236 | 0,086773 |
| 91 | 0 | -39,6618 | -92,5855 | -14,66567412 | -107,251 | -0,00499 |
| 91 | 1,03125 | -39,6618 | -48,0878 | -14,66567412 | -62,7535 | -0,00499 |
| 91 | 2,0625 | -39,6618 | -3,59011 | -14,66567412 | -18,2558 | -0,00499 |
| 92 | 0 | 70,91489 | -3,33906 | 17,76510358 | 14,42604 | -0,16148 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 92 | 1,03125 | 70,91489 | 41,15862 | 17,76510358 | 58,92372 | -0,16148 |
| 92 | 2,0625 | 70,91489 | 85,65629 | 17,76510358 | 103,4214 | -0,16148 |
| 93 | 0 | 186,9569 | 84,70574 | 56,42588427 | 141,1316 | -0,26044 |
| 93 | 1,03125 | 186,9569 | 129,2034 | 56,42588427 | 185,6293 | -0,26044 |
| 93 | 2,0625 | 186,9569 | 164,728 | 56,42588427 | 221,1539 | -0,26044 |
| 94 | 0 | -139,256 | -159,364 | -12,04679319 | -171,411 | 0,182327 |
| 94 | 1,03125 | -139,256 | -123,84 | -12,04679319 | -135,887 | 0,182327 |
| 94 | 2,0625 | -139,256 | -79,3421 | -12,04679319 | -91,3889 | 0,182327 |
| 95 | 0 | -53,9089 | -82,5679 | -6,142307398 | -88,7102 | 0,11625 |
| 95 | 1,03125 | -53,9089 | -38,0702 | -6,142307398 | -44,2125 | 0,11625 |
| 95 | 2,0625 | -53,9089 | 6,427472 | -6,142307398 | 0,285165 | 0,11625 |
| 96 | 0 | 32,05546 | 3,815755 | 2,954899174 | 6,770654 | -0,01157 |
| 96 | 1,03125 | 32,05546 | 48,31343 | 2,954899174 | 51,26833 | -0,01157 |
| 96 | 2,0625 | 32,05546 | 92,81111 | 2,954899174 | 95,766 | -0,01157 |
| 97 | 0 | 121,6552 | 89,31067 | 8,91208394 | 98,22276 | -0,06384 |
| 97 | 1,03125 | 121,6552 | 91,51717 | 8,91208394 | 100,4293 | -0,06384 |
| 97 | 2,0625 | 121,6552 | 91,51717 | 8,91208394 | 100,4293 | -0,06384 |
| 98 | 0 | -121,64 | -91,6626 | -8,91208394 | -100,575 | 0,063839 |
| 98 | 1,03125 | -121,64 | -91,6626 | -8,91208394 | -100,575 | 0,063839 |
| 98 | 2,0625 | -121,64 | -89,2722 | -8,91208394 | -98,1843 | 0,063839 |
| 99 | 0 | -31,8237 | -92,79 | -2,954899174 | -95,7449 | 0,011566 |
| 99 | 1,03125 | -31,8237 | -48,2923 | -2,954899174 | -51,2472 | 0,011566 |
| 99 | 2,0625 | -31,8237 | -3,79463 | -2,954899174 | -6,74953 | 0,011566 |
| 100 | 0 | 54,08901 | -6,41585 | 6,142307398 | -0,27354 | -0,11625 |
| 100 | 1,03125 | 54,08901 | 38,08183 | 6,142307398 | 44,22414 | -0,11625 |
| 100 | 2,0625 | 54,08901 | 82,5795 | 6,142307398 | 88,72181 | -0,11625 |
| 101 | 0 | 139,0536 | 79,3514 | 12,04679319 | 91,3982 | -0,18233 |
| 101 | 1,03125 | 139,0536 | 123,8491 | 12,04679319 | 135,8959 | -0,18233 |
| 101 | 2,0625 | 139,0536 | 159,3737 | 12,04679319 | 171,4205 | -0,18233 |
| 102 | 0 | -116,647 | -156,96 | -9,810193507 | -166,771 | 0,17759 |
| 102 | 1,03125 | -116,647 | -121,436 | -9,810193507 | -131,246 | 0,17759 |
| 102 | 2,0625 | -116,647 | -76,9382 | -9,810193507 | -86,7484 | 0,17759 |
| 103 | 0 | -44,5566 | -80,9789 | -4,785394302 | -85,7643 | 0,089046 |
| 103 | 1,03125 | -44,5566 | -36,4812 | -4,785394302 | -41,2666 | 0,089046 |
| 103 | 2,0625 | -44,5566 | 8,016439 | -4,785394302 | 3,231045 | 0,089046 |
| 104 | 0 | 36,26794 | 5,931202 | 3,818595399 | 9,749798 | -0,04124 |
| 104 | 1,03125 | 36,26794 | 50,42888 | 3,818595399 | 54,24747 | -0,04124 |
| 104 | 2,0625 | 36,26794 | 94,92655 | 3,818595399 | 98,74515 | -0,04124 |
| 105 | 0 | 110,5997 | 90,85598 | 8,610048176 | 99,46603 | -0,13091 |
| 105 | 1,03125 | 110,5997 | 93,06248 | 8,610048176 | 101,6725 | -0,13091 |
| 105 | 2,0625 | 110,5997 | 93,06248 | 8,610048176 | 101,6725 | -0,13091 |
| 106 | 0 | -111,436 | -93,2003 | -8,610048176 | -101,81 | 0,130905 |
| 106 | 1,03125 | -111,436 | -93,2003 | -8,610048176 | -101,81 | 0,130905 |
| 106 | 2,0625 | -111,436 | -90,81 | -8,610048176 | -99,42 | 0,130905 |
| 107 | 0 | -38,3239 | -94,9076 | -3,818595399 | -98,7262 | 0,041241 |
| 107 | 1,03125 | -38,3239 | -50,4099 | -3,818595399 | -54,2285 | 0,041241 |
| 107 | 2,0625 | -38,3239 | -5,91222 | -3,818595399 | -9,73082 | 0,041241 |
| 108 | 0 | 42,52279 | -8,01349 | 4,785394302 | -3,2281 | -0,08905 |
| 108 | 1,03125 | 42,52279 | 36,48418 | 4,785394302 | 41,26958 | -0,08905 |
| 108 | 2,0625 | 42,52279 | 80,98186 | 4,785394302 | 85,76725 | -0,08905 |
| 109 | 0 | 115,8955 | 76,93743 | 9,810193507 | 86,74762 | -0,17759 |
| 109 | 1,03125 | 115,8955 | 121,4351 | 9,810193507 | 131,2453 | -0,17759 |
| 109 | 2,0625 | 115,8955 | 156,9597 | 9,810193507 | 166,7699 | -0,17759 |
| 110 | 0 | -257,21 | -175,758 | -66,27471712 | -242,033 | 0,078552 |
| 110 | 1,03125 | -257,21 | -140,233 | -66,27471712 | -206,508 | 0,078552 |



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|-----|----------|----------|----------|--------------|----------|----------|
| 110 | 2,0625 | -257,21 | -95,7358 | -66,27471712 | -162,01 | 0,078552 |
| 111 | 0 | -78,4651 | -85,2074 | -19,92941717 | -105,137 | 0,033888 |
| 111 | 1,03125 | -78,4651 | -40,7097 | -19,92941717 | -60,6392 | 0,033888 |
| 111 | 2,0625 | -78,4651 | 3,787928 | -19,92941717 | -16,1415 | 0,033888 |
| 112 | 0 | 94,14642 | 10,88587 | 21,90270632 | 32,78858 | -0,04437 |
| 112 | 1,03125 | 94,14642 | 55,38355 | 21,90270632 | 77,28626 | -0,04437 |
| 112 | 2,0625 | 94,14642 | 99,88122 | 21,90270632 | 121,7839 | -0,04437 |
| 113 | 0 | 288,7828 | 111,197 | 68,89376277 | 180,0908 | -0,07026 |
| 113 | 1,03125 | 288,7828 | 113,4035 | 68,89376277 | 182,2973 | -0,07026 |
| 113 | 2,0625 | 288,7828 | 113,4035 | 68,89376277 | 182,2973 | -0,07026 |
| 114 | 0 | -280,011 | -113,55 | -68,89376277 | -182,444 | 0,070264 |
| 114 | 1,03125 | -280,011 | -113,55 | -68,89376277 | -182,444 | 0,070264 |
| 114 | 2,0625 | -280,011 | -111,16 | -68,89376277 | -180,054 | 0,070264 |
| 115 | 0 | -85,0976 | -99,8602 | -21,90270632 | -121,763 | 0,044374 |
| 115 | 1,03125 | -85,0976 | -55,3625 | -21,90270632 | -77,2652 | 0,044374 |
| 115 | 2,0625 | -85,0976 | -10,8648 | -21,90270632 | -32,7675 | 0,044374 |
| 116 | 0 | 87,69806 | -3,77647 | 19,92941717 | 16,15295 | -0,03389 |
| 116 | 1,03125 | 87,69806 | 40,72121 | 19,92941717 | 60,65063 | -0,03389 |
| 116 | 2,0625 | 87,69806 | 85,21888 | 19,92941717 | 105,1483 | -0,03389 |
| 117 | 0 | 266,4243 | 95,74542 | 66,27471712 | 162,0201 | -0,07855 |
| 117 | 1,03125 | 266,4243 | 140,2431 | 66,27471712 | 206,5178 | -0,07855 |
| 117 | 2,0625 | 266,4243 | 175,7677 | 66,27471712 | 242,0424 | -0,07855 |
| 118 | 0 | 3,611047 | -117,186 | 0,201492925 | -116,985 | -0,02927 |
| 118 | 1,03125 | 3,611047 | -86,2032 | 0,201492925 | -86,0017 | -0,02927 |
| 118 | 2,0625 | 3,611047 | -55,6616 | 0,201492925 | -55,4601 | -0,02927 |
| 119 | 0 | 3,611047 | -55,6616 | 0,201492925 | -55,4601 | -0,02927 |
| 119 | 1,031251 | 3,611047 | -25,12 | 0,201492925 | -24,9185 | -0,02927 |
| 119 | 2,062501 | 3,611047 | 5,421564 | 0,201492925 | 5,623057 | -0,02927 |
| 120 | 0 | 3,611047 | 5,421564 | 0,201492925 | 5,623057 | -0,02927 |
| 120 | 1,03125 | 3,611047 | 35,96315 | 0,201492925 | 36,16464 | -0,02927 |
| 120 | 2,0625 | 3,611047 | 66,50473 | 0,201492925 | 66,70622 | -0,02927 |
| 121 | 0 | 3,611047 | 66,50473 | 0,201492925 | 66,70622 | -0,02927 |
| 121 | 1,03125 | 3,611047 | 68,01985 | 0,201492925 | 68,22135 | -0,02927 |
| 121 | 2,062499 | 3,611047 | 68,01985 | 0,201492925 | 68,22135 | -0,02927 |
| 122 | 0 | 9,128539 | -68,1316 | -0,201492925 | -68,3331 | 0,029269 |
| 122 | 1,03125 | 9,128539 | -68,1316 | -0,201492925 | -68,3331 | 0,029269 |
| 122 | 2,0625 | 9,128539 | -66,4902 | -0,201492925 | -66,6917 | 0,029269 |
| 123 | 0 | 9,128539 | -66,4902 | -0,201492925 | -66,6917 | 0,029269 |
| 123 | 1,031251 | 9,128539 | -35,9486 | -0,201492925 | -36,1501 | 0,029269 |
| 123 | 2,062501 | 9,128539 | -5,40704 | -0,201492925 | -5,60854 | 0,029269 |
| 125 | 0 | 9,128539 | -5,40704 | -0,201492925 | -5,60854 | 0,029269 |
| 125 | 1,03125 | 9,128539 | 25,13454 | -0,201492925 | 24,93305 | 0,029269 |
| 125 | 2,0625 | 9,128539 | 55,67612 | -0,201492925 | 55,47463 | 0,029269 |
| 126 | 0 | 9,128539 | 55,67612 | -0,201492925 | 55,47463 | 0,029269 |
| 126 | 1,03125 | 9,128539 | 86,2177 | -0,201492925 | 86,0162 | 0,029269 |
| 126 | 2,062499 | 9,128539 | 117,2006 | -0,201492925 | 116,9991 | 0,029269 |
| 127 | 0 | -248,655 | -113,898 | -4,416472124 | -118,315 | -0,00793 |
| 127 | 1,03125 | -248,655 | -83,3567 | -4,416472124 | -87,7732 | -0,00793 |
| 127 | 2,0625 | -248,655 | -52,3738 | -4,416472124 | -56,7903 | -0,00793 |
| 129 | 0 | -91,0642 | -55,0026 | -1,80343735 | -56,806 | -0,03223 |
| 129 | 1,03125 | -91,0642 | -24,461 | -1,80343735 | -26,2645 | -0,03223 |
| 129 | 2,0625 | -91,0642 | 6,080568 | -1,80343735 | 4,27713 | -0,03223 |
| 130 | 0 | 59,1529 | 3,564641 | 2,43877449 | 6,003415 | -0,07639 |
| 130 | 1,03125 | 59,1529 | 34,10623 | 2,43877449 | 36,545 | -0,07639 |
| 130 | 2,0625 | 59,1529 | 64,64781 | 2,43877449 | 67,08659 | -0,07639 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 131 | 0 | 221,4586 | 61,91472 | 4,751616433 | 66,66634 | -0,09991 |
| 131 | 1,03125 | 221,4586 | 61,91472 | 4,751616433 | 66,66634 | -0,09991 |
| 131 | 2,0625 | 221,4586 | 63,55611 | 4,751616433 | 68,30772 | -0,09991 |
| 132 | 0 | -242,853 | -63,4326 | -4,751616433 | -68,1842 | 0,099913 |
| 132 | 1,03125 | -242,853 | -61,9175 | -4,751616433 | -66,6691 | 0,099913 |
| 132 | 2,0625 | -242,853 | -61,9175 | -4,751616433 | -66,6691 | 0,099913 |
| 133 | 0 | -77,9059 | -64,6561 | -2,43877449 | -67,0949 | 0,076385 |
| 133 | 1,03125 | -77,9059 | -34,1146 | -2,43877449 | -36,5533 | 0,076385 |
| 133 | 2,0625 | -77,9059 | -3,57298 | -2,43877449 | -6,01175 | 0,076385 |
| 138 | 0 | 72,50078 | -6,09223 | 1,80343735 | -4,28879 | 0,032235 |
| 138 | 1,03125 | 72,50078 | 24,44936 | 1,80343735 | 26,25279 | 0,032235 |
| 138 | 2,0625 | 72,50078 | 54,99094 | 1,80343735 | 56,79438 | 0,032235 |
| 139 | 0 | 227,9698 | 52,36139 | 4,416472124 | 56,77786 | 0,007926 |
| 139 | 1,03125 | 227,9698 | 83,34427 | 4,416472124 | 87,76074 | 0,007926 |
| 139 | 2,0625 | 227,9698 | 113,8859 | 4,416472124 | 118,3023 | 0,007926 |
| 140 | 0 | -140,298 | -120,628 | 1,291737499 | -119,336 | -0,00625 |
| 140 | 1,03125 | -140,298 | -89,6452 | 1,291737499 | -88,3535 | -0,00625 |
| 140 | 2,0625 | -140,298 | -59,1037 | 1,291737499 | -57,8119 | -0,00625 |
| 141 | 0 | -51,3354 | -57,2771 | 0,623114672 | -56,654 | -0,04289 |
| 141 | 1,03125 | -51,3354 | -26,7355 | 0,623114672 | -26,1124 | -0,04289 |
| 141 | 2,0625 | -51,3354 | 3,806092 | 0,623114672 | 4,429207 | -0,04289 |
| 142 | 0 | 40,91805 | 3,875655 | -0,632294709 | 3,24336 | -0,1015 |
| 142 | 1,03125 | 40,91805 | 34,41724 | -0,632294709 | 33,78495 | -0,1015 |
| 142 | 2,0625 | 40,91805 | 64,95883 | -0,632294709 | 64,32653 | -0,1015 |
| 143 | 0 | 135,3434 | 66,82115 | -1,144013194 | 65,67714 | -0,1384 |
| 143 | 1,03125 | 135,3434 | 68,33628 | -1,144013194 | 67,19227 | -0,1384 |
| 143 | 2,0625 | 135,3434 | 68,33628 | -1,144013194 | 67,19227 | -0,1384 |
| 144 | 0 | -121,139 | -68,4412 | 1,144013194 | -67,2972 | 0,138401 |
| 144 | 1,03125 | -121,139 | -68,4412 | 1,144013194 | -67,2972 | 0,138401 |
| 144 | 2,0625 | -121,139 | -66,7998 | 1,144013194 | -65,6558 | 0,138401 |
| 145 | 0 | -27,2856 | -64,9432 | 0,632294709 | -64,3109 | 0,101495 |
| 145 | 1,03125 | -27,2856 | -34,4016 | 0,632294709 | -33,7693 | 0,101495 |
| 145 | 2,0625 | -27,2856 | -3,86003 | 0,632294709 | -3,22774 | 0,101495 |
| 150 | 0 | 64,97675 | -3,79387 | -0,623114672 | -4,41698 | 0,042887 |
| 150 | 1,03125 | 64,97675 | 26,74772 | -0,623114672 | 26,1246 | 0,042887 |
| 150 | 2,0625 | 64,97675 | 57,2893 | -0,623114672 | 56,66619 | 0,042887 |
| 152 | 0 | 154,4249 | 59,11531 | -1,291737499 | 57,82357 | 0,006245 |
| 152 | 1,03125 | 154,4249 | 89,6569 | -1,291737499 | 88,36516 | 0,006245 |
| 152 | 2,0625 | 154,4249 | 120,6398 | -1,291737499 | 119,348 | 0,006245 |
| 154 | 0 | -168,796 | -120,822 | -0,225881303 | -121,048 | -0,01857 |
| 154 | 1,03125 | -168,796 | -90,2803 | -0,225881303 | -90,5062 | -0,01857 |
| 154 | 2,0625 | -168,796 | -59,2974 | -0,225881303 | -59,5233 | -0,01857 |
| 156 | 0 | -67,9324 | -57,9892 | -0,212719093 | -58,2019 | -0,04919 |
| 156 | 1,03125 | -67,9324 | -27,4476 | -0,212719093 | -27,6603 | -0,04919 |
| 156 | 2,0625 | -67,9324 | 3,093972 | -0,212719093 | 2,881253 | -0,04919 |
| 157 | 0 | 28,33522 | 4,016644 | -0,610201862 | 3,406442 | -0,09796 |
| 157 | 1,03125 | 28,33522 | 34,55823 | -0,610201862 | 33,94803 | -0,09796 |
| 157 | 2,0625 | 28,33522 | 65,09982 | -0,610201862 | 64,48961 | -0,09796 |
| 158 | 0 | 134,485 | 66,87161 | -0,473038625 | 66,39857 | -0,12707 |
| 158 | 1,03125 | 134,485 | 66,87161 | -0,473038625 | 66,39857 | -0,12707 |
| 158 | 2,0625 | 134,485 | 68,513 | -0,473038625 | 68,03996 | -0,12707 |
| 159 | 0 | -145,152 | -68,39 | 0,473038625 | -67,917 | 0,127067 |
| 159 | 1,03125 | -145,152 | -66,8749 | 0,473038625 | -66,4019 | 0,127067 |
| 159 | 2,0625 | -145,152 | -66,8749 | 0,473038625 | -66,4019 | 0,127067 |
| 160 | 0 | -37,9371 | -65,1076 | 0,610201862 | -64,4974 | 0,09796 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 160 | 1,03125 | -37,9371 | -34,566 | 0,610201862 | -33,9558 | 0,09796 |
| 160 | 2,0625 | -37,9371 | -4,02444 | 0,610201862 | -3,41423 | 0,09796 |
| 161 | 0 | 58,21307 | -3,10459 | 0,212719093 | -2,89188 | 0,04919 |
| 161 | 1,03125 | 58,21307 | 27,43699 | 0,212719093 | 27,64971 | 0,04919 |
| 161 | 2,0625 | 58,21307 | 57,97858 | 0,212719093 | 58,1913 | 0,04919 |
| 162 | 0 | 158,0307 | 59,28601 | 0,225881303 | 59,51189 | 0,018569 |
| 162 | 1,03125 | 158,0307 | 90,26889 | 0,225881303 | 90,49477 | 0,018569 |
| 162 | 2,0625 | 158,0307 | 120,8105 | 0,225881303 | 121,0364 | 0,018569 |
| 163 | 0 | -170,416 | -124,725 | -2,469460856 | -127,195 | 0,005376 |
| 163 | 1,03125 | -170,416 | -93,7425 | -2,469460856 | -96,2119 | 0,005376 |
| 163 | 2,0625 | -170,416 | -63,2009 | -2,469460856 | -65,6703 | 0,005376 |
| 165 | 0 | -64,1777 | -58,7617 | -1,430298491 | -60,192 | -0,03395 |
| 165 | 1,03125 | -64,1777 | -28,2201 | -1,430298491 | -29,6504 | -0,03395 |
| 165 | 2,0625 | -64,1777 | 2,32151 | -1,430298491 | 0,891212 | -0,03395 |
| 166 | 0 | 40,22322 | 5,088976 | -0,804747295 | 4,284229 | -0,08599 |
| 166 | 1,03125 | 40,22322 | 35,63056 | -0,804747295 | 34,82582 | -0,08599 |
| 166 | 2,0625 | 40,22322 | 66,17215 | -0,804747295 | 65,3674 | -0,08599 |
| 168 | 0 | 152,796 | 69,65428 | 0,617049505 | 70,27133 | -0,12971 |
| 168 | 1,03125 | 152,796 | 71,16941 | 0,617049505 | 71,78646 | -0,12971 |
| 168 | 2,0625 | 152,796 | 71,16941 | 0,617049505 | 71,78646 | -0,12971 |
| 169 | 0 | -143,214 | -71,2808 | -0,617049505 | -71,8979 | 0,129705 |
| 169 | 1,03125 | -143,214 | -71,2808 | -0,617049505 | -71,8979 | 0,129705 |
| 169 | 2,0625 | -143,214 | -69,6395 | -0,617049505 | -70,2565 | 0,129705 |
| 170 | 0 | -32,4042 | -66,1584 | 0,804747295 | -65,3536 | 0,085992 |
| 170 | 1,03125 | -32,4042 | -35,6168 | 0,804747295 | -34,812 | 0,085992 |
| 170 | 2,0625 | -32,4042 | -5,07519 | 0,804747295 | -4,27044 | 0,085992 |
| 171 | 0 | 72,20857 | -2,30806 | 1,430298491 | -0,87776 | 0,033953 |
| 171 | 1,03125 | 72,20857 | 28,23353 | 1,430298491 | 29,66383 | 0,033953 |
| 171 | 2,0625 | 72,20857 | 58,77511 | 1,430298491 | 60,20541 | 0,033953 |
| 172 | 0 | 180,7924 | 63,21494 | 2,469460856 | 65,6844 | -0,00538 |
| 172 | 1,03125 | 180,7924 | 93,75653 | 2,469460856 | 96,22599 | -0,00538 |
| 172 | 2,0625 | 180,7924 | 124,7394 | 2,469460856 | 127,2089 | -0,00538 |
| 173 | 0 | -152,722 | -114,2 | -13,89605261 | -128,096 | -0,01218 |
| 173 | 1,03125 | -152,722 | -83,2174 | -13,89605261 | -97,1134 | -0,01218 |
| 173 | 2,0625 | -152,722 | -52,6758 | -13,89605261 | -66,5719 | -0,01218 |
| 174 | 0 | -56,5784 | -54,1517 | -6,507680232 | -60,6593 | -0,02112 |
| 174 | 1,03125 | -56,5784 | -23,6101 | -6,507680232 | -30,1178 | -0,02112 |
| 174 | 2,0625 | -56,5784 | 6,931506 | -6,507680232 | 0,423826 | -0,02112 |
| 175 | 0 | 38,72091 | 5,57419 | 3,815624233 | 9,389814 | -0,04418 |
| 175 | 1,03125 | 38,72091 | 36,11578 | 3,815624233 | 39,9314 | -0,04418 |
| 175 | 2,0625 | 38,72091 | 66,65736 | 3,815624233 | 70,47299 | -0,04418 |
| 176 | 0 | 140,2731 | 66,28988 | 11,09383379 | 77,38371 | -0,05338 |
| 176 | 1,03125 | 140,2731 | 67,80501 | 11,09383379 | 78,89884 | -0,05338 |
| 176 | 2,0625 | 140,2731 | 67,80501 | 11,09383379 | 78,89884 | -0,05338 |
| 177 | 0 | -133,151 | -67,9143 | -11,09383379 | -79,0081 | 0,053384 |
| 177 | 1,03125 | -133,151 | -67,9143 | -11,09383379 | -79,0081 | 0,053384 |
| 177 | 2,0625 | -133,151 | -66,2729 | -11,09383379 | -77,3667 | 0,053384 |
| 178 | 0 | -31,3207 | -66,6413 | -3,815624233 | -70,4569 | 0,044184 |
| 178 | 1,03125 | -31,3207 | -36,0997 | -3,815624233 | -39,9153 | 0,044184 |
| 178 | 2,0625 | -31,3207 | -5,55811 | -3,815624233 | -9,37374 | 0,044184 |
| 179 | 0 | 63,28978 | -6,91625 | 6,507680232 | -0,40857 | 0,021124 |
| 179 | 1,03125 | 63,28978 | 23,62534 | 6,507680232 | 30,13302 | 0,021124 |
| 179 | 2,0625 | 63,28978 | 54,16692 | 6,507680232 | 60,6746 | 0,021124 |
| 180 | 0 | 157,8641 | 52,69052 | 13,89605261 | 66,58657 | 0,01218 |
| 180 | 1,03125 | 157,8641 | 83,2321 | 13,89605261 | 97,12815 | 0,01218 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 180 | 2,0625 | 157,8641 | 114,215 | 13,89605261 | 128,111 | 0,01218 |
| 181 | 0 | -131,166 | -109,855 | -48,59017207 | -158,445 | -0,03974 |
| 181 | 1,03125 | -131,166 | -78,872 | -48,59017207 | -127,462 | -0,03974 |
| 181 | 2,0625 | -131,166 | -48,3304 | -48,59017207 | -96,9206 | -0,03974 |
| 182 | 0 | -48,4287 | -52,5146 | -14,79928089 | -67,3139 | -0,01204 |
| 182 | 1,03125 | -48,4287 | -21,973 | -14,79928089 | -36,7723 | -0,01204 |
| 182 | 2,0625 | -48,4287 | 8,568595 | -14,79928089 | -6,23069 | -0,01204 |
| 183 | 0 | 36,32503 | 4,324714 | 13,47504368 | 17,79976 | -5,2E-05 |
| 183 | 1,03125 | 36,32503 | 34,8663 | 13,47504368 | 48,34134 | -5,2E-05 |
| 183 | 2,0625 | 36,32503 | 65,40789 | 13,47504368 | 78,88293 | -5,2E-05 |
| 184 | 0 | 126,0661 | 60,31598 | 46,77762054 | 107,0936 | 0,034005 |
| 184 | 1,03125 | 126,0661 | 61,83111 | 46,77762054 | 108,6087 | 0,034005 |
| 184 | 2,0625 | 126,0661 | 61,83111 | 46,77762054 | 108,6087 | 0,034005 |
| 185 | 0 | -114,427 | -61,9423 | -46,77762054 | -108,72 | -0,03401 |
| 185 | 1,03125 | -114,427 | -61,9423 | -46,77762054 | -108,72 | -0,03401 |
| 185 | 2,0625 | -114,427 | -60,3009 | -46,77762054 | -107,079 | -0,03401 |
| 186 | 0 | -26,2 | -65,3923 | -13,47504368 | -78,8674 | 5,17E-05 |
| 186 | 1,03125 | -26,2 | -34,8508 | -13,47504368 | -48,3258 | 5,17E-05 |
| 186 | 2,0625 | -26,2 | -4,30917 | -13,47504368 | -17,7842 | 5,17E-05 |
| 188 | 0 | 59,83426 | -8,55317 | 14,79928089 | 6,246111 | 0,012041 |
| 188 | 1,03125 | 59,83426 | 21,98842 | 14,79928089 | 36,7877 | 0,012041 |
| 188 | 2,0625 | 59,83426 | 52,53 | 14,79928089 | 67,32928 | 0,012041 |
| 189 | 0 | 146,259 | 48,34527 | 48,59017207 | 96,93544 | 0,039738 |
| 189 | 1,03125 | 146,259 | 78,88686 | 48,59017207 | 127,477 | 0,039738 |
| 189 | 2,0625 | 146,259 | 109,8697 | 48,59017207 | 158,4599 | 0,039738 |
| 190 | 0 | -150,792 | -111,693 | -13,39013893 | -125,083 | 0,0017 |
| 190 | 1,03125 | -150,792 | -80,7098 | -13,39013893 | -94,0999 | 0,0017 |
| 190 | 2,0625 | -150,792 | -50,1682 | -13,39013893 | -63,5583 | 0,0017 |
| 191 | 0 | -58,6554 | -53,7671 | -6,525431555 | -60,2925 | 0,009831 |
| 191 | 1,03125 | -58,6554 | -23,2255 | -6,525431555 | -29,7509 | 0,009831 |
| 191 | 2,0625 | -58,6554 | 7,316078 | -6,525431555 | 0,790646 | 0,009831 |
| 192 | 0 | 34,25935 | 4,906781 | 3,609862079 | 8,516643 | 0,002196 |
| 192 | 1,03125 | 34,25935 | 35,44837 | 3,609862079 | 39,05823 | 0,002196 |
| 192 | 2,0625 | 34,25935 | 65,98995 | 3,609862079 | 69,59982 | 0,002196 |
| 193 | 0 | 129,3838 | 63,26965 | 10,22716587 | 73,49682 | 0,013483 |
| 193 | 1,03125 | 129,3838 | 64,78478 | 10,22716587 | 75,01194 | 0,013483 |
| 193 | 2,0625 | 129,3838 | 64,78478 | 10,22716587 | 75,01194 | 0,013483 |
| 194 | 0 | -127,861 | -64,8937 | -10,22716587 | -75,1209 | -0,01348 |
| 194 | 1,03125 | -127,861 | -64,8937 | -10,22716587 | -75,1209 | -0,01348 |
| 194 | 2,0625 | -127,861 | -63,2524 | -10,22716587 | -73,4795 | -0,01348 |
| 195 | 0 | -31,1554 | -65,9741 | -3,609862079 | -69,5839 | -0,0022 |
| 195 | 1,03125 | -31,1554 | -35,4325 | -3,609862079 | -39,0424 | -0,0022 |
| 195 | 2,0625 | -31,1554 | -4,89091 | -3,609862079 | -8,50078 | -0,0022 |
| 196 | 0 | 60,87259 | -7,30119 | 6,525431555 | -0,77575 | -0,00983 |
| 196 | 1,03125 | 60,87259 | 23,2404 | 6,525431555 | 29,76583 | -0,00983 |
| 196 | 2,0625 | 60,87259 | 53,78199 | 6,525431555 | 60,30742 | -0,00983 |
| 197 | 0 | 149,4362 | 50,18232 | 13,39013893 | 63,57246 | -0,0017 |
| 197 | 1,03125 | 149,4362 | 80,72391 | 13,39013893 | 94,11404 | -0,0017 |
| 197 | 2,0625 | 149,4362 | 111,7068 | 13,39013893 | 125,0969 | -0,0017 |
| 198 | 0 | -168,544 | -121,355 | -1,896918333 | -123,252 | 0,034857 |
| 198 | 1,03125 | -168,544 | -90,3721 | -1,896918333 | -92,269 | 0,034857 |
| 198 | 2,0625 | -168,544 | -59,8305 | -1,896918333 | -61,7274 | 0,034857 |
| 199 | 0 | -68,2106 | -58,386 | -1,495442652 | -59,8814 | 0,022306 |
| 199 | 1,03125 | -68,2106 | -27,8444 | -1,495442652 | -29,3398 | 0,022306 |
| 199 | 2,0625 | -68,2106 | 2,697197 | -1,495442652 | 1,201755 | 0,022306 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 200 | 0 | 33,85156 | 4,620361 | -1,009312177 | 3,611049 | -0,00546 |
| 200 | 1,03125 | 33,85156 | 35,16195 | -1,009312177 | 34,15263 | -0,00546 |
| 200 | 2,0625 | 33,85156 | 65,70353 | -1,009312177 | 64,69422 | -0,00546 |
| 201 | 0 | 137,635 | 66,23268 | -0,302963442 | 65,92972 | -0,01571 |
| 201 | 1,03125 | 137,635 | 67,74781 | -0,302963442 | 67,44484 | -0,01571 |
| 201 | 2,0625 | 137,635 | 67,74781 | -0,302963442 | 67,44484 | -0,01571 |
| 202 | 0 | -137,72 | -67,8622 | 0,302963442 | -67,5592 | 0,015705 |
| 202 | 1,03125 | -137,72 | -67,8622 | 0,302963442 | -67,5592 | 0,015705 |
| 202 | 2,0625 | -137,72 | -66,2208 | 0,302963442 | -65,9178 | 0,015705 |
| 203 | 0 | -33,2178 | -65,6902 | 1,009312177 | -64,6809 | 0,005456 |
| 203 | 1,03125 | -33,2178 | -35,1486 | 1,009312177 | -34,1393 | 0,005456 |
| 203 | 2,0625 | -33,2178 | -4,60699 | 1,009312177 | -3,59768 | 0,005456 |
| 204 | 0 | 68,92277 | -2,68277 | 1,495442652 | -1,18733 | -0,02231 |
| 204 | 1,03125 | 68,92277 | 27,85882 | 1,495442652 | 29,35426 | -0,02231 |
| 204 | 2,0625 | 68,92277 | 58,4004 | 1,495442652 | 59,89585 | -0,02231 |
| 205 | 0 | 169,0206 | 59,84545 | 1,896918333 | 61,74237 | -0,03486 |
| 205 | 1,03125 | 169,0206 | 90,38704 | 1,896918333 | 92,28396 | -0,03486 |
| 205 | 2,0625 | 169,0206 | 121,3699 | 1,896918333 | 123,2668 | -0,03486 |
| 206 | 0 | -164,215 | -119,386 | -0,382684182 | -119,769 | 0,019065 |
| 206 | 1,03125 | -164,215 | -88,4032 | -0,382684182 | -88,7859 | 0,019065 |
| 206 | 2,0625 | -164,215 | -57,8616 | -0,382684182 | -58,2443 | 0,019065 |
| 207 | 0 | -67,1248 | -58,3217 | -0,503345597 | -58,8251 | 0,016903 |
| 207 | 1,03125 | -67,1248 | -27,7802 | -0,503345597 | -28,2835 | 0,016903 |
| 207 | 2,0625 | -67,1248 | 2,761429 | -0,503345597 | 2,258083 | 0,016903 |
| 208 | 0 | 32,6061 | 3,639143 | -0,611163845 | 3,027979 | -0,00105 |
| 208 | 1,03125 | 32,6061 | 34,18073 | -0,611163845 | 33,56957 | -0,00105 |
| 208 | 2,0625 | 32,6061 | 64,72232 | -0,611163845 | 64,11115 | -0,00105 |
| 209 | 0 | 134,0247 | 64,52717 | -0,657747677 | 63,86942 | -0,00193 |
| 209 | 1,03125 | 134,0247 | 66,0423 | -0,657747677 | 65,38455 | -0,00193 |
| 209 | 2,0625 | 134,0247 | 66,0423 | -0,657747677 | 65,38455 | -0,00193 |
| 210 | 0 | -134,695 | -66,1538 | 0,657747677 | -65,4961 | 0,001928 |
| 210 | 1,03125 | -134,695 | -66,1538 | 0,657747677 | -65,4961 | 0,001928 |
| 210 | 2,0625 | -134,695 | -64,5125 | 0,657747677 | -63,8547 | 0,001928 |
| 211 | 0 | -31,9582 | -64,7079 | 0,611163845 | -64,0968 | 0,001051 |
| 211 | 1,03125 | -31,9582 | -34,1663 | 0,611163845 | -33,5552 | 0,001051 |
| 211 | 2,0625 | -31,9582 | -3,62475 | 0,611163845 | -3,01359 | 0,001051 |
| 212 | 0 | 67,91271 | -2,74708 | 0,503345597 | -2,24373 | -0,0169 |
| 212 | 1,03125 | 67,91271 | 27,79451 | 0,503345597 | 28,29786 | -0,0169 |
| 212 | 2,0625 | 67,91271 | 58,3361 | 0,503345597 | 58,83944 | -0,0169 |
| 220 | 0 | 163,9976 | 57,87582 | 0,382684182 | 58,25851 | -0,01907 |
| 220 | 1,03125 | 163,9976 | 88,41741 | 0,382684182 | 88,80009 | -0,01907 |
| 220 | 2,0625 | 163,9976 | 119,4003 | 0,382684182 | 119,783 | -0,01907 |
| 222 | 0 | 54,5439 | 4,743406 | -0,32778504 | 4,415621 | 0,023349 |
| 222 | 1,03125 | 54,5439 | 35,28499 | -0,32778504 | 34,95721 | 0,023349 |
| 222 | 2,0625 | 54,5439 | 65,82658 | -0,32778504 | 65,49879 | 0,023349 |
| 223 | 0 | 154,3454 | 64,86356 | -0,871539044 | 63,99202 | 0,031859 |
| 223 | 1,03125 | 154,3454 | 66,37868 | -0,871539044 | 65,50714 | 0,031859 |
| 223 | 2,0625 | 154,3454 | 66,37868 | -0,871539044 | 65,50714 | 0,031859 |
| 225 | 0 | -125,592 | -66,4889 | 0,871539044 | -65,6174 | -0,03186 |
| 225 | 1,03125 | -125,592 | -66,4889 | 0,871539044 | -65,6174 | -0,03186 |
| 225 | 2,0625 | -125,592 | -64,8476 | 0,871539044 | -63,976 | -0,03186 |
| 226 | 0 | -25,6751 | -65,8105 | 0,32778504 | -65,4827 | -0,02335 |
| 226 | 1,03125 | -25,6751 | -35,2689 | 0,32778504 | -34,9411 | -0,02335 |
| 226 | 2,0625 | -25,6751 | -4,72734 | 0,32778504 | -4,39956 | -0,02335 |
| 228 | 0 | 68,02779 | -6,11558 | -0,591493269 | -6,70708 | 0,014907 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 339 | 2,0625 | -120,939 | -53,7492 | -11,37734377 | -65,1265 | 0,167694 |
| 340 | 0 | -22,1066 | -55,2071 | -4,673736053 | -59,8808 | 0,089919 |
| 340 | 1,03125 | -22,1066 | -24,6655 | -4,673736053 | -29,3392 | 0,089919 |
| 340 | 2,0625 | -22,1066 | 5,876111 | -4,673736053 | 1,202375 | 0,089919 |
| 341 | 0 | 75,15984 | 6,237968 | 5,435141659 | 11,67311 | -0,05138 |
| 341 | 1,03125 | 75,15984 | 36,77955 | 5,435141659 | 42,2147 | -0,05138 |
| 341 | 2,0625 | 75,15984 | 67,32114 | 5,435141659 | 72,75628 | -0,05138 |
| 353 | 0 | 169,5777 | 66,08872 | 11,69346755 | 77,78219 | -0,11592 |
| 353 | 1,03125 | 169,5777 | 67,60385 | 11,69346755 | 79,29732 | -0,11592 |
| 353 | 2,0625 | 169,5777 | 67,60385 | 11,69346755 | 79,29732 | -0,11592 |
| 355 | 0 | -119,074 | -67,7136 | -11,69346755 | -79,4071 | 0,115918 |
| 355 | 1,03125 | -119,074 | -67,7136 | -11,69346755 | -79,4071 | 0,115918 |
| 355 | 2,0625 | -119,074 | -66,0722 | -11,69346755 | -77,7657 | 0,115918 |
| 356 | 0 | -20,6116 | -67,3052 | -5,435141659 | -72,7404 | 0,051384 |
| 356 | 1,03125 | -20,6116 | -36,7636 | -5,435141659 | -42,1988 | 0,051384 |
| 356 | 2,0625 | -20,6116 | -6,22204 | -5,435141659 | -11,6572 | 0,051384 |
| 357 | 0 | 75,50172 | -5,86061 | 4,673736053 | -1,18687 | -0,08992 |
| 357 | 1,03125 | 75,50172 | 24,68098 | 4,673736053 | 29,35471 | -0,08992 |
| 357 | 2,0625 | 75,50172 | 55,22256 | 4,673736053 | 59,8963 | -0,08992 |
| 358 | 0 | 166,3923 | 53,76406 | 11,37734377 | 65,1414 | -0,16769 |
| 358 | 1,03125 | 166,3923 | 84,30565 | 11,37734377 | 95,68299 | -0,16769 |
| 358 | 2,0625 | 166,3923 | 115,2885 | 11,37734377 | 126,6659 | -0,16769 |
| 359 | 0 | -134,52 | -115,092 | 1,265025312 | -113,827 | -0,06824 |
| 359 | 1,03125 | -134,52 | -84,1094 | 1,265025312 | -82,8444 | -0,06824 |
| 359 | 2,0625 | -134,52 | -53,5678 | 1,265025312 | -52,3028 | -0,06824 |
| 360 | 0 | -39,0172 | -55,0727 | 0,571120672 | -54,5016 | 0,015726 |
| 360 | 1,03125 | -39,0172 | -24,5311 | 0,571120672 | -23,96 | 0,015726 |
| 360 | 2,0625 | -39,0172 | 6,010489 | 0,571120672 | 6,58161 | 0,015726 |
| 361 | 0 | 55,36945 | 4,387417 | -0,375715056 | 4,011702 | 0,08016 |
| 361 | 1,03125 | 55,36945 | 34,929 | -0,375715056 | 34,55329 | 0,08016 |
| 361 | 2,0625 | 55,36945 | 65,47059 | -0,375715056 | 65,09487 | 0,08016 |
| 362 | 0 | 154,4143 | 63,80796 | -1,001950784 | 62,80601 | 0,167579 |
| 362 | 1,03125 | 154,4143 | 65,32309 | -1,001950784 | 64,32114 | 0,167579 |
| 362 | 2,0625 | 154,4143 | 65,32309 | -1,001950784 | 64,32114 | 0,167579 |
| 363 | 0 | -123,127 | -65,4342 | 1,001950784 | -64,4322 | -0,16758 |
| 363 | 1,03125 | -123,127 | -65,4342 | 1,001950784 | -64,4322 | -0,16758 |
| 363 | 2,0625 | -123,127 | -63,7928 | 1,001950784 | -62,7909 | -0,16758 |
| 364 | 0 | -23,9251 | -65,4553 | 0,375715056 | -65,0796 | -0,08016 |
| 364 | 1,03125 | -23,9251 | -34,9138 | 0,375715056 | -34,538 | -0,08016 |
| 364 | 2,0625 | -23,9251 | -4,37217 | 0,375715056 | -3,99646 | -0,08016 |
| 373 | 0 | 69,53542 | -5,99538 | -0,571120672 | -6,5665 | -0,01573 |
| 373 | 1,03125 | 69,53542 | 24,54621 | -0,571120672 | 23,97509 | -0,01573 |
| 373 | 2,0625 | 69,53542 | 55,0878 | -0,571120672 | 54,51667 | -0,01573 |
| 374 | 0 | 163,5508 | 53,5827 | -1,265025312 | 52,31768 | 0,068238 |
| 374 | 1,03125 | 163,5508 | 84,12429 | -1,265025312 | 82,85926 | 0,068238 |
| 374 | 2,0625 | 163,5508 | 115,1072 | -1,265025312 | 113,8421 | 0,068238 |
| 375 | 0 | -147,936 | -117,522 | 0,577227312 | -116,944 | 0,048895 |
| 375 | 1,03125 | -147,936 | -86,5387 | 0,577227312 | -85,9615 | 0,048895 |
| 375 | 2,0625 | -147,936 | -55,9971 | 0,577227312 | -55,4199 | 0,048895 |
| 376 | 0 | -51,3877 | -56,6498 | 0,385436757 | -56,2644 | 0,058949 |
| 376 | 1,03125 | -51,3877 | -26,1082 | 0,385436757 | -25,7228 | 0,058949 |
| 376 | 2,0625 | -51,3877 | 4,433344 | 0,385436757 | 4,818781 | 0,058949 |
| 377 | 0 | 45,33359 | 4,192287 | -0,029975564 | 4,162312 | 0,056228 |
| 377 | 1,03125 | 45,33359 | 34,73387 | -0,029975564 | 34,7039 | 0,056228 |
| 377 | 2,0625 | 45,33359 | 65,27546 | -0,029975564 | 65,24548 | 0,056228 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 378 | 0 | 145,5725 | 64,6303 | -0,174630477 | 64,45567 | 0,066018 |
| 378 | 1,03125 | 145,5725 | 66,14543 | -0,174630477 | 65,9708 | 0,066018 |
| 378 | 2,0625 | 145,5725 | 66,14543 | -0,174630477 | 65,9708 | 0,066018 |
| 379 | 0 | -129,92 | -66,2569 | 0,174630477 | -66,0822 | -0,06602 |
| 379 | 1,03125 | -129,92 | -66,2569 | 0,174630477 | -66,0822 | -0,06602 |
| 379 | 2,0625 | -129,92 | -64,6155 | 0,174630477 | -64,4409 | -0,06602 |
| 383 | 0 | -28,2412 | -65,2606 | 0,029975564 | -65,2307 | -0,05623 |
| 383 | 1,03125 | -28,2412 | -34,719 | 0,029975564 | -34,6891 | -0,05623 |
| 383 | 2,0625 | -28,2412 | -4,17746 | 0,029975564 | -4,14749 | -0,05623 |
| 384 | 0 | 68,46667 | -4,41849 | -0,385436757 | -4,80393 | -0,05895 |
| 384 | 1,03125 | 68,46667 | 26,12309 | -0,385436757 | 25,73766 | -0,05895 |
| 384 | 2,0625 | 68,46667 | 56,66468 | -0,385436757 | 56,27924 | -0,05895 |
| 387 | 0 | 163,6801 | 56,01189 | -0,577227312 | 55,43466 | -0,0489 |
| 387 | 1,03125 | 163,6801 | 86,55347 | -0,577227312 | 85,97625 | -0,0489 |
| 387 | 2,0625 | 163,6801 | 117,5364 | -0,577227312 | 116,9591 | -0,0489 |
| 388 | 0 | -156,15 | -118,716 | 0,098825316 | -118,617 | 0,081767 |
| 388 | 1,03125 | -156,15 | -87,7327 | 0,098825316 | -87,6338 | 0,081767 |
| 388 | 2,0625 | -156,15 | -57,1911 | 0,098825316 | -57,0923 | 0,081767 |
| 390 | 0 | -59,3251 | -57,6574 | 0,112323844 | -57,5451 | 0,077734 |
| 390 | 1,03125 | -59,3251 | -27,1158 | 0,112323844 | -27,0035 | 0,077734 |
| 390 | 2,0625 | -59,3251 | 3,425787 | 0,112323844 | 3,538111 | 0,077734 |
| 391 | 0 | 38,38471 | 3,689751 | 0,116927446 | 3,806678 | 0,046024 |
| 391 | 1,03125 | 38,38471 | 34,23134 | 0,116927446 | 34,34826 | 0,046024 |
| 391 | 2,0625 | 38,38471 | 64,77292 | 0,116927446 | 64,88985 | 0,046024 |
| 392 | 0 | 138,9398 | 64,30419 | 0,133150807 | 64,43734 | 0,04338 |
| 392 | 1,03125 | 138,9398 | 65,81932 | 0,133150807 | 65,95247 | 0,04338 |
| 392 | 2,0625 | 138,9398 | 65,81932 | 0,133150807 | 65,95247 | 0,04338 |
| 397 | 0 | -132,027 | -65,931 | -0,133150807 | -66,0642 | -0,04338 |
| 397 | 1,03125 | -132,027 | -65,931 | -0,133150807 | -66,0642 | -0,04338 |
| 397 | 2,0625 | -132,027 | -64,2896 | -0,133150807 | -64,4228 | -0,04338 |
| 399 | 0 | -29,9968 | -64,7584 | -0,116927446 | -64,8753 | -0,04602 |
| 399 | 1,03125 | -29,9968 | -34,2168 | -0,116927446 | -34,3337 | -0,04602 |
| 399 | 2,0625 | -29,9968 | -3,67519 | -0,116927446 | -3,79212 | -0,04602 |
| 400 | 0 | 67,74138 | -3,41119 | -0,112323844 | -3,52352 | -0,07773 |
| 400 | 1,03125 | 67,74138 | 27,13039 | -0,112323844 | 27,01807 | -0,07773 |
| 400 | 2,0625 | 67,74138 | 57,67198 | -0,112323844 | 57,55966 | -0,07773 |
| 402 | 0 | 163,3232 | 57,20561 | -0,098825316 | 57,10678 | -0,08177 |
| 402 | 1,03125 | 163,3232 | 87,74719 | -0,098825316 | 87,64837 | -0,08177 |
| 402 | 2,0625 | 163,3232 | 118,7301 | -0,098825316 | 118,6313 | -0,08177 |
| 403 | 0 | -161,714 | -119,709 | -0,218563891 | -119,927 | 0,095347 |
| 403 | 1,03125 | -161,714 | -88,726 | -0,218563891 | -88,9445 | 0,095347 |
| 403 | 2,0625 | -161,714 | -58,1844 | -0,218563891 | -58,403 | 0,095347 |
| 420 | 0 | -64,3191 | -58,3739 | -0,167621367 | -58,5415 | 0,082251 |
| 420 | 1,03125 | -64,3191 | -27,8323 | -0,167621367 | -27,9999 | 0,082251 |
| 420 | 2,0625 | -64,3191 | 2,709269 | -0,167621367 | 2,541648 | 0,082251 |
| 421 | 0 | 34,47605 | 3,413352 | -0,105497352 | 3,307855 | 0,040439 |
| 421 | 1,03125 | 34,47605 | 33,95494 | -0,105497352 | 33,84944 | 0,040439 |
| 421 | 2,0625 | 34,47605 | 64,49652 | -0,105497352 | 64,39103 | 0,040439 |
| 463 | 0 | 135,5665 | 64,24805 | -0,042027212 | 64,20602 | 0,028606 |
| 463 | 1,03125 | 135,5665 | 65,76318 | -0,042027212 | 65,72115 | 0,028606 |
| 463 | 2,0625 | 135,5665 | 65,76318 | -0,042027212 | 65,72115 | 0,028606 |
| 517 | 0 | -132,981 | -65,8753 | 0,042027212 | -65,8332 | -0,02861 |
| 517 | 1,03125 | -132,981 | -65,8753 | 0,042027212 | -65,8332 | -0,02861 |
| 517 | 2,0625 | -132,981 | -64,2339 | 0,042027212 | -64,1918 | -0,02861 |
| 518 | 0 | -30,4997 | -64,4823 | 0,105497352 | -64,3768 | -0,04044 |

| | | | | | | |
|-----|---------|----------|----------|--------------|----------|----------|
| 518 | 1,03125 | -30,4997 | -33,9407 | 0,105497352 | -33,8352 | -0,04044 |
| 518 | 2,0625 | -30,4997 | -3,39916 | 0,105497352 | -3,29366 | -0,04044 |
| 527 | 0 | 68,33347 | -2,69507 | 0,167621367 | -2,52745 | -0,08225 |
| 527 | 1,03125 | 68,33347 | 27,84652 | 0,167621367 | 28,01414 | -0,08225 |
| 527 | 2,0625 | 68,33347 | 58,38811 | 0,167621367 | 58,55573 | -0,08225 |
| 530 | 0 | 164,5365 | 58,19852 | 0,218563891 | 58,41708 | -0,09535 |
| 530 | 1,03125 | 164,5365 | 88,7401 | 0,218563891 | 88,95867 | -0,09535 |
| 530 | 2,0625 | 164,5365 | 119,723 | 0,218563891 | 119,9416 | -0,09535 |
| 531 | 0 | -164,058 | -119,996 | -0,472987113 | -120,469 | 0,098239 |
| 531 | 1,03125 | -164,058 | -89,013 | -0,472987113 | -89,486 | 0,098239 |
| 531 | 2,0625 | -164,058 | -58,4714 | -0,472987113 | -58,9444 | 0,098239 |
| 534 | 0 | -66,8812 | -58,6845 | -0,560549156 | -59,245 | 0,075219 |
| 534 | 1,03125 | -66,8812 | -28,1429 | -0,560549156 | -28,7034 | 0,075219 |
| 534 | 2,0625 | -66,8812 | 2,398706 | -0,560549156 | 1,838157 | 0,075219 |
| 536 | 0 | 33,25782 | 3,5036 | -0,637651565 | 2,865949 | 0,035308 |
| 536 | 1,03125 | 33,25782 | 34,04519 | -0,637651565 | 33,40753 | 0,035308 |
| 536 | 2,0625 | 33,25782 | 64,58677 | -0,637651565 | 63,94912 | 0,035308 |
| 537 | 0 | 135,194 | 64,62064 | -0,650551171 | 63,97009 | 0,013973 |
| 537 | 1,03125 | 135,194 | 66,13577 | -0,650551171 | 65,48522 | 0,013973 |
| 537 | 2,0625 | 135,194 | 66,13577 | -0,650551171 | 65,48522 | 0,013973 |
| 538 | 0 | -133,614 | -66,2482 | 0,650551171 | -65,5976 | -0,01397 |
| 538 | 1,03125 | -133,614 | -66,2482 | 0,650551171 | -65,5976 | -0,01397 |
| 538 | 2,0625 | -133,614 | -64,6068 | 0,650551171 | -63,9562 | -0,01397 |
| 539 | 0 | -30,5072 | -64,5732 | 0,637651565 | -63,9356 | -0,03531 |
| 539 | 1,03125 | -30,5072 | -34,0316 | 0,637651565 | -33,394 | -0,03531 |
| 539 | 2,0625 | -30,5072 | -3,49005 | 0,637651565 | -2,8524 | -0,03531 |
| 540 | 0 | 69,63979 | -2,38515 | 0,560549156 | -1,8246 | -0,07522 |
| 540 | 1,03125 | 69,63979 | 28,15644 | 0,560549156 | 28,71699 | -0,07522 |
| 540 | 2,0625 | 69,63979 | 58,69802 | 0,560549156 | 59,25857 | -0,07522 |
| 610 | 0 | 165,9599 | 58,48492 | 0,472987113 | 58,95791 | -0,09824 |
| 610 | 1,03125 | 165,9599 | 89,0265 | 0,472987113 | 89,49949 | -0,09824 |
| 610 | 2,0625 | 165,9599 | 120,0094 | 0,472987113 | 120,4824 | -0,09824 |
| 677 | 0 | -168,43 | -120,596 | -1,813867193 | -122,41 | -0,02477 |
| 677 | 1,03125 | -168,43 | -89,6133 | -1,813867193 | -91,4272 | -0,02477 |
| 677 | 2,0625 | -168,43 | -59,0718 | -1,813867193 | -60,8856 | -0,02477 |
| 685 | 0 | -66,0756 | -58,2293 | -1,483978093 | -59,7133 | 0,024731 |
| 685 | 1,03125 | -66,0756 | -27,6877 | -1,483978093 | -29,1717 | 0,024731 |
| 685 | 2,0625 | -66,0756 | 2,853879 | -1,483978093 | 1,369901 | 0,024731 |
| 686 | 0 | 36,26226 | 4,141432 | -1,07375753 | 3,067674 | 0,064205 |
| 686 | 1,03125 | 36,26226 | 34,68302 | -1,07375753 | 33,60926 | 0,064205 |
| 686 | 2,0625 | 36,26226 | 65,2246 | -1,07375753 | 64,15085 | 0,064205 |
| 687 | 0 | 138,9821 | 65,13212 | -0,445239698 | 64,68688 | 0,114156 |
| 687 | 1,03125 | 138,9821 | 66,64724 | -0,445239698 | 66,20201 | 0,114156 |
| 687 | 2,0625 | 138,9821 | 66,64724 | -0,445239698 | 66,20201 | 0,114156 |
| 688 | 0 | -134,621 | -66,7625 | 0,445239698 | -66,3172 | -0,11416 |
| 688 | 1,03125 | -134,621 | -66,7625 | 0,445239698 | -66,3172 | -0,11416 |
| 688 | 2,0625 | -134,621 | -65,1211 | 0,445239698 | -64,6759 | -0,11416 |
| 689 | 0 | -30,473 | -65,2121 | 1,07375753 | -64,1383 | -0,0642 |
| 689 | 1,03125 | -30,473 | -34,6705 | 1,07375753 | -33,5967 | -0,0642 |
| 689 | 2,0625 | -30,473 | -4,12891 | 1,07375753 | -3,05515 | -0,0642 |
| 690 | 0 | 71,0925 | -2,84032 | 1,483978093 | -1,35634 | -0,02473 |
| 690 | 1,03125 | 71,0925 | 27,70126 | 1,483978093 | 29,18524 | -0,02473 |
| 690 | 2,0625 | 71,0925 | 58,24285 | 1,483978093 | 59,72683 | -0,02473 |
| 691 | 0 | 170,3549 | 59,08574 | 1,813867193 | 60,89961 | 0,02477 |
| 691 | 1,03125 | 170,3549 | 89,62733 | 1,813867193 | 91,44119 | 0,02477 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 691 | 2,0625 | 170,3549 | 120,6102 | 1,813867193 | 122,4241 | 0,02477 |
| 692 | 0 | -135,213 | -110,856 | -13,2762394 | -124,132 | -0,075 |
| 692 | 1,03125 | -135,213 | -79,8728 | -13,2762394 | -93,149 | -0,075 |
| 692 | 2,0625 | -135,213 | -49,3312 | -13,2762394 | -62,6074 | -0,075 |
| 693 | 0 | -50,3555 | -53,4533 | -6,481121457 | -59,9345 | -0,00821 |
| 693 | 1,03125 | -50,3555 | -22,9118 | -6,481121457 | -29,3929 | -0,00821 |
| 693 | 2,0625 | -50,3555 | 7,629832 | -6,481121457 | 1,148711 | -0,00821 |
| 694 | 0 | 38,86869 | 4,493876 | 3,562872335 | 8,056749 | 0,063993 |
| 694 | 1,03125 | 38,86869 | 35,03546 | 3,562872335 | 38,59833 | 0,063993 |
| 694 | 2,0625 | 38,86869 | 65,57705 | 3,562872335 | 69,13992 | 0,063993 |
| 695 | 0 | 134,4445 | 62,3531 | 10,1192374 | 72,47234 | 0,132598 |
| 695 | 1,03125 | 134,4445 | 63,86823 | 10,1192374 | 73,98746 | 0,132598 |
| 695 | 2,0625 | 134,4445 | 63,86823 | 10,1192374 | 73,98746 | 0,132598 |
| 696 | 0 | -121,672 | -63,9778 | -10,1192374 | -74,097 | -0,1326 |
| 696 | 1,03125 | -121,672 | -63,9778 | -10,1192374 | -74,097 | -0,1326 |
| 696 | 2,0625 | -121,672 | -62,3364 | -10,1192374 | -72,4556 | -0,1326 |
| 697 | 0 | -27,4677 | -65,5619 | -3,562872335 | -69,1247 | -0,06399 |
| 697 | 1,03125 | -27,4677 | -35,0203 | -3,562872335 | -38,5831 | -0,06399 |
| 697 | 2,0625 | -27,4677 | -4,47869 | -3,562872335 | -8,04156 | -0,06399 |
| 698 | 0 | 63,40006 | -7,61573 | 6,481121457 | -1,13461 | 0,008211 |
| 698 | 1,03125 | 63,40006 | 22,92586 | 6,481121457 | 29,40698 | 0,008211 |
| 698 | 2,0625 | 63,40006 | 53,46744 | 6,481121457 | 59,94857 | 0,008211 |
| 699 | 0 | 152,4266 | 49,34445 | 13,2762394 | 62,62069 | 0,074999 |
| 699 | 1,03125 | 152,4266 | 79,88604 | 13,2762394 | 93,16228 | 0,074999 |
| 699 | 2,0625 | 152,4266 | 110,8689 | 13,2762394 | 124,1452 | 0,074999 |
| 700 | 0 | -142,844 | -110,378 | -48,65472653 | -159,032 | 0,014453 |
| 700 | 1,03125 | -142,844 | -79,3948 | -48,65472653 | -128,05 | 0,014453 |
| 700 | 2,0625 | -142,844 | -48,8532 | -48,65472653 | -97,5079 | 0,014453 |
| 701 | 0 | -53,9429 | -52,5441 | -14,80127888 | -67,3454 | -0,01072 |
| 701 | 1,03125 | -53,9429 | -22,0025 | -14,80127888 | -36,8038 | -0,01072 |
| 701 | 2,0625 | -53,9429 | 8,539092 | -14,80127888 | -6,26219 | -0,01072 |
| 702 | 0 | 33,69018 | 4,455912 | 13,4944731 | 17,95039 | -0,01514 |
| 702 | 1,03125 | 33,69018 | 34,9975 | 13,4944731 | 48,49197 | -0,01514 |
| 702 | 2,0625 | 33,69018 | 65,53908 | 13,4944731 | 79,03356 | -0,01514 |
| 703 | 0 | 123,6798 | 60,92546 | 46,85418268 | 107,7796 | -0,03456 |
| 703 | 1,03125 | 123,6798 | 62,44059 | 46,85418268 | 109,2948 | -0,03456 |
| 703 | 2,0625 | 123,6798 | 62,44059 | 46,85418268 | 109,2948 | -0,03456 |
| 704 | 0 | -117,725 | -62,5521 | -46,85418268 | -109,406 | 0,034563 |
| 704 | 1,03125 | -117,725 | -62,5521 | -46,85418268 | -109,406 | 0,034563 |
| 704 | 2,0625 | -117,725 | -60,9108 | -46,85418268 | -107,765 | 0,034563 |
| 705 | 0 | -27,7287 | -65,5239 | -13,4944731 | -79,0184 | 0,01514 |
| 705 | 1,03125 | -27,7287 | -34,9824 | -13,4944731 | -48,4768 | 0,01514 |
| 705 | 2,0625 | -27,7287 | -4,44078 | -13,4944731 | -17,9353 | 0,01514 |
| 706 | 0 | 58,95921 | -8,52422 | 14,80127888 | 6,277055 | 0,010716 |
| 706 | 1,03125 | 58,95921 | 22,01736 | 14,80127888 | 36,81864 | 0,010716 |
| 706 | 2,0625 | 58,95921 | 52,55895 | 14,80127888 | 67,36023 | 0,010716 |
| 707 | 0 | 145,6484 | 48,86745 | 48,65472653 | 97,52218 | -0,01445 |
| 707 | 1,03125 | 145,6484 | 79,40904 | 48,65472653 | 128,0638 | -0,01445 |
| 707 | 2,0625 | 145,6484 | 110,3919 | 48,65472653 | 159,0466 | -0,01445 |
| 708 | 0 | -153,738 | -115,98 | -14,10040137 | -130,08 | 0,163668 |
| 708 | 1,03125 | -153,738 | -84,9967 | -14,10040137 | -99,0971 | 0,163668 |
| 708 | 2,0625 | -153,738 | -54,4551 | -14,10040137 | -68,5555 | 0,163668 |
| 709 | 0 | -58,4343 | -54,5154 | -6,545106228 | -61,0605 | -0,0028 |
| 709 | 1,03125 | -58,4343 | -23,9738 | -6,545106228 | -30,5189 | -0,0028 |
| 709 | 2,0625 | -58,4343 | 6,567775 | -6,545106228 | 0,022669 | -0,0028 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 710 | 0 | 37,25707 | 6,272767 | 3,905824058 | 10,17859 | -0,14616 |
| 710 | 1,03125 | 37,25707 | 36,81435 | 3,905824058 | 40,72018 | -0,14616 |
| 710 | 2,0625 | 37,25707 | 67,35594 | 3,905824058 | 71,26176 | -0,14616 |
| 711 | 0 | 141,0614 | 68,40266 | 11,35485839 | 79,75752 | -0,31798 |
| 711 | 1,03125 | 141,0614 | 69,91779 | 11,35485839 | 81,27265 | -0,31798 |
| 711 | 2,0625 | 141,0614 | 69,91779 | 11,35485839 | 81,27265 | -0,31798 |
| 712 | 0 | -135,969 | -70,0268 | -11,35485839 | -81,3816 | 0,317976 |
| 712 | 1,03125 | -135,969 | -70,0268 | -11,35485839 | -81,3816 | 0,317976 |
| 712 | 2,0625 | -135,969 | -68,3854 | -11,35485839 | -79,7402 | 0,317976 |
| 713 | 0 | -33,4078 | -67,3401 | -3,905824058 | -71,2459 | 0,146157 |
| 713 | 1,03125 | -33,4078 | -36,7985 | -3,905824058 | -40,7043 | 0,146157 |
| 713 | 2,0625 | -33,4078 | -6,2569 | -3,905824058 | -10,1627 | 0,146157 |
| 714 | 0 | 62,07514 | -6,55279 | 6,545106228 | -0,00769 | 0,002796 |
| 714 | 1,03125 | 62,07514 | 23,98879 | 6,545106228 | 30,5339 | 0,002796 |
| 714 | 2,0625 | 62,07514 | 54,53038 | 6,545106228 | 61,07549 | 0,002796 |
| 715 | 0 | 158,2295 | 54,46981 | 14,10040137 | 68,57021 | -0,16367 |
| 715 | 1,03125 | 158,2295 | 85,0114 | 14,10040137 | 99,1118 | -0,16367 |
| 715 | 2,0625 | 158,2295 | 115,9943 | 14,10040137 | 130,0947 | -0,16367 |
| 716 | 0 | -173,788 | -126,307 | -2,636060023 | -128,943 | 0,135134 |
| 716 | 1,03125 | -173,788 | -95,3239 | -2,636060023 | -97,96 | 0,135134 |
| 716 | 2,0625 | -173,788 | -64,7824 | -2,636060023 | -67,4184 | 0,135134 |
| 717 | 0 | -65,5225 | -59,0478 | -1,444922366 | -60,4927 | -0,04786 |
| 717 | 1,03125 | -65,5225 | -28,5062 | -1,444922366 | -29,9511 | -0,04786 |
| 717 | 2,0625 | -65,5225 | 2,035403 | -1,444922366 | 0,590481 | -0,04786 |
| 718 | 0 | 39,92653 | 5,763928 | -0,709031118 | 5,054897 | -0,20568 |
| 718 | 1,03125 | 39,92653 | 36,30551 | -0,709031118 | 35,59648 | -0,20568 |
| 718 | 2,0625 | 39,92653 | 66,8471 | -0,709031118 | 66,13807 | -0,20568 |
| 719 | 0 | 153,8419 | 71,67106 | 0,867102751 | 72,53816 | -0,39886 |
| 719 | 1,03125 | 153,8419 | 73,18619 | 0,867102751 | 74,05329 | -0,39886 |
| 719 | 2,0625 | 153,8419 | 73,18619 | 0,867102751 | 74,05329 | -0,39886 |
| 720 | 0 | -146,826 | -73,3006 | -0,867102751 | -74,1677 | 0,398862 |
| 720 | 1,03125 | -146,826 | -73,3006 | -0,867102751 | -74,1677 | 0,398862 |
| 720 | 2,0625 | -146,826 | -71,6592 | -0,867102751 | -72,5263 | 0,398862 |
| 721 | 0 | -34,7647 | -66,8335 | 0,709031118 | -66,1245 | 0,205677 |
| 721 | 1,03125 | -34,7647 | -36,2919 | 0,709031118 | -35,5829 | 0,205677 |
| 721 | 2,0625 | -34,7647 | -5,75036 | 0,709031118 | -5,04133 | 0,205677 |
| 722 | 0 | 70,66253 | -2,02046 | 1,444922366 | -0,57554 | 0,047864 |
| 722 | 1,03125 | 70,66253 | 28,52113 | 1,444922366 | 29,96605 | 0,047864 |
| 722 | 2,0625 | 70,66253 | 59,06271 | 1,444922366 | 60,50763 | 0,047864 |
| 723 | 0 | 180,2207 | 64,79847 | 2,636060023 | 67,43453 | -0,13513 |
| 723 | 1,03125 | 180,2207 | 95,34006 | 2,636060023 | 97,97612 | -0,13513 |
| 723 | 2,0625 | 180,2207 | 126,3229 | 2,636060023 | 128,959 | -0,13513 |
| 724 | 0 | -159,355 | -120,955 | -0,199034371 | -121,155 | -0,0795 |
| 724 | 1,03125 | -159,355 | -89,9726 | -0,199034371 | -90,1716 | -0,0795 |
| 724 | 2,0625 | -159,355 | -59,431 | -0,199034371 | -59,63 | -0,0795 |
| 725 | 0 | -59,3584 | -57,9522 | -0,16830525 | -58,1205 | -0,12564 |
| 725 | 1,03125 | -59,3584 | -27,4106 | -0,16830525 | -27,5789 | -0,12564 |
| 725 | 2,0625 | -59,3584 | 3,130965 | -0,16830525 | 2,96266 | -0,12564 |
| 726 | 0 | 36,99764 | 4,107357 | -0,552845994 | 3,554511 | -0,1871 |
| 726 | 1,03125 | 36,99764 | 34,64894 | -0,552845994 | 34,0961 | -0,1871 |
| 726 | 2,0625 | 36,99764 | 65,19053 | -0,552845994 | 64,63768 | -0,1871 |
| 727 | 0 | 144,5692 | 67,0234 | -0,39517238 | 66,62823 | -0,23788 |
| 727 | 1,03125 | 144,5692 | 68,53853 | -0,39517238 | 68,14336 | -0,23788 |
| 727 | 2,0625 | 144,5692 | 68,53853 | -0,39517238 | 68,14336 | -0,23788 |
| 728 | 0 | -136,867 | -68,6496 | 0,39517238 | -68,2545 | 0,23788 |

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|-----|---------|----------|----------|--------------|----------|----------|
| 728 | 1,03125 | -136,867 | -68,6496 | 0,39517238 | -68,2545 | 0,23788 |
| 728 | 2,0625 | -136,867 | -67,0083 | 0,39517238 | -66,6131 | 0,23788 |
| 729 | 0 | -30,6835 | -65,1756 | 0,552845994 | -64,6227 | 0,187098 |
| 729 | 1,03125 | -30,6835 | -34,634 | 0,552845994 | -34,0812 | 0,187098 |
| 729 | 2,0625 | -30,6835 | -4,09241 | 0,552845994 | -3,53957 | 0,187098 |
| 730 | 0 | 65,66995 | -3,11623 | 0,16830525 | -2,94792 | 0,125639 |
| 730 | 1,03125 | 65,66995 | 27,42536 | 0,16830525 | 27,59366 | 0,125639 |
| 730 | 2,0625 | 65,66995 | 57,96694 | 0,16830525 | 58,13525 | 0,125639 |
| 731 | 0 | 166,6669 | 59,44608 | 0,199034371 | 59,64511 | 0,079501 |
| 731 | 1,03125 | 166,6669 | 89,98766 | 0,199034371 | 90,1867 | 0,079501 |
| 731 | 2,0625 | 166,6669 | 120,9705 | 0,199034371 | 121,1696 | 0,079501 |
| 732 | 0 | -142,041 | -121,065 | 1,270880925 | -119,795 | -0,02259 |
| 732 | 1,03125 | -142,041 | -90,0826 | 1,270880925 | -88,8117 | -0,02259 |
| 732 | 2,0625 | -142,041 | -59,541 | 1,270880925 | -58,2701 | -0,02259 |
| 733 | 0 | -52,6893 | -57,188 | 0,663334711 | -56,5246 | -0,11507 |
| 733 | 1,03125 | -52,6893 | -26,6464 | 0,663334711 | -25,983 | -0,11507 |
| 733 | 2,0625 | -52,6893 | 3,895221 | 0,663334711 | 4,558556 | -0,11507 |
| 734 | 0 | 39,86962 | 4,276808 | -0,562487866 | 3,71432 | -0,20204 |
| 734 | 1,03125 | 39,86962 | 34,81839 | -0,562487866 | 34,25591 | -0,20204 |
| 734 | 2,0625 | 39,86962 | 65,35998 | -0,562487866 | 64,79749 | -0,20204 |
| 735 | 0 | 135,2311 | 67,8566 | -1,009696345 | 66,84691 | -0,3035 |
| 735 | 1,03125 | 135,2311 | 69,37173 | -1,009696345 | 68,36203 | -0,3035 |
| 735 | 2,0625 | 135,2311 | 69,37173 | -1,009696345 | 68,36203 | -0,3035 |
| 736 | 0 | -123,954 | -69,4799 | 1,009696345 | -68,4702 | 0,303502 |
| 736 | 1,03125 | -123,954 | -69,4799 | 1,009696345 | -68,4702 | 0,303502 |
| 736 | 2,0625 | -123,954 | -67,8385 | 1,009696345 | -66,8288 | 0,303502 |
| 737 | 0 | -29,8757 | -65,3433 | 0,562487866 | -64,7809 | 0,202036 |
| 737 | 1,03125 | -29,8757 | -34,8018 | 0,562487866 | -34,2393 | 0,202036 |
| 737 | 2,0625 | -29,8757 | -4,26017 | 0,562487866 | -3,69769 | 0,202036 |
| 738 | 0 | 62,60401 | -3,8804 | -0,663334711 | -4,54374 | 0,11507 |
| 738 | 1,03125 | 62,60401 | 26,66118 | -0,663334711 | 25,99785 | 0,11507 |
| 738 | 2,0625 | 62,60401 | 57,20277 | -0,663334711 | 56,53943 | 0,11507 |
| 739 | 0 | 152,7375 | 59,55315 | -1,270880925 | 58,28227 | 0,022589 |
| 739 | 1,03125 | 152,7375 | 90,09474 | -1,270880925 | 88,82385 | 0,022589 |
| 739 | 2,0625 | 152,7375 | 121,0776 | -1,270880925 | 119,8067 | 0,022589 |
| 740 | 0 | -227,615 | -112,682 | -4,232687085 | -116,915 | -0,21108 |
| 740 | 1,03125 | -227,615 | -81,6992 | -4,232687085 | -85,9318 | -0,21108 |
| 740 | 2,0625 | -227,615 | -51,1576 | -4,232687085 | -55,3903 | -0,21108 |
| 741 | 0 | -73,1846 | -54,6527 | -1,721788605 | -56,3745 | -0,13832 |
| 741 | 1,03125 | -73,1846 | -24,1111 | -1,721788605 | -25,8329 | -0,13832 |
| 741 | 2,0625 | -73,1846 | 6,430498 | -1,721788605 | 4,708709 | -0,13832 |
| 742 | 0 | 76,55469 | 3,273505 | 2,450178269 | 5,723683 | -0,11575 |
| 742 | 1,03125 | 76,55469 | 33,81509 | 2,450178269 | 36,26527 | -0,11575 |
| 742 | 2,0625 | 76,55469 | 64,35668 | 2,450178269 | 66,80686 | -0,11575 |
| 743 | 0 | 240,7033 | 60,71655 | 4,665611987 | 65,38216 | -0,04775 |
| 743 | 1,03125 | 240,7033 | 62,23168 | 4,665611987 | 66,89729 | -0,04775 |
| 743 | 2,0625 | 240,7033 | 62,23168 | 4,665611987 | 66,89729 | -0,04775 |
| 744 | 0 | -222,273 | -62,3464 | -4,665611987 | -67,012 | 0,047748 |
| 744 | 1,03125 | -222,273 | -62,3464 | -4,665611987 | -67,012 | 0,047748 |
| 744 | 2,0625 | -222,273 | -60,705 | -4,665611987 | -65,3706 | 0,047748 |
| 745 | 0 | -60,9089 | -64,3433 | -2,450178269 | -66,7934 | 0,115755 |
| 745 | 1,03125 | -60,9089 | -33,8017 | -2,450178269 | -36,2518 | 0,115755 |
| 745 | 2,0625 | -60,9089 | -3,26008 | -2,450178269 | -5,71026 | 0,115755 |
| 746 | 0 | 88,71991 | -6,41396 | 1,721788605 | -4,69217 | 0,138319 |
| 746 | 1,03125 | 88,71991 | 24,12763 | 1,721788605 | 25,84941 | 0,138319 |

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|-----|----------|----------|----------|--------------|----------|----------|
| 746 | 2,0625 | 88,71991 | 54,66921 | 1,721788605 | 56,391 | 0,138319 |
| 747 | 0 | 245,53 | 51,1791 | 4,232687085 | 55,41178 | 0,211081 |
| 747 | 1,03125 | 245,53 | 81,72068 | 4,232687085 | 85,95337 | 0,211081 |
| 747 | 2,0625 | 245,53 | 112,7036 | 4,232687085 | 116,9363 | 0,211081 |
| 748 | 0 | 4,562382 | -117,47 | 0,228486527 | -117,241 | -0,07051 |
| 748 | 1,03125 | 4,562382 | -86,4869 | 0,228486527 | -86,2584 | -0,07051 |
| 748 | 2,0625 | 4,562382 | -55,9453 | 0,228486527 | -55,7168 | -0,07051 |
| 749 | 0 | 4,562382 | -55,9453 | 0,228486527 | -55,7168 | -0,07051 |
| 749 | 1,031251 | 4,562382 | -25,4037 | 0,228486527 | -25,1752 | -0,07051 |
| 749 | 2,062501 | 4,562382 | 5,137869 | 0,228486527 | 5,366356 | -0,07051 |
| 750 | 0 | 4,562382 | 5,137869 | 0,228486527 | 5,366356 | -0,07051 |
| 750 | 1,03125 | 4,562382 | 36,29635 | 0,228486527 | 36,52484 | -0,07051 |
| 750 | 2,0625 | 4,562382 | 67,45483 | 0,228486527 | 67,68332 | -0,07051 |
| 751 | 0 | 4,562382 | 67,45483 | 0,228486527 | 67,68332 | -0,07051 |
| 751 | 1,03125 | 4,562382 | 68,96996 | 0,228486527 | 69,19844 | -0,07051 |
| 751 | 2,062499 | 4,562382 | 68,96996 | 0,228486527 | 69,19844 | -0,07051 |
| 752 | 0 | 9,497825 | -68,2668 | -0,228486527 | -68,4953 | 0,070508 |
| 752 | 1,03125 | 9,497825 | -68,2668 | -0,228486527 | -68,4953 | 0,070508 |
| 752 | 2,0625 | 9,497825 | -66,6254 | -0,228486527 | -66,8539 | 0,070508 |
| 753 | 0 | 9,497825 | -66,6254 | -0,228486527 | -66,8539 | 0,070508 |
| 753 | 1,031251 | 9,497825 | -36,0838 | -0,228486527 | -36,3123 | 0,070508 |
| 753 | 2,062501 | 9,497825 | -5,54222 | -0,228486527 | -5,7707 | 0,070508 |
| 754 | 0 | 9,497825 | -5,54222 | -0,228486527 | -5,7707 | 0,070508 |
| 754 | 1,03125 | 9,497825 | 24,99936 | -0,228486527 | 24,77088 | 0,070508 |
| 754 | 2,0625 | 9,497825 | 55,54094 | -0,228486527 | 55,31246 | 0,070508 |
| 755 | 0 | 9,497825 | 55,54094 | -0,228486527 | 55,31246 | 0,070508 |
| 755 | 1,03125 | 9,497825 | 86,08252 | -0,228486527 | 85,85403 | 0,070508 |
| 755 | 2,062499 | 9,497825 | 117,0654 | -0,228486527 | 116,8369 | 0,070508 |
| 756 | 0 | -249,211 | -175,529 | -66,24334958 | -241,773 | 0,045732 |
| 756 | 1,03125 | -249,211 | -140,005 | -66,24334958 | -206,248 | 0,045732 |
| 756 | 2,0625 | -249,211 | -95,507 | -66,24334958 | -161,75 | 0,045732 |
| 757 | 0 | -72,2018 | -85,2145 | -19,92984944 | -105,144 | 0,035374 |
| 757 | 1,03125 | -72,2018 | -40,7168 | -19,92984944 | -60,6466 | 0,035374 |
| 757 | 2,0625 | -72,2018 | 3,780894 | -19,92984944 | -16,149 | 0,035374 |
| 758 | 0 | 100,1692 | 10,8526 | 21,89811419 | 32,75071 | -0,03986 |
| 758 | 1,03125 | 100,1692 | 55,35027 | 21,89811419 | 77,24839 | -0,03986 |
| 758 | 2,0625 | 100,1692 | 99,84795 | 21,89811419 | 121,7461 | -0,03986 |
| 759 | 0 | 295,1971 | 110,9611 | 68,86792718 | 179,829 | -0,0523 |
| 759 | 1,03125 | 295,1971 | 113,1676 | 68,86792718 | 182,0355 | -0,0523 |
| 759 | 2,0625 | 295,1971 | 113,1676 | 68,86792718 | 182,0355 | -0,0523 |
| 760 | 0 | -273,182 | -113,338 | -68,86792718 | -182,206 | 0,052299 |
| 760 | 1,03125 | -273,182 | -113,338 | -68,86792718 | -182,206 | 0,052299 |
| 760 | 2,0625 | -273,182 | -110,947 | -68,86792718 | -179,815 | 0,052299 |
| 761 | 0 | -78,987 | -99,8323 | -21,89811419 | -121,73 | 0,03986 |
| 761 | 1,03125 | -78,987 | -55,3346 | -21,89811419 | -77,2327 | 0,03986 |
| 761 | 2,0625 | -78,987 | -10,8369 | -21,89811419 | -32,735 | 0,03986 |
| 762 | 0 | 93,98296 | -3,76572 | 19,92984944 | 16,16413 | -0,03537 |
| 762 | 1,03125 | 93,98296 | 40,73195 | 19,92984944 | 60,6618 | -0,03537 |
| 762 | 2,0625 | 93,98296 | 85,22963 | 19,92984944 | 105,1595 | -0,03537 |
| 763 | 0 | 273,8521 | 95,51877 | 66,24334958 | 161,7621 | -0,04573 |
| 763 | 1,03125 | 273,8521 | 140,0164 | 66,24334958 | 206,2598 | -0,04573 |
| 763 | 2,0625 | 273,8521 | 175,541 | 66,24334958 | 241,7844 | -0,04573 |
| 764 | 0 | -110,873 | -159,635 | -10,15158335 | -169,787 | 0,534988 |
| 764 | 1,03125 | -110,873 | -124,111 | -10,15158335 | -134,262 | 0,534988 |
| 764 | 2,0625 | -110,873 | -79,613 | -10,15158335 | -89,7646 | 0,534988 |

| | | | | | | |
|-----|---------|----------|----------|--------------|----------|----------|
| 765 | 0 | -34,8669 | -81,546 | -4,87879432 | -86,4248 | 0,211455 |
| 765 | 1,03125 | -34,8669 | -37,0483 | -4,87879432 | -41,9271 | 0,211455 |
| 765 | 2,0625 | -34,8669 | 7,449387 | -4,87879432 | 2,570592 | 0,211455 |
| 766 | 0 | 47,22192 | 6,353989 | 3,842373949 | 10,19636 | -0,02982 |
| 766 | 1,03125 | 47,22192 | 50,85166 | 3,842373949 | 54,69404 | -0,02982 |
| 766 | 2,0625 | 47,22192 | 95,34934 | 3,842373949 | 99,19171 | -0,02982 |
| 767 | 0 | 123,0917 | 93,3749 | 8,88332604 | 102,2582 | -0,35767 |
| 767 | 1,03125 | 123,0917 | 95,58139 | 8,88332604 | 104,4647 | -0,35767 |
| 767 | 2,0625 | 123,0917 | 95,58139 | 8,88332604 | 104,4647 | -0,35767 |
| 768 | 0 | -103,598 | -95,7376 | -8,88332604 | -104,621 | 0,357672 |
| 768 | 1,03125 | -103,598 | -95,7376 | -8,88332604 | -104,621 | 0,357672 |
| 768 | 2,0625 | -103,598 | -93,3473 | -8,88332604 | -102,231 | 0,357672 |
| 769 | 0 | -27,5721 | -95,3313 | -3,842373949 | -99,1736 | 0,029821 |
| 769 | 1,03125 | -27,5721 | -50,8336 | -3,842373949 | -54,676 | 0,029821 |
| 769 | 2,0625 | -27,5721 | -6,3359 | -3,842373949 | -10,1783 | 0,029821 |
| 770 | 0 | 54,08778 | -7,43642 | 4,87879432 | -2,55762 | -0,21145 |
| 770 | 1,03125 | 54,08778 | 37,06126 | 4,87879432 | 41,94005 | -0,21145 |
| 770 | 2,0625 | 54,08778 | 81,55894 | 4,87879432 | 86,43773 | -0,21145 |
| 774 | 0 | 127,9445 | 79,62618 | 10,15158335 | 89,77777 | -0,53499 |
| 774 | 1,03125 | 127,9445 | 124,1239 | 10,15158335 | 134,2754 | -0,53499 |
| 774 | 2,0625 | 127,9445 | 159,6485 | 10,15158335 | 169,8 | -0,53499 |
| 775 | 0 | -126,22 | -89,631 | -8,623146156 | -98,2542 | -0,27681 |
| 775 | 1,03125 | -126,22 | -89,631 | -8,623146156 | -98,2542 | -0,27681 |
| 775 | 2,0625 | -126,22 | -87,2407 | -8,623146156 | -95,8638 | -0,27681 |
| 843 | 0 | -38,4108 | -92,2546 | -2,843198169 | -95,0978 | -0,15812 |
| 843 | 1,03125 | -38,4108 | -47,7569 | -2,843198169 | -50,6001 | -0,15812 |
| 843 | 2,0625 | -38,4108 | -3,25921 | -2,843198169 | -6,1024 | -0,15812 |
| 910 | 0 | 46,7399 | -6,62679 | 6,166198201 | -0,4606 | -0,2019 |
| 910 | 1,03125 | 46,7399 | 37,87088 | 6,166198201 | 44,03708 | -0,2019 |
| 910 | 2,0625 | 46,7399 | 82,36856 | 6,166198201 | 88,53475 | -0,2019 |
| 918 | 0 | 130,2726 | 77,61825 | 11,89265168 | 89,51091 | -0,10048 |
| 918 | 1,03125 | 130,2726 | 122,1159 | 11,89265168 | 134,0086 | -0,10048 |
| 918 | 2,0625 | 130,2726 | 157,6405 | 11,89265168 | 169,5332 | -0,10048 |
| 919 | 0 | -111,499 | -89,646 | -8,623146156 | -98,2692 | -0,27681 |
| 919 | 1,03125 | -111,499 | -89,646 | -8,623146156 | -98,2692 | -0,27681 |
| 919 | 2,0625 | -111,499 | -87,2557 | -8,623146156 | -95,8788 | -0,27681 |
| 920 | 0 | -23,069 | -92,2556 | -2,843198169 | -95,0988 | -0,15812 |
| 920 | 1,03125 | -23,069 | -47,7579 | -2,843198169 | -50,6011 | -0,15812 |
| 920 | 2,0625 | -23,069 | -3,26026 | -2,843198169 | -6,10346 | -0,15812 |
| 921 | 0 | 62,07878 | -6,61967 | 6,166198201 | -0,45347 | -0,2019 |
| 921 | 1,03125 | 62,07878 | 37,87801 | 6,166198201 | 44,04421 | -0,2019 |
| 921 | 2,0625 | 62,07878 | 82,37568 | 6,166198201 | 88,54188 | -0,2019 |
| 922 | 0 | 145,6771 | 77,62692 | 11,89265168 | 89,51957 | -0,10048 |
| 922 | 1,03125 | 145,6771 | 122,1246 | 11,89265168 | 134,0172 | -0,10048 |
| 922 | 2,0625 | 145,6771 | 157,6492 | 11,89265168 | 169,5418 | -0,10048 |
| 923 | 0 | -183,135 | -164,587 | -56,47390369 | -221,061 | 0,388669 |
| 923 | 1,03125 | -183,135 | -129,062 | -56,47390369 | -185,536 | 0,388669 |
| 923 | 2,0625 | -183,135 | -84,5643 | -56,47390369 | -141,038 | 0,388669 |
| 924 | 0 | -66,7044 | -85,6671 | -17,83161461 | -103,499 | 0,307403 |
| 924 | 1,03125 | -66,7044 | -41,1694 | -17,83161461 | -59,001 | 0,307403 |
| 924 | 2,0625 | -66,7044 | 3,328279 | -17,83161461 | -14,5033 | 0,307403 |
| 925 | 0 | 43,6678 | 3,40684 | 14,57827964 | 17,98512 | 0,17065 |
| 925 | 1,03125 | 43,6678 | 47,90452 | 14,57827964 | 62,48279 | 0,17065 |
| 925 | 2,0625 | 43,6678 | 92,40219 | 14,57827964 | 106,9805 | 0,17065 |
| 926 | 0 | 163,5358 | 91,28591 | 52,55013855 | 143,836 | 0,08994 |

| | | | | | | |
|-----|---------|----------|----------|--------------|----------|----------|
| 926 | 1,03125 | 163,5358 | 93,49241 | 52,55013855 | 146,0425 | 0,08994 |
| 926 | 2,0625 | 163,5358 | 93,49241 | 52,55013855 | 146,0425 | 0,08994 |
| 927 | 0 | -154,433 | -93,6486 | -52,55013855 | -146,199 | -0,08994 |
| 927 | 1,03125 | -154,433 | -93,6486 | -52,55013855 | -146,199 | -0,08994 |
| 927 | 2,0625 | -154,433 | -91,2582 | -52,55013855 | -143,808 | -0,08994 |
| 928 | 0 | -33,4025 | -92,3832 | -14,57827964 | -106,961 | -0,17065 |
| 928 | 1,03125 | -33,4025 | -47,8855 | -14,57827964 | -62,4638 | -0,17065 |
| 928 | 2,0625 | -33,4025 | -3,3878 | -14,57827964 | -17,9661 | -0,17065 |
| 929 | 0 | 76,9899 | -3,31388 | 17,83161461 | 14,51774 | -0,3074 |
| 929 | 1,03125 | 76,9899 | 41,1838 | 17,83161461 | 59,01541 | -0,3074 |
| 929 | 2,0625 | 76,9899 | 85,68147 | 17,83161461 | 103,5131 | -0,3074 |
| 930 | 0 | 192,535 | 84,5777 | 56,47390369 | 141,0516 | -0,38867 |
| 930 | 1,03125 | 192,535 | 129,0754 | 56,47390369 | 185,5493 | -0,38867 |
| 930 | 2,0625 | 192,535 | 164,6 | 56,47390369 | 221,0739 | -0,38867 |
| 931 | 0 | -157,818 | -168,131 | -14,4440709 | -182,575 | 0,514106 |
| 931 | 1,03125 | -157,818 | -132,607 | -14,4440709 | -147,051 | 0,514106 |
| 931 | 2,0625 | -157,818 | -88,109 | -14,4440709 | -102,553 | 0,514106 |
| 932 | 0 | -65,7608 | -87,6339 | -7,165115094 | -94,799 | 0,383299 |
| 932 | 1,03125 | -65,7608 | -43,1362 | -7,165115094 | -50,3013 | 0,383299 |
| 932 | 2,0625 | -65,7608 | 1,36145 | -7,165115094 | -5,80367 | 0,383299 |
| 933 | 0 | 32,96669 | 3,838937 | 3,807726189 | 7,646663 | 0,157659 |
| 933 | 1,03125 | 32,96669 | 48,33661 | 3,807726189 | 52,14434 | 0,157659 |
| 933 | 2,0625 | 32,96669 | 92,83429 | 3,807726189 | 96,64201 | 0,157659 |
| 934 | 0 | 129,3332 | 93,24408 | 11,07423866 | 104,3183 | 0,038611 |
| 934 | 1,03125 | 129,3332 | 95,45058 | 11,07423866 | 106,5248 | 0,038611 |
| 934 | 2,0625 | 129,3332 | 95,45058 | 11,07423866 | 106,5248 | 0,038611 |
| 935 | 0 | -123,781 | -95,618 | -11,07423866 | -106,692 | -0,03861 |
| 935 | 1,03125 | -123,781 | -95,618 | -11,07423866 | -106,692 | -0,03861 |
| 935 | 2,0625 | -123,781 | -93,2276 | -11,07423866 | -104,302 | -0,03861 |
| 936 | 0 | -26,4534 | -92,816 | -3,807726189 | -96,6237 | -0,15766 |
| 936 | 1,03125 | -26,4534 | -48,3183 | -3,807726189 | -52,126 | -0,15766 |
| 936 | 2,0625 | -26,4534 | -3,82064 | -3,807726189 | -7,62837 | -0,15766 |
| 937 | 0 | 72,111 | -1,34262 | 7,165115094 | 5,822492 | -0,3833 |
| 937 | 1,03125 | 72,111 | 43,15505 | 7,165115094 | 50,32017 | -0,3833 |
| 937 | 2,0625 | 72,111 | 87,65273 | 7,165115094 | 94,81784 | -0,3833 |
| 938 | 0 | 163,5013 | 88,12777 | 14,4440709 | 102,5718 | -0,51411 |
| 938 | 1,03125 | 163,5013 | 132,6254 | 14,4440709 | 147,0695 | -0,51411 |
| 938 | 2,0625 | 163,5013 | 168,15 | 14,4440709 | 182,5941 | -0,51411 |
| 939 | 0 | -166,993 | -168,592 | 0,297978759 | -168,294 | 0,596743 |
| 939 | 1,03125 | -166,993 | -133,067 | 0,297978759 | -132,769 | 0,596743 |
| 939 | 2,0625 | -166,993 | -88,5695 | 0,297978759 | -88,2715 | 0,596743 |
| 940 | 0 | -67,0413 | -86,9717 | -0,565096747 | -87,5368 | 0,392341 |
| 940 | 1,03125 | -67,0413 | -42,4741 | -0,565096747 | -43,0392 | 0,392341 |
| 940 | 2,0625 | -67,0413 | 2,023608 | -0,565096747 | 1,458511 | 0,392341 |
| 941 | 0 | 34,33118 | 5,051952 | -1,502905082 | 3,549047 | 0,1381 |
| 941 | 1,03125 | 34,33118 | 49,54963 | -1,502905082 | 48,04672 | 0,1381 |
| 941 | 2,0625 | 34,33118 | 94,0473 | -1,502905082 | 92,5444 | 0,1381 |
| 942 | 0 | 138,9128 | 95,70549 | -2,204642606 | 93,50084 | -0,05631 |
| 942 | 1,03125 | 138,9128 | 97,91198 | -2,204642606 | 95,70734 | -0,05631 |
| 942 | 2,0625 | 138,9128 | 97,91198 | -2,204642606 | 95,70734 | -0,05631 |
| 943 | 0 | -134,821 | -98,0791 | 2,204642606 | -95,8744 | 0,05631 |
| 943 | 1,03125 | -134,821 | -98,0791 | 2,204642606 | -95,8744 | 0,05631 |
| 943 | 2,0625 | -134,821 | -95,8887 | 2,204642606 | -93,4841 | 0,05631 |
| 944 | 0 | -29,5176 | -94,0302 | 1,502905082 | -92,5273 | -0,1381 |
| 944 | 1,03125 | -29,5176 | -49,5325 | 1,502905082 | -48,0296 | -0,1381 |

| | | | | | | |
|-----|---------|----------|----------|--------------|----------|----------|
| 963 | 0 | -83,5359 | -157,301 | -0,574565419 | -157,875 | -1,46739 |
| 963 | 1,03125 | -83,5359 | -121,776 | -0,574565419 | -122,351 | -1,46739 |
| 963 | 2,0625 | -83,5359 | -77,2784 | -0,574565419 | -77,853 | -1,46739 |
| 964 | 0 | -12,1525 | -62,8792 | -0,007995413 | -62,8872 | -0,53568 |
| 964 | 1,03125 | -12,1525 | -18,3816 | -0,007995413 | -18,3896 | -0,53568 |
| 964 | 2,0625 | -12,1525 | 26,11611 | -0,007995413 | 26,10812 | -0,53568 |
| 965 | 0 | 57,40401 | 39,09984 | 0,393497069 | 39,49334 | 0,707243 |
| 965 | 1,03125 | 57,40401 | 83,59752 | 0,393497069 | 83,99102 | 0,707243 |
| 965 | 2,0625 | 57,40401 | 128,0952 | 0,393497069 | 128,4887 | 0,707243 |
| 966 | 0 | 135,0941 | 146,7863 | 0,900164531 | 147,6864 | 1,631165 |
| 966 | 1,03125 | 135,0941 | 148,9928 | 0,900164531 | 149,8929 | 1,631165 |
| 966 | 2,0625 | 135,0941 | 148,9928 | 0,900164531 | 149,8929 | 1,631165 |
| 967 | 0 | -148,75 | -149,141 | -0,900164531 | -150,041 | -1,63116 |
| 967 | 1,03125 | -148,75 | -149,141 | -0,900164531 | -150,041 | -1,63116 |
| 967 | 2,0625 | -148,75 | -146,75 | -0,900164531 | -147,651 | -1,63116 |
| 968 | 0 | -69,3871 | -128,06 | -0,393497069 | -128,454 | -0,70724 |
| 968 | 1,03125 | -69,3871 | -83,5625 | -0,393497069 | -83,956 | -0,70724 |
| 968 | 2,0625 | -69,3871 | -39,0648 | -0,393497069 | -39,4583 | -0,70724 |
| 969 | 0 | -1,52325 | -26,0802 | 0,007995413 | -26,0722 | 0,535683 |
| 969 | 1,03125 | -1,52325 | 18,41743 | 0,007995413 | 18,42543 | 0,535683 |
| 969 | 2,0625 | -1,52325 | 62,91511 | 0,007995413 | 62,9231 | 0,535683 |
| 970 | 0 | 64,13534 | 77,31731 | 0,574565419 | 77,89188 | 1,467387 |
| 970 | 1,03125 | 64,13534 | 121,815 | 0,574565419 | 122,3896 | 1,467387 |
| 970 | 2,0625 | 64,13534 | 157,3396 | 0,574565419 | 157,9141 | 1,467387 |



TABEL GAYA GESER BALOK LINTANG STRUKTUR BAWAH

| FRAME | STA | VD | VL | | VL TOT | VE |
|-------|-------|----------|-----------|---------------|----------|-----------|
| | | | VL merata | VL.Koef kejut | | |
| 404 | 0 | 1,654588 | 10,95465 | -0,005289077 | 10,94936 | 0,130033 |
| 404 | 4,125 | 1,654588 | 10,95465 | -0,005289077 | 10,94936 | 0,130033 |
| 404 | 8,25 | 1,654588 | 10,95465 | -0,005289077 | 10,94936 | 0,130033 |
| 405 | 0 | -1,54719 | -10,9497 | 0,005289077 | -10,9444 | -0,130033 |
| 405 | 4,125 | -1,54719 | -10,9497 | 0,005289077 | -10,9444 | -0,130033 |
| 405 | 8,25 | -1,54719 | -10,9497 | 0,005289077 | -10,9444 | -0,130033 |
| 406 | 0 | -11,7328 | 2,128733 | -0,356120019 | 1,772613 | 0,122014 |
| 406 | 4,125 | -11,7328 | 2,128733 | -0,356120019 | 1,772613 | 0,122014 |
| 406 | 8,25 | -11,7328 | 2,128733 | -0,356120019 | 1,772613 | 0,122014 |
| 409 | 0 | 11,53862 | -2,12375 | 0,356120019 | -1,76763 | -0,12201 |
| 409 | 4,125 | 11,53862 | -2,12375 | 0,356120019 | -1,76763 | -0,12201 |
| 409 | 8,25 | 11,53862 | -2,12375 | 0,356120019 | -1,76763 | -0,12201 |
| 410 | 0 | -18,1589 | -2,41852 | -0,980521 | -3,39904 | 0,118823 |
| 410 | 4,125 | -18,1589 | -2,41852 | -0,980521 | -3,39904 | 0,118823 |
| 410 | 8,25 | -18,1589 | -2,41852 | -0,980521 | -3,39904 | 0,118823 |
| 413 | 0 | 17,85875 | 2,423461 | 0,980521 | 3,403982 | -0,11882 |
| 413 | 4,125 | 17,85875 | 2,423461 | 0,980521 | 3,403982 | -0,11882 |
| 413 | 8,25 | 17,85875 | 2,423461 | 0,980521 | 3,403982 | -0,11882 |
| 415 | 0 | -19,911 | -4,14959 | -1,805181081 | -5,95477 | 0,103484 |
| 415 | 4,125 | -19,911 | -4,14959 | -1,805181081 | -5,95477 | 0,103484 |
| 415 | 8,25 | -19,911 | -4,14959 | -1,805181081 | -5,95477 | 0,103484 |
| 417 | 0 | 19,60073 | 4,154135 | 1,805181081 | 5,959316 | -0,10348 |
| 417 | 4,125 | 19,60073 | 4,154135 | 1,805181081 | 5,959316 | -0,10348 |
| 417 | 8,25 | 19,60073 | 4,154135 | 1,805181081 | 5,959316 | -0,10348 |
| 422 | 0 | -13,679 | -3,42601 | -1,914337673 | -5,34035 | 0,046918 |
| 422 | 4,125 | -13,679 | -3,42601 | -1,914337673 | -5,34035 | 0,046918 |
| 422 | 8,25 | -13,679 | -3,42601 | -1,914337673 | -5,34035 | 0,046918 |
| 423 | 0 | 13,82372 | 3,428246 | 1,914337673 | 5,342584 | -0,04692 |
| 423 | 4,125 | 13,82372 | 3,428246 | 1,914337673 | 5,342584 | -0,04692 |
| 423 | 8,25 | 13,82372 | 3,428246 | 1,914337673 | 5,342584 | -0,04692 |
| 424 | 0 | -6,73734 | -2,21446 | -0,961011236 | -3,17547 | 0,018717 |
| 424 | 4,125 | -6,73734 | -2,21446 | -0,961011236 | -3,17547 | 0,018717 |
| 424 | 8,25 | -6,73734 | -2,21446 | -0,961011236 | -3,17547 | 0,018717 |
| 425 | 0 | 7,636396 | 2,216434 | 0,961011236 | 3,177445 | -0,01872 |
| 425 | 4,125 | 7,636396 | 2,216434 | 0,961011236 | 3,177445 | -0,01872 |
| 425 | 8,25 | 7,636396 | 2,216434 | 0,961011236 | 3,177445 | -0,01872 |
| 426 | 0 | 3,218476 | -0,91337 | 0,118855443 | -0,79451 | -0,02902 |
| 426 | 4,125 | 3,218476 | -0,91337 | 0,118855443 | -0,79451 | -0,02902 |
| 426 | 8,25 | 3,218476 | -0,91337 | 0,118855443 | -0,79451 | -0,02902 |
| 427 | 0 | 10,14781 | 0,915489 | -0,118855443 | 0,796634 | 0,029025 |
| 427 | 4,125 | 10,14781 | 0,915489 | -0,118855443 | 0,796634 | 0,029025 |
| 427 | 8,25 | 10,14781 | 0,915489 | -0,118855443 | 0,796634 | 0,029025 |
| 428 | 0 | -1,94718 | -1,18099 | 0,106325808 | -1,07466 | -0,05188 |
| 428 | 4,125 | -1,94718 | -1,18099 | 0,106325808 | -1,07466 | -0,05188 |
| 428 | 8,25 | -1,94718 | -1,18099 | 0,106325808 | -1,07466 | -0,05188 |
| 429 | 0 | 20,12136 | 1,184318 | -0,106325808 | 1,077993 | 0,05188 |
| 429 | 4,125 | 20,12136 | 1,184318 | -0,106325808 | 1,077993 | 0,05188 |
| 429 | 8,25 | 20,12136 | 1,184318 | -0,106325808 | 1,077993 | 0,05188 |
| 430 | 0 | -7,77131 | -1,37717 | -0,022976658 | -1,40015 | -0,06924 |
| 430 | 4,125 | -7,77131 | -1,37717 | -0,022976658 | -1,40015 | -0,06924 |
| 430 | 8,25 | -7,77131 | -1,37717 | -0,022976658 | -1,40015 | -0,06924 |
| 431 | 0 | 20,3678 | 1,38105 | 0,022976658 | 1,404027 | 0,069237 |

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|-----|-------|----------|----------|--------------|----------|----------|
| 431 | 4,125 | 20,3678 | 1,38105 | 0,022976658 | 1,404027 | 0,069237 |
| 431 | 8,25 | 20,3678 | 1,38105 | 0,022976658 | 1,404027 | 0,069237 |
| 432 | 0 | -12,0378 | -1,26646 | -0,469165778 | -1,73562 | -0,07118 |
| 432 | 4,125 | -12,0378 | -1,26646 | -0,469165778 | -1,73562 | -0,07118 |
| 432 | 8,25 | -12,0378 | -1,26646 | -0,469165778 | -1,73562 | -0,07118 |
| 437 | 0 | 20,2523 | 1,27045 | 0,469165778 | 1,739616 | 0,07118 |
| 437 | 4,125 | 20,2523 | 1,27045 | 0,469165778 | 1,739616 | 0,07118 |
| 437 | 8,25 | 20,2523 | 1,27045 | 0,469165778 | 1,739616 | 0,07118 |
| 439 | 0 | -13,7087 | -0,83453 | -1,164209175 | -1,99874 | -0,05883 |
| 439 | 4,125 | -13,7087 | -0,83453 | -1,164209175 | -1,99874 | -0,05883 |
| 439 | 8,25 | -13,7087 | -0,83453 | -1,164209175 | -1,99874 | -0,05883 |
| 441 | 0 | 20,25546 | 0,83855 | 1,164209175 | 2,002759 | 0,058833 |
| 441 | 4,125 | 20,25546 | 0,83855 | 1,164209175 | 2,002759 | 0,058833 |
| 441 | 8,25 | 20,25546 | 0,83855 | 1,164209175 | 2,002759 | 0,058833 |
| 443 | 0 | -14,9201 | -1,40848 | -2,131988763 | -3,54047 | -0,03433 |
| 443 | 4,125 | -14,9201 | -1,40848 | -2,131988763 | -3,54047 | -0,03433 |
| 443 | 8,25 | -14,9201 | -1,40848 | -2,131988763 | -3,54047 | -0,03433 |
| 445 | 0 | 22,26525 | 1,411057 | 2,131988763 | 3,543045 | 0,03433 |
| 445 | 4,125 | 22,26525 | 1,411057 | 2,131988763 | 3,543045 | 0,03433 |
| 445 | 8,25 | 22,26525 | 1,411057 | 2,131988763 | 3,543045 | 0,03433 |
| 447 | 0 | -12,6562 | -1,3738 | -2,711744797 | -4,08555 | -0,01009 |
| 447 | 4,125 | -12,6562 | -1,3738 | -2,711744797 | -4,08555 | -0,01009 |
| 447 | 8,25 | -12,6562 | -1,3738 | -2,711744797 | -4,08555 | -0,01009 |
| 448 | 0 | 23,46245 | 1,375996 | 2,711744797 | 4,087741 | 0,010093 |
| 448 | 4,125 | 23,46245 | 1,375996 | 2,711744797 | 4,087741 | 0,010093 |
| 448 | 8,25 | 23,46245 | 1,375996 | 2,711744797 | 4,087741 | 0,010093 |
| 452 | 0 | -17,0161 | -1,42372 | -2,216337794 | -3,64006 | 0,003319 |
| 452 | 4,125 | -17,0161 | -1,42372 | -2,216337794 | -3,64006 | 0,003319 |
| 452 | 8,25 | -17,0161 | -1,42372 | -2,216337794 | -3,64006 | 0,003319 |
| 456 | 0 | 21,83704 | 1,426202 | 2,216337794 | 3,64254 | -0,00332 |
| 456 | 4,125 | 21,83704 | 1,426202 | 2,216337794 | 3,64254 | -0,00332 |
| 456 | 8,25 | 21,83704 | 1,426202 | 2,216337794 | 3,64254 | -0,00332 |
| 458 | 0 | -17,0057 | -0,76682 | -1,283442643 | -2,05026 | 0,007128 |
| 458 | 4,125 | -17,0057 | -0,76682 | -1,283442643 | -2,05026 | 0,007128 |
| 458 | 8,25 | -17,0057 | -0,76682 | -1,283442643 | -2,05026 | 0,007128 |
| 461 | 0 | 19,73646 | 0,770897 | 1,283442643 | 2,054339 | -0,00713 |
| 461 | 4,125 | 19,73646 | 0,770897 | 1,283442643 | 2,054339 | -0,00713 |
| 461 | 8,25 | 19,73646 | 0,770897 | 1,283442643 | 2,054339 | -0,00713 |
| 464 | 0 | -17,1228 | -1,33001 | -0,607496728 | -1,93751 | 0,007404 |
| 464 | 4,125 | -17,1228 | -1,33001 | -0,607496728 | -1,93751 | 0,007404 |
| 464 | 8,25 | -17,1228 | -1,33001 | -0,607496728 | -1,93751 | 0,007404 |
| 466 | 0 | 20,31054 | 1,334348 | 0,607496728 | 1,941845 | -0,0074 |
| 466 | 4,125 | 20,31054 | 1,334348 | 0,607496728 | 1,941845 | -0,0074 |
| 466 | 8,25 | 20,31054 | 1,334348 | 0,607496728 | 1,941845 | -0,0074 |
| 468 | 0 | -15,539 | -1,72961 | -0,136248368 | -1,86586 | 0,006624 |
| 468 | 4,125 | -15,539 | -1,72961 | -0,136248368 | -1,86586 | 0,006624 |
| 468 | 8,25 | -15,539 | -1,72961 | -0,136248368 | -1,86586 | 0,006624 |
| 469 | 0 | 21,10244 | 1,733918 | 0,136248368 | 1,870167 | -0,00662 |
| 469 | 4,125 | 21,10244 | 1,733918 | 0,136248368 | 1,870167 | -0,00662 |
| 469 | 8,25 | 21,10244 | 1,733918 | 0,136248368 | 1,870167 | -0,00662 |
| 473 | 0 | -11,7184 | -1,85071 | 0,12477608 | -1,72593 | 0,006029 |
| 473 | 4,125 | -11,7184 | -1,85071 | 0,12477608 | -1,72593 | 0,006029 |
| 473 | 8,25 | -11,7184 | -1,85071 | 0,12477608 | -1,72593 | 0,006029 |
| 476 | 0 | 22,3589 | 1,854771 | -0,12477608 | 1,729995 | -0,00603 |
| 476 | 4,125 | 22,3589 | 1,854771 | -0,12477608 | 1,729995 | -0,00603 |

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|-----|-------|----------|----------|--------------|----------|----------|
| 476 | 8,25 | 22,3589 | 1,854771 | -0,12477608 | 1,729995 | -0,00603 |
| 477 | 0 | -5,25567 | -1,83199 | 0,202271325 | -1,62972 | 0,005429 |
| 477 | 4,125 | -5,25567 | -1,83199 | 0,202271325 | -1,62972 | 0,005429 |
| 477 | 8,25 | -5,25567 | -1,83199 | 0,202271325 | -1,62972 | 0,005429 |
| 478 | 0 | 24,79467 | 1,835648 | -0,202271325 | 1,633376 | -0,00543 |
| 478 | 4,125 | 24,79467 | 1,835648 | -0,202271325 | 1,633376 | -0,00543 |
| 478 | 8,25 | 24,79467 | 1,835648 | -0,202271325 | 1,633376 | -0,00543 |
| 479 | 0 | 4,009 | -1,70874 | 0,09659647 | -1,61214 | 0,004125 |
| 479 | 4,125 | 4,009 | -1,70874 | 0,09659647 | -1,61214 | 0,004125 |
| 479 | 8,25 | 4,009 | -1,70874 | 0,09659647 | -1,61214 | 0,004125 |
| 480 | 0 | 27,80682 | 1,711832 | -0,09659647 | 1,615235 | -0,00412 |
| 480 | 4,125 | 27,80682 | 1,711832 | -0,09659647 | 1,615235 | -0,00412 |
| 480 | 8,25 | 27,80682 | 1,711832 | -0,09659647 | 1,615235 | -0,00412 |
| 481 | 0 | 12,82069 | -1,34082 | -0,201520168 | -1,54234 | 0,002644 |
| 481 | 4,125 | 12,82069 | -1,34082 | -0,201520168 | -1,54234 | 0,002644 |
| 481 | 8,25 | 12,82069 | -1,34082 | -0,201520168 | -1,54234 | 0,002644 |
| 482 | 0 | 26,3449 | 1,34303 | 0,201520168 | 1,54455 | -0,00264 |
| 482 | 4,125 | 26,3449 | 1,34303 | 0,201520168 | 1,54455 | -0,00264 |
| 482 | 8,25 | 26,3449 | 1,34303 | 0,201520168 | 1,54455 | -0,00264 |
| 483 | 0 | 13,72023 | -1,47922 | -0,220671574 | -1,6999 | 0,02658 |
| 483 | 4,125 | 13,72023 | -1,47922 | -0,220671574 | -1,6999 | 0,02658 |
| 483 | 8,25 | 13,72023 | -1,47922 | -0,220671574 | -1,6999 | 0,02658 |
| 484 | 0 | 27,61239 | 1,480949 | 0,220671574 | 1,70162 | -0,02658 |
| 484 | 4,125 | 27,61239 | 1,480949 | 0,220671574 | 1,70162 | -0,02658 |
| 484 | 8,25 | 27,61239 | 1,480949 | 0,220671574 | 1,70162 | -0,02658 |
| 485 | 0 | 5,265219 | -1,91044 | 0,067286349 | -1,84315 | 0,042401 |
| 485 | 4,125 | 5,265219 | -1,91044 | 0,067286349 | -1,84315 | 0,042401 |
| 485 | 8,25 | 5,265219 | -1,91044 | 0,067286349 | -1,84315 | 0,042401 |
| 486 | 0 | 29,65105 | 1,912705 | -0,067286349 | 1,845418 | -0,0424 |
| 486 | 4,125 | 29,65105 | 1,912705 | -0,067286349 | 1,845418 | -0,0424 |
| 486 | 8,25 | 29,65105 | 1,912705 | -0,067286349 | 1,845418 | -0,0424 |
| 487 | 0 | -4,21804 | -2,0857 | 0,164874387 | -1,92083 | 0,053434 |
| 487 | 4,125 | -4,21804 | -2,0857 | 0,164874387 | -1,92083 | 0,053434 |
| 487 | 8,25 | -4,21804 | -2,0857 | 0,164874387 | -1,92083 | 0,053434 |
| 488 | 0 | 26,61598 | 2,088495 | -0,164874387 | 1,92362 | -0,05343 |
| 488 | 4,125 | 26,61598 | 2,088495 | -0,164874387 | 1,92362 | -0,05343 |
| 488 | 8,25 | 26,61598 | 2,088495 | -0,164874387 | 1,92362 | -0,05343 |
| 489 | 0 | -11,0581 | -2,13048 | 0,08257287 | -2,0479 | 0,058431 |
| 489 | 4,125 | -11,0581 | -2,13048 | 0,08257287 | -2,0479 | 0,058431 |
| 489 | 8,25 | -11,0581 | -2,13048 | 0,08257287 | -2,0479 | 0,058431 |
| 490 | 0 | 23,95943 | 2,133759 | -0,08257287 | 2,051186 | -0,05843 |
| 490 | 4,125 | 23,95943 | 2,133759 | -0,08257287 | 2,051186 | -0,05843 |
| 490 | 8,25 | 23,95943 | 2,133759 | -0,08257287 | 2,051186 | -0,05843 |
| 491 | 0 | -15,1107 | -2,00286 | -0,17926198 | -2,18212 | 0,057539 |
| 491 | 4,125 | -15,1107 | -2,00286 | -0,17926198 | -2,18212 | 0,057539 |
| 491 | 8,25 | -15,1107 | -2,00286 | -0,17926198 | -2,18212 | 0,057539 |
| 492 | 0 | 22,55467 | 2,006451 | 0,17926198 | 2,185713 | -0,05754 |
| 492 | 4,125 | 22,55467 | 2,006451 | 0,17926198 | 2,185713 | -0,05754 |
| 492 | 8,25 | 22,55467 | 2,006451 | 0,17926198 | 2,185713 | -0,05754 |
| 493 | 0 | -16,515 | -1,55726 | -0,645256651 | -2,20252 | 0,050783 |
| 493 | 4,125 | -16,515 | -1,55726 | -0,645256651 | -2,20252 | 0,050783 |
| 493 | 8,25 | -16,515 | -1,55726 | -0,645256651 | -2,20252 | 0,050783 |
| 494 | 0 | 21,84731 | 1,560896 | 0,645256651 | 2,206153 | -0,05078 |
| 494 | 4,125 | 21,84731 | 1,560896 | 0,645256651 | 2,206153 | -0,05078 |
| 494 | 8,25 | 21,84731 | 1,560896 | 0,645256651 | 2,206153 | -0,05078 |

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|-----|-------|----------|----------|--------------|----------|----------|
| 495 | 0 | -15,245 | -0,89336 | -1,303766302 | -2,19713 | 0,037662 |
| 495 | 4,125 | -15,245 | -0,89336 | -1,303766302 | -2,19713 | 0,037662 |
| 495 | 8,25 | -15,245 | -0,89336 | -1,303766302 | -2,19713 | 0,037662 |
| 496 | 0 | 21,75532 | 0,896712 | 1,303766302 | 2,200479 | -0,03766 |
| 496 | 4,125 | 21,75532 | 0,896712 | 1,303766302 | 2,200479 | -0,03766 |
| 496 | 8,25 | 21,75532 | 0,896712 | 1,303766302 | 2,200479 | -0,03766 |
| 497 | 0 | -11,9716 | -1,33918 | -2,19090228 | -3,53008 | 0,015709 |
| 497 | 4,125 | -11,9716 | -1,33918 | -2,19090228 | -3,53008 | 0,015709 |
| 497 | 8,25 | -11,9716 | -1,33918 | -2,19090228 | -3,53008 | 0,015709 |
| 498 | 0 | 23,99131 | 1,340984 | 2,19090228 | 3,531886 | -0,01571 |
| 498 | 4,125 | 23,99131 | 1,340984 | 2,19090228 | 3,531886 | -0,01571 |
| 498 | 8,25 | 23,99131 | 1,340984 | 2,19090228 | 3,531886 | -0,01571 |
| 499 | 0 | -16,322 | -1,30143 | -2,696551658 | -3,99798 | -0,01979 |
| 499 | 4,125 | -16,322 | -1,30143 | -2,696551658 | -3,99798 | -0,01979 |
| 499 | 8,25 | -16,322 | -1,30143 | -2,696551658 | -3,99798 | -0,01979 |
| 500 | 0 | 21,88544 | 1,30316 | 2,696551658 | 3,999712 | 0,019785 |
| 500 | 4,125 | 21,88544 | 1,30316 | 2,696551658 | 3,999712 | 0,019785 |
| 500 | 8,25 | 21,88544 | 1,30316 | 2,696551658 | 3,999712 | 0,019785 |
| 501 | 0 | -16,7299 | -1,29574 | -2,108956396 | -3,4047 | -0,07152 |
| 501 | 4,125 | -16,7299 | -1,29574 | -2,108956396 | -3,4047 | -0,07152 |
| 501 | 8,25 | -16,7299 | -1,29574 | -2,108956396 | -3,4047 | -0,07152 |
| 502 | 0 | 20,2964 | 1,29824 | 2,108956396 | 3,407197 | 0,071523 |
| 502 | 4,125 | 20,2964 | 1,29824 | 2,108956396 | 3,407197 | 0,071523 |
| 502 | 8,25 | 20,2964 | 1,29824 | 2,108956396 | 3,407197 | 0,071523 |
| 503 | 0 | -14,6886 | -0,65029 | -1,125157846 | -1,77545 | -0,12476 |
| 503 | 4,125 | -14,6886 | -0,65029 | -1,125157846 | -1,77545 | -0,12476 |
| 503 | 8,25 | -14,6886 | -0,65029 | -1,125157846 | -1,77545 | -0,12476 |
| 504 | 0 | 18,28169 | 0,654617 | 1,125157846 | 1,779775 | 0,124763 |
| 504 | 4,125 | 18,28169 | 0,654617 | 1,125157846 | 1,779775 | 0,124763 |
| 504 | 8,25 | 18,28169 | 0,654617 | 1,125157846 | 1,779775 | 0,124763 |
| 505 | 0 | -12,9944 | -1,02881 | -0,418441074 | -1,44725 | -0,15449 |
| 505 | 4,125 | -12,9944 | -1,02881 | -0,418441074 | -1,44725 | -0,15449 |
| 505 | 8,25 | -12,9944 | -1,02881 | -0,418441074 | -1,44725 | -0,15449 |
| 506 | 0 | 18,0314 | 1,033476 | 0,418441074 | 1,451917 | 0,154485 |
| 506 | 4,125 | 18,0314 | 1,033476 | 0,418441074 | 1,451917 | 0,154485 |
| 506 | 8,25 | 18,0314 | 1,033476 | 0,418441074 | 1,451917 | 0,154485 |
| 507 | 0 | -8,84989 | -1,13101 | 0,031346105 | -1,09966 | -0,15606 |
| 507 | 4,125 | -8,84989 | -1,13101 | 0,031346105 | -1,09966 | -0,15606 |
| 507 | 8,25 | -8,84989 | -1,13101 | 0,031346105 | -1,09966 | -0,15606 |
| 508 | 0 | 18,01279 | 1,13576 | -0,031346105 | 1,104414 | 0,156057 |
| 508 | 4,125 | 18,01279 | 1,13576 | -0,031346105 | 1,104414 | 0,156057 |
| 508 | 8,25 | 18,01279 | 1,13576 | -0,031346105 | 1,104414 | 0,156057 |
| 509 | 0 | -2,86284 | -0,94764 | 0,155110536 | -0,79253 | -0,12687 |
| 509 | 4,125 | -2,86284 | -0,94764 | 0,155110536 | -0,79253 | -0,12687 |
| 509 | 8,25 | -2,86284 | -0,94764 | 0,155110536 | -0,79253 | -0,12687 |
| 510 | 0 | 18,12545 | 0,952831 | -0,155110536 | 0,79772 | 0,12687 |
| 510 | 4,125 | 18,12545 | 0,952831 | -0,155110536 | 0,79772 | 0,12687 |
| 510 | 8,25 | 18,12545 | 0,952831 | -0,155110536 | 0,79772 | 0,12687 |
| 511 | 0 | 3,343805 | -0,79022 | 0,145973943 | -0,64425 | -0,07018 |
| 511 | 4,125 | 3,343805 | -0,79022 | 0,145973943 | -0,64425 | -0,07018 |
| 511 | 8,25 | 3,343805 | -0,79022 | 0,145973943 | -0,64425 | -0,07018 |
| 512 | 0 | 9,691259 | 0,800369 | -0,145973943 | 0,654395 | 0,070177 |
| 512 | 4,125 | 9,691259 | 0,800369 | -0,145973943 | 0,654395 | 0,070177 |
| 512 | 8,25 | 9,691259 | 0,800369 | -0,145973943 | 0,654395 | 0,070177 |
| 513 | 0 | 2,32524 | -2,3499 | -1,000049562 | -3,34995 | 0,086181 |

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|-----|-------|----------|----------|--------------|----------|----------|
| 513 | 4,125 | 2,32524 | -2,3499 | -1,000049562 | -3,34995 | 0,086181 |
| 513 | 8,25 | 2,32524 | -2,3499 | -1,000049562 | -3,34995 | 0,086181 |
| 514 | 0 | 17,58604 | 2,34976 | 1,000049562 | 3,349809 | -0,08618 |
| 514 | 4,125 | 17,58604 | 2,34976 | 1,000049562 | 3,349809 | -0,08618 |
| 514 | 8,25 | 17,58604 | 2,34976 | 1,000049562 | 3,349809 | -0,08618 |
| 515 | 0 | -3,97541 | -3,55767 | -1,974784525 | -5,53245 | 0,163455 |
| 515 | 4,125 | -3,97541 | -3,55767 | -1,974784525 | -5,53245 | 0,163455 |
| 515 | 8,25 | -3,97541 | -3,55767 | -1,974784525 | -5,53245 | 0,163455 |
| 516 | 0 | 24,97744 | 3,558467 | 1,974784525 | 5,533251 | -0,16345 |
| 516 | 4,125 | 24,97744 | 3,558467 | 1,974784525 | 5,533251 | -0,16345 |
| 516 | 8,25 | 24,97744 | 3,558467 | 1,974784525 | 5,533251 | -0,16345 |
| 519 | 0 | -10,814 | -4,29317 | -2,628293096 | -6,92147 | 0,222025 |
| 519 | 4,125 | -10,814 | -4,29317 | -2,628293096 | -6,92147 | 0,222025 |
| 519 | 8,25 | -10,814 | -4,29317 | -2,628293096 | -6,92147 | 0,222025 |
| 520 | 0 | 27,54785 | 4,295122 | 2,628293096 | 6,923415 | -0,22202 |
| 520 | 4,125 | 27,54785 | 4,295122 | 2,628293096 | 6,923415 | -0,22202 |
| 520 | 8,25 | 27,54785 | 4,295122 | 2,628293096 | 6,923415 | -0,22202 |
| 521 | 0 | -14,2849 | -4,16853 | -1,873360516 | -6,04189 | 0,254139 |
| 521 | 4,125 | -14,2849 | -4,16853 | -1,873360516 | -6,04189 | 0,254139 |
| 521 | 8,25 | -14,2849 | -4,16853 | -1,873360516 | -6,04189 | 0,254139 |
| 522 | 0 | 26,97856 | 4,171682 | 1,873360516 | 6,045042 | -0,25414 |
| 522 | 4,125 | 26,97856 | 4,171682 | 1,873360516 | 6,045042 | -0,25414 |
| 522 | 8,25 | 26,97856 | 4,171682 | 1,873360516 | 6,045042 | -0,25414 |
| 523 | 0 | -13,5721 | -2,30332 | -1,02980844 | -3,33313 | 0,247695 |
| 523 | 4,125 | -13,5721 | -2,30332 | -1,02980844 | -3,33313 | 0,247695 |
| 523 | 8,25 | -13,5721 | -2,30332 | -1,02980844 | -3,33313 | 0,247695 |
| 524 | 0 | 23,80035 | 2,307085 | 1,02980844 | 3,336894 | -0,24769 |
| 524 | 4,125 | 23,80035 | 2,307085 | 1,02980844 | 3,336894 | -0,24769 |
| 524 | 8,25 | 23,80035 | 2,307085 | 1,02980844 | 3,336894 | -0,24769 |
| 525 | 0 | -7,84908 | 2,324221 | -0,38290924 | 1,941312 | 0,21268 |
| 525 | 4,125 | -7,84908 | 2,324221 | -0,38290924 | 1,941312 | 0,21268 |
| 525 | 8,25 | -7,84908 | 2,324221 | -0,38290924 | 1,941312 | 0,21268 |
| 526 | 0 | 16,2343 | -2,3193 | 0,38290924 | -1,93639 | -0,21268 |
| 526 | 4,125 | 16,2343 | -2,3193 | 0,38290924 | -1,93639 | -0,21268 |
| 526 | 8,25 | 16,2343 | -2,3193 | 0,38290924 | -1,93639 | -0,21268 |
| 528 | 0 | 3,365121 | 11,10372 | -0,012972187 | 11,09075 | 0,165322 |
| 528 | 4,125 | 3,365121 | 11,10372 | -0,012972187 | 11,09075 | 0,165322 |
| 528 | 8,25 | 3,365121 | 11,10372 | -0,012972187 | 11,09075 | 0,165322 |
| 529 | 0 | 0,706621 | -11,0943 | 0,012972187 | -11,0813 | -0,16532 |
| 529 | 4,125 | 0,706621 | -11,0943 | 0,012972187 | -11,0813 | -0,16532 |
| 529 | 8,25 | 0,706621 | -11,0943 | 0,012972187 | -11,0813 | -0,16532 |
| 541 | 0 | -18,4019 | -4,18446 | -2,556445112 | -6,7409 | 0,07655 |
| 541 | 4,125 | -18,4019 | -4,18446 | -2,556445112 | -6,7409 | 0,07655 |
| 541 | 8,25 | -18,4019 | -4,18446 | -2,556445112 | -6,7409 | 0,07655 |
| 542 | 0 | 18,19258 | 4,188054 | 2,556445112 | 6,744499 | -0,07655 |
| 542 | 4,125 | 18,19258 | 4,188054 | 2,556445112 | 6,744499 | -0,07655 |
| 542 | 8,25 | 18,19258 | 4,188054 | 2,556445112 | 6,744499 | -0,07655 |

TABEL GAYA GESER BALOK LINGKUNG TEPI

| FRAME | STA | VD | VL | | VL TOT | VE | COMB1 1.5(VD+VL+VE) |
|-------|----------|-----------|-----------|---------------|-----------|--------------|------------------------|
| | | | VL merata | VL.Koef kejut | | | |
| 13 | 0 | -179,6532 | -201,5776 | -35,2474034 | -236,825 | 1,714420393 | -622,1456454 |
| 13 | 2,586036 | -179,6532 | -201,5776 | -35,2474034 | -236,825 | 1,714420393 | -622,1456454 |
| 13 | 5,172072 | -179,6532 | -201,5776 | -35,2474034 | -236,825 | 1,714420393 | -622,1456454 |
| 14 | 0 | -122,1688 | -159,4864 | -33,0302879 | -192,5167 | -0,144946763 | -472,2456744 |
| 14 | 2,567192 | -122,1688 | -159,4864 | -33,0302879 | -192,5167 | -0,144946763 | -472,2456744 |
| 14 | 5,134383 | -122,1688 | -159,4864 | -33,0302879 | -192,5167 | -0,144946763 | -472,2456744 |
| 15 | 0 | -34,74279 | -154,0546 | -40,2111128 | -194,2657 | 0,294756734 | -343,0706226 |
| 15 | 2,55129 | -34,74279 | -154,0546 | -40,2111128 | -194,2657 | 0,294756734 | -343,0706226 |
| 15 | 5,10258 | -34,74279 | -154,0546 | -40,2111128 | -194,2657 | 0,294756734 | -343,0706226 |
| 19 | 0 | -40,1441 | -9,711327 | 1,429908302 | -8,281418 | -2,476063423 | -76,35237671 |
| 19 | 2,506689 | -40,1441 | -9,711327 | 1,429908302 | -8,281418 | -2,476063423 | -76,35237671 |
| 19 | 5,013378 | -40,1441 | -9,711327 | 1,429908302 | -8,281418 | -2,476063423 | -76,35237671 |
| 20 | 0 | 145,2473 | 79,11791 | 0,639310499 | 79,75722 | -3,799092741 | 331,8080713 |
| 20 | 2,502183 | 145,2473 | 79,11791 | 0,639310499 | 79,75722 | -3,799092741 | 331,8080713 |
| 20 | 5,004366 | 145,2473 | 79,11791 | 0,639310499 | 79,75722 | -3,799092741 | 331,8080713 |
| 164 | 0 | -172,4079 | -77,27969 | 1,582566826 | -75,69712 | -0,69194868 | -373,1954263 |
| 164 | 2,513691 | -172,4079 | -77,27969 | 1,582566826 | -75,69712 | -0,69194868 | -373,1954263 |
| 164 | 5,027383 | -172,4079 | -77,27969 | 1,582566826 | -75,69712 | -0,69194868 | -373,1954263 |
| 167 | 0 | -8,905808 | -21,93379 | 12,51298559 | -9,420803 | -2,735052656 | -31,59249523 |
| 167 | 2,705585 | -8,905808 | -21,93379 | 12,51298559 | -9,420803 | -2,735052656 | -31,59249523 |
| 167 | 5,41117 | -8,905808 | -21,93379 | 12,51298559 | -9,420803 | -2,735052656 | -31,59249523 |
| 187 | 0 | -84,85025 | -47,48042 | 13,73325952 | -33,74716 | 2,308365088 | -174,4335761 |
| 187 | 2,651523 | -84,85025 | -47,48042 | 13,73325952 | -33,74716 | 2,308365088 | -174,4335761 |
| 187 | 5,303045 | -84,85025 | -47,48042 | 13,73325952 | -33,74716 | 2,308365088 | -174,4335761 |
| 213 | 0 | -22,53167 | -14,40641 | 17,1811214 | 2,774715 | 0,176460312 | -29,37073639 |
| 213 | 2,672821 | -22,53167 | -14,40641 | 17,1811214 | 2,774715 | 0,176460312 | -29,37073639 |
| 213 | 5,345641 | -22,53167 | -14,40641 | 17,1811214 | 2,774715 | 0,176460312 | -29,37073639 |
| 214 | 0 | -151,7625 | -54,35884 | 6,605603885 | -47,75323 | 2,056822985 | -296,1883197 |
| 214 | 2,623968 | -151,7625 | -54,35884 | 6,605603885 | -47,75323 | 2,056822985 | -296,1883197 |
| 214 | 5,247936 | -151,7625 | -54,35884 | 6,605603885 | -47,75323 | 2,056822985 | -296,1883197 |
| 215 | 0 | -147,6839 | -66,15197 | 3,443850375 | -62,70812 | 2,07921792 | -312,4691527 |
| 215 | 2,585908 | -147,6839 | -66,15197 | 3,443850375 | -62,70812 | 2,07921792 | -312,4691527 |
| 215 | 5,171816 | -147,6839 | -66,15197 | 3,443850375 | -62,70812 | 2,07921792 | -312,4691527 |
| 216 | 0 | -188,3213 | -79,01158 | -5,84613653 | -84,85772 | 2,412701767 | -406,1495116 |
| 216 | 2,555252 | -188,3213 | -79,01158 | -5,84613653 | -84,85772 | 2,412701767 | -406,1495116 |
| 216 | 5,110504 | -188,3213 | -79,01158 | -5,84613653 | -84,85772 | 2,412701767 | -406,1495116 |
| 217 | 0 | -205,5097 | -86,34771 | -17,0428573 | -103,3906 | 2,617063939 | -459,4247264 |
| 217 | 2,531798 | -205,5097 | -86,34771 | -17,0428573 | -103,3906 | 2,617063939 | -459,4247264 |
| 217 | 5,063596 | -205,5097 | -86,34771 | -17,0428573 | -103,3906 | 2,617063939 | -459,4247264 |
| 218 | 0 | -174,4397 | -74,77536 | -27,8189482 | -102,5943 | 2,286970163 | -412,1205006 |
| 218 | 2,515189 | -174,4397 | -74,77536 | -27,8189482 | -102,5943 | 2,286970163 | -412,1205006 |
| 218 | 5,030378 | -174,4397 | -74,77536 | -27,8189482 | -102,5943 | 2,286970163 | -412,1205006 |
| 219 | 0 | -81,5416 | -37,8325 | -24,1093598 | -61,94186 | 0,871049076 | -213,9186176 |
| 219 | 2,504407 | -81,5416 | -37,8325 | -24,1093598 | -61,94186 | 0,871049076 | -213,9186176 |
| 219 | 5,008813 | -81,5416 | -37,8325 | -24,1093598 | -61,94186 | 0,871049076 | -213,9186176 |
| 221 | 0 | 32,47826 | 12,12199 | 18,70730921 | 30,8293 | -0,820799674 | 93,73014039 |

| | | | | | | | |
|-----|----------|-----------|-----------|-------------|-----------|--------------|--------------|
| 221 | 2,500135 | 32,47826 | 12,12199 | 18,70730921 | 30,8293 | -0,820799674 | 93,73014039 |
| 221 | 5,00027 | 32,47826 | 12,12199 | 18,70730921 | 30,8293 | -0,820799674 | 93,73014039 |
| 224 | 0 | 208,303 | 86,01943 | 7,303905471 | 93,32334 | -3,008118618 | 447,9273183 |
| 224 | 2,52383 | 208,303 | 86,01943 | 7,303905471 | 93,32334 | -3,008118618 | 447,9273183 |
| 224 | 5,047659 | 208,303 | 86,01943 | 7,303905471 | 93,32334 | -3,008118618 | 447,9273183 |
| 227 | 0 | 124,4317 | 58,07394 | -10,1755309 | 47,89841 | -1,908028996 | 255,6331297 |
| 227 | 2,607363 | 124,4317 | 58,07394 | -10,1755309 | 47,89841 | -1,908028996 | 255,6331297 |
| 227 | 5,214725 | 124,4317 | 58,07394 | -10,1755309 | 47,89841 | -1,908028996 | 255,6331297 |
| 230 | 0 | -159,5546 | -69,27131 | 5,935850115 | -63,33546 | 2,329590638 | -330,8406928 |
| 230 | 2,572163 | -159,5546 | -69,27131 | 5,935850115 | -63,33546 | 2,329590638 | -330,8406928 |
| 230 | 5,144327 | -159,5546 | -69,27131 | 5,935850115 | -63,33546 | 2,329590638 | -330,8406928 |
| 231 | 0 | -189,6 | -79,56726 | 0,255521858 | -79,31173 | 2,671218372 | -399,3608189 |
| 231 | 2,544352 | -189,6 | -79,56726 | 0,255521858 | -79,31173 | 2,671218372 | -399,3608189 |
| 231 | 5,088705 | -189,6 | -79,56726 | 0,255521858 | -79,31173 | 2,671218372 | -399,3608189 |
| 235 | 0 | 204,1392 | 83,49115 | 16,76217796 | 100,2533 | -3,089794073 | 451,9541585 |
| 235 | 2,509705 | 204,1392 | 83,49115 | 16,76217796 | 100,2533 | -3,089794073 | 451,9541585 |
| 235 | 5,01941 | 204,1392 | 83,49115 | 16,76217796 | 100,2533 | -3,089794073 | 451,9541585 |
| 236 | 0 | -146,0211 | -58,63514 | -24,8395602 | -83,4747 | 2,443579238 | -340,5783807 |
| 236 | 2,501881 | -146,0211 | -58,63514 | -24,8395602 | -83,4747 | 2,443579238 | -340,5783807 |
| 236 | 5,003762 | -146,0211 | -58,63514 | -24,8395602 | -83,4747 | 2,443579238 | -340,5783807 |
| 323 | 0 | -65,28546 | -64,52545 | 7,505422527 | -57,02002 | 17,41516581 | -157,3354754 |
| 323 | 2,705585 | -65,28546 | -64,52545 | 7,505422527 | -57,02002 | 17,41516581 | -157,3354754 |
| 323 | 5,41117 | -65,28546 | -64,52545 | 7,505422527 | -57,02002 | 17,41516581 | -157,3354754 |
| 324 | 0 | -105,8497 | -63,92097 | 11,79522527 | -52,12574 | 10,13597838 | -221,7592354 |
| 324 | 2,651523 | -105,8497 | -63,92097 | 11,79522527 | -52,12574 | 10,13597838 | -221,7592354 |
| 324 | 5,303045 | -105,8497 | -63,92097 | 11,79522527 | -52,12574 | 10,13597838 | -221,7592354 |
| 325 | 0 | -148,5666 | -76,86626 | 7,959606014 | -68,90665 | 10,86278084 | -309,9156845 |
| 325 | 2,607363 | -148,5666 | -76,86626 | 7,959606014 | -68,90665 | 10,86278084 | -309,9156845 |
| 325 | 5,214725 | -148,5666 | -76,86626 | 7,959606014 | -68,90665 | 10,86278084 | -309,9156845 |
| 326 | 0 | -179,8595 | -85,21212 | 4,055761501 | -81,15636 | 9,931330079 | -376,6267455 |
| 326 | 2,572163 | -179,8595 | -85,21212 | 4,055761501 | -81,15636 | 9,931330079 | -376,6267455 |
| 326 | 5,144327 | -179,8595 | -85,21212 | 4,055761501 | -81,15636 | 9,931330079 | -376,6267455 |
| 342 | 0 | -145,9131 | -46,7494 | 7,560424621 | -39,18898 | -2,086238022 | -280,7825028 |
| 342 | 2,623968 | -145,9131 | -46,7494 | 7,560424621 | -39,18898 | -2,086238022 | -280,7825028 |
| 342 | 5,247936 | -145,9131 | -46,7494 | 7,560424621 | -39,18898 | -2,086238022 | -280,7825028 |
| 343 | 0 | -138,6699 | -56,27378 | 4,6586926 | -51,61508 | -3,092728543 | -290,0666247 |
| 343 | 2,585908 | -138,6699 | -56,27378 | 4,6586926 | -51,61508 | -3,092728543 | -290,0666247 |
| 343 | 5,171816 | -138,6699 | -56,27378 | 4,6586926 | -51,61508 | -3,092728543 | -290,0666247 |
| 344 | 0 | -188,8755 | -75,8586 | -5,42223135 | -81,28084 | 0,449419853 | -404,5604146 |
| 344 | 2,555252 | -188,8755 | -75,8586 | -5,42223135 | -81,28084 | 0,449419853 | -404,5604146 |
| 344 | 5,110504 | -188,8755 | -75,8586 | -5,42223135 | -81,28084 | 0,449419853 | -404,5604146 |
| 345 | 0 | -218,2646 | -92,2307 | -17,6961081 | -109,9268 | 5,061358717 | -484,6950521 |
| 345 | 2,531798 | -218,2646 | -92,2307 | -17,6961081 | -109,9268 | 5,061358717 | -484,6950521 |
| 345 | 5,063596 | -218,2646 | -92,2307 | -17,6961081 | -109,9268 | 5,061358717 | -484,6950521 |
| 346 | 0 | -200,6328 | -91,56804 | -29,7656327 | -121,3337 | 10,04391259 | -467,8838135 |
| 346 | 2,515189 | -200,6328 | -91,56804 | -29,7656327 | -121,3337 | 10,04391259 | -467,8838135 |
| 346 | 5,030378 | -200,6328 | -91,56804 | -29,7656327 | -121,3337 | 10,04391259 | -467,8838135 |
| 347 | 0 | -114,6133 | -61,11733 | -26,8318388 | -87,94917 | 11,86026421 | -286,0532486 |
| 347 | 2,504407 | -114,6133 | -61,11733 | -26,8318388 | -87,94917 | 11,86026421 | -286,0532486 |
| 347 | 5,008813 | -114,6133 | -61,11733 | -26,8318388 | -87,94917 | 11,86026421 | -286,0532486 |

| | | | | | | | |
|-----|----------|-----------|-----------|-------------|-----------|--------------|--------------|
| 348 | 0 | 10,27006 | -10,62088 | 16,03743223 | 5,416556 | 10,00447431 | 38,53662971 |
| 348 | 2,500135 | 10,27006 | -10,62088 | 16,03743223 | 5,416556 | 10,00447431 | 38,53662971 |
| 348 | 5,00027 | 10,27006 | -10,62088 | 16,03743223 | 5,416556 | 10,00447431 | 38,53662971 |
| 349 | 0 | 122,9851 | 43,13024 | 22,99702588 | 66,12727 | 4,772469182 | 290,8271925 |
| 349 | 2,501979 | 122,9851 | 43,13024 | 22,99702588 | 66,12727 | 4,772469182 | 290,8271925 |
| 349 | 5,003959 | 122,9851 | 43,13024 | 22,99702588 | 66,12727 | 4,772469182 | 290,8271925 |
| 350 | 0 | 199,0836 | 80,01424 | 16,37962129 | 96,39386 | -1,13503726 | 441,513675 |
| 350 | 2,509487 | 199,0836 | 80,01424 | 16,37962129 | 96,39386 | -1,13503726 | 441,513675 |
| 350 | 5,018974 | 199,0836 | 80,01424 | 16,37962129 | 96,39386 | -1,13503726 | 441,513675 |
| 351 | 0 | 214,5612 | 91,86316 | 7,986909364 | 99,85007 | -5,788771229 | 462,9336962 |
| 351 | 2,52383 | 214,5612 | 91,86316 | 7,986909364 | 99,85007 | -5,788771229 | 462,9336962 |
| 351 | 5,047659 | 214,5612 | 91,86316 | 7,986909364 | 99,85007 | -5,788771229 | 462,9336962 |
| 352 | 0 | 204,5359 | 91,65134 | 1,168226038 | 92,81957 | -8,428945298 | 433,3898094 |
| 352 | 2,544352 | 204,5359 | 91,65134 | 1,168226038 | 92,81957 | -8,428945298 | 433,3898094 |
| 352 | 5,088705 | 204,5359 | 91,65134 | 1,168226038 | 92,81957 | -8,428945298 | 433,3898094 |
| 354 | 0 | -60,16017 | -45,14315 | -24,2049534 | -69,3481 | 28,06701359 | -152,1618931 |
| 354 | 2,672821 | -60,16017 | -45,14315 | -24,2049534 | -69,3481 | 28,06701359 | -152,1618931 |
| 354 | 5,345641 | -60,16017 | -45,14315 | -24,2049534 | -69,3481 | 28,06701359 | -152,1618931 |
| 365 | 0 | -194,2675 | -109,7249 | -4,21491674 | -113,9399 | 18,03962573 | -435,2515687 |
| 365 | 2,502183 | -194,2675 | -109,7249 | -4,21491674 | -113,9399 | 18,03962573 | -435,2515687 |
| 365 | 5,004366 | -194,2675 | -109,7249 | -4,21491674 | -113,9399 | 18,03962573 | -435,2515687 |
| 366 | 0 | 29,43003 | 6,49075 | -1,82459978 | 4,66615 | 4,172922666 | 57,40365439 |
| 366 | 2,506689 | 29,43003 | 6,49075 | -1,82459978 | 4,66615 | 4,172922666 | 57,40365439 |
| 366 | 5,013378 | 29,43003 | 6,49075 | -1,82459978 | 4,66615 | 4,172922666 | 57,40365439 |
| 367 | 0 | 190,2674 | 94,6582 | 0,439519096 | 95,09772 | -7,322341807 | 417,0641286 |
| 367 | 2,513691 | 190,2674 | 94,6582 | 0,439519096 | 95,09772 | -7,322341807 | 417,0641286 |
| 367 | 5,027383 | 190,2674 | 94,6582 | 0,439519096 | 95,09772 | -7,322341807 | 417,0641286 |
| 368 | 0 | 280,665 | 146,5954 | 1,69203984 | 148,2875 | -13,84389609 | 622,6628203 |
| 368 | 2,523556 | 280,665 | 146,5954 | 1,69203984 | 148,2875 | -13,84389609 | 622,6628203 |
| 368 | 5,047112 | 280,665 | 146,5954 | 1,69203984 | 148,2875 | -13,84389609 | 622,6628203 |
| 369 | 0 | 330,7306 | 174,9401 | 8,713794403 | 183,6539 | -17,84829831 | 744,8043445 |
| 369 | 2,537563 | 330,7306 | 174,9401 | 8,713794403 | 183,6539 | -17,84829831 | 744,8043445 |
| 369 | 5,075126 | 330,7306 | 174,9401 | 8,713794403 | 183,6539 | -17,84829831 | 744,8043445 |
| 370 | 0 | 82,44704 | 194,4443 | 44,95648068 | 239,4008 | -19,37371868 | 453,7111548 |
| 370 | 2,55129 | 82,44704 | 194,4443 | 44,95648068 | 239,4008 | -19,37371868 | 453,7111548 |
| 370 | 5,10258 | 82,44704 | 194,4443 | 44,95648068 | 239,4008 | -19,37371868 | 453,7111548 |
| 371 | 0 | 158,0273 | 193,6742 | 37,04634449 | 230,7205 | -16,00412264 | 559,1155222 |
| 371 | 2,567192 | 158,0273 | 193,6742 | 37,04634449 | 230,7205 | -16,00412264 | 559,1155222 |
| 371 | 5,134383 | 158,0273 | 193,6742 | 37,04634449 | 230,7205 | -16,00412264 | 559,1155222 |
| 372 | 0 | 294,3155 | 293,2514 | 45,94126065 | 339,1927 | -44,26229812 | 883,868847 |
| 372 | 2,586036 | 294,3155 | 293,2514 | 45,94126065 | 339,1927 | -44,26229812 | 883,868847 |
| 372 | 5,172072 | 294,3155 | 293,2514 | 45,94126065 | 339,1927 | -44,26229812 | 883,868847 |
| 532 | 0 | -285,5436 | -137,5617 | -4,32868416 | -141,8904 | 0,257280148 | -640,7650355 |
| 532 | 2,537563 | -285,5436 | -137,5617 | -4,32868416 | -141,8904 | 0,257280148 | -640,7650355 |
| 532 | 5,075126 | -285,5436 | -137,5617 | -4,32868416 | -141,8904 | 0,257280148 | -640,7650355 |
| 533 | 0 | 246,2002 | 117,2227 | -1,74892422 | 115,4738 | -0,069839704 | 542,4062268 |
| 533 | 2,523556 | 246,2002 | 117,2227 | -1,74892422 | 115,4738 | -0,069839704 | 542,4062268 |
| 533 | 5,047112 | 246,2002 | 117,2227 | -1,74892422 | 115,4738 | -0,069839704 | 542,4062268 |

GAYA GESER BALOK LINGKUNG TENGAH

| FRAME | STA | VD | VL | | VL TOT | VE | COMB1 |
|-------|----------|--------------|-----------|---------------|----------|-----------|---------------|
| | | | VL merata | VL.Koef kejut | | | 1,5(VD+VL+VE) |
| 545 | 0 | -268,9797743 | -220,5594 | -48,4204144 | -268,98 | 1,443015 | -804,7747998 |
| 545 | 2,586036 | -273,9276109 | -220,5594 | -48,4204144 | -268,98 | 1,443015 | -812,1965547 |
| 545 | 5,172072 | -273,9276109 | -220,5594 | -48,4204144 | -268,98 | 1,443015 | -812,1965547 |
| 546 | 0 | -187,4054081 | -173,1895 | -44,8089813 | -217,999 | -2,617307 | -612,0318498 |
| 546 | 2,567192 | -187,4054081 | -173,1895 | -44,8089813 | -217,999 | -2,617307 | -612,0318498 |
| 546 | 5,134383 | -187,4054081 | -173,1895 | -44,8089813 | -217,999 | -2,617307 | -612,0318498 |
| 547 | 0 | -97,68066033 | -169,4427 | -57,2326121 | -226,675 | -2,415035 | -490,1564428 |
| 547 | 2,55129 | -97,68066033 | -169,4427 | -57,2326121 | -226,675 | -2,415035 | -490,1564428 |
| 547 | 5,10258 | -97,68066033 | -169,4427 | -57,2326121 | -226,675 | -2,415035 | -490,1564428 |
| 548 | 0 | -63,58194994 | -25,09898 | 1,31432615 | -23,7847 | -5,508709 | -139,3129741 |
| 548 | 2,506689 | -63,58194994 | -25,09898 | 1,31432615 | -23,7847 | -5,508709 | -139,3129741 |
| 548 | 5,013378 | -63,58194994 | -25,09898 | 1,31432615 | -23,7847 | -5,508709 | -139,3129741 |
| 549 | 0 | 197,7339454 | 105,9149 | -0,02818549 | 105,8867 | -5,02335 | 447,8960124 |
| 549 | 2,502183 | 197,7339454 | 105,9149 | -0,02818549 | 105,8867 | -5,02335 | 447,8960124 |
| 549 | 5,004366 | 197,7339454 | 105,9149 | -0,02818549 | 105,8867 | -5,02335 | 447,8960124 |
| 563 | 0 | -224,1963726 | -104,0116 | 2,96547071 | -101,046 | -3,774875 | -493,5261188 |
| 563 | 2,513691 | -224,1963726 | -104,0116 | 2,96547071 | -101,046 | -3,774875 | -493,5261188 |
| 563 | 5,027383 | -224,1963726 | -104,0116 | 2,96547071 | -101,046 | -3,774875 | -493,5261188 |
| 564 | 0 | -105,0449787 | -25,53818 | 10,7260478 | -14,8121 | -2,301505 | -183,237926 |
| 564 | 2,705585 | -105,0449787 | -25,53818 | 10,7260478 | -14,8121 | -2,301505 | -183,237926 |
| 564 | 5,41117 | -105,0449787 | -25,53818 | 10,7260478 | -14,8121 | -2,301505 | -183,237926 |
| 565 | 0 | -144,7224558 | -50,9371 | 17,2347232 | -33,7024 | 2,908539 | -263,2744418 |
| 565 | 2,651523 | -144,7224558 | -50,9371 | 17,2347232 | -33,7024 | 2,908539 | -263,2744418 |
| 565 | 5,303045 | -144,7224558 | -50,9371 | 17,2347232 | -33,7024 | 2,908539 | -263,2744418 |
| 566 | 0 | -51,72443999 | -18,53085 | 20,063134 | 1,532281 | -0,286256 | -75,71762254 |
| 566 | 2,672821 | -51,72443999 | -18,53085 | 20,063134 | 1,532281 | -0,286256 | -75,71762254 |
| 566 | 5,345641 | -51,72443999 | -18,53085 | 20,063134 | 1,532281 | -0,286256 | -75,71762254 |
| 567 | 0 | -245,5310076 | -59,43258 | 7,73760422 | -51,695 | 3,587004 | -440,4584746 |
| 567 | 2,623968 | -245,5310076 | -59,43258 | 7,73760422 | -51,695 | 3,587004 | -440,4584746 |
| 567 | 5,247936 | -245,5310076 | -59,43258 | 7,73760422 | -51,695 | 3,587004 | -440,4584746 |
| 568 | 0 | -190,8185719 | -74,2942 | 6,11634947 | -68,1778 | 3,784982 | -382,8171589 |
| 568 | 2,585908 | -190,8185719 | -74,2942 | 6,11634947 | -68,1778 | 3,784982 | -382,8171589 |
| 568 | 5,171816 | -190,8185719 | -74,2942 | 6,11634947 | -68,1778 | 3,784982 | -382,8171589 |
| 569 | 0 | -239,7076105 | -89,44928 | -5,37313395 | -94,8224 | 4,198027 | -495,4980002 |
| 569 | 2,555252 | -239,7076105 | -89,44928 | -5,37313395 | -94,8224 | 4,198027 | -495,4980002 |
| 569 | 5,110504 | -239,7076105 | -89,44928 | -5,37313395 | -94,8224 | 4,198027 | -495,4980002 |
| 570 | 0 | -260,4912981 | -98,83797 | -20,6379204 | -119,476 | 4,266479 | -563,5510658 |
| 570 | 2,531798 | -260,4912981 | -98,83797 | -20,6379204 | -119,476 | 4,266479 | -563,5510658 |
| 570 | 5,063596 | -260,4912981 | -98,83797 | -20,6379204 | -119,476 | 4,266479 | -563,5510658 |
| 571 | 0 | -220,1143012 | -85,53241 | -38,0097028 | -123,542 | 3,520761 | -510,2034745 |
| 571 | 2,515189 | -220,1143012 | -85,53241 | -38,0097028 | -123,542 | 3,520761 | -510,2034745 |
| 571 | 5,030378 | -220,1143012 | -85,53241 | -38,0097028 | -123,542 | 3,520761 | -510,2034745 |
| 572 | 0 | -102,0121232 | -40,97779 | -35,0711781 | -76,049 | 1,525414 | -264,8035122 |
| 572 | 2,504407 | -102,0121232 | -40,97779 | -35,0711781 | -76,049 | 1,525414 | -264,8035122 |
| 572 | 5,008813 | -102,0121232 | -40,97779 | -35,0711781 | -76,049 | 1,525414 | -264,8035122 |
| 573 | 0 | 44,18184341 | 14,52304 | 28,818534 | 43,34157 | -0,535727 | 130,4815339 |
| 573 | 2,500135 | 44,18184341 | 14,52304 | 28,818534 | 43,34157 | -0,535727 | 130,4815339 |

| | | | | | | | |
|-----|----------|--------------|-----------|-------------|----------|-----------|--------------|
| 573 | 5,00027 | 44,18184341 | 14,52304 | 28,818534 | 43,34157 | -0,535727 | 130,4815339 |
| 574 | 0 | 252,1659102 | 95,91307 | 6,43148284 | 102,3446 | -3,618481 | 526,3379754 |
| 574 | 2,52383 | 252,1659102 | 95,91307 | 6,43148284 | 102,3446 | -3,618481 | 526,3379754 |
| 574 | 5,047659 | 252,1659102 | 95,91307 | 6,43148284 | 102,3446 | -3,618481 | 526,3379754 |
| 575 | 0 | 170,6789583 | 61,98678 | -12,6797571 | 49,30702 | -2,549539 | 326,1546623 |
| 575 | 2,607363 | 170,6789583 | 61,98678 | -12,6797571 | 49,30702 | -2,549539 | 326,1546623 |
| 575 | 5,214725 | 170,6789583 | 61,98678 | -12,6797571 | 49,30702 | -2,549539 | 326,1546623 |
| 576 | 0 | -198,8541917 | -74,20332 | 8,37916565 | -65,8242 | 2,984177 | -392,5412514 |
| 576 | 2,572163 | -198,8541917 | -74,20332 | 8,37916565 | -65,8242 | 2,984177 | -392,5412514 |
| 576 | 5,144327 | -198,8541917 | -74,20332 | 8,37916565 | -65,8242 | 2,984177 | -392,5412514 |
| 577 | 0 | -229,3513923 | -86,66601 | 2,45731114 | -84,2087 | 3,323495 | -465,3548879 |
| 577 | 2,544352 | -229,3513923 | -86,66601 | 2,45731114 | -84,2087 | 3,323495 | -465,3548879 |
| 577 | 5,088705 | -229,3513923 | -86,66601 | 2,45731114 | -84,2087 | 3,323495 | -465,3548879 |
| 578 | 0 | 250,5292551 | 95,15694 | 19,7187469 | 114,8757 | -3,559528 | 542,7681273 |
| 578 | 2,509705 | 250,5292551 | 95,15694 | 19,7187469 | 114,8757 | -3,559528 | 542,7681273 |
| 578 | 5,01941 | 250,5292551 | 95,15694 | 19,7187469 | 114,8757 | -3,559528 | 542,7681273 |
| 579 | 0 | -181,9225051 | -68,06014 | -34,2894325 | -102,35 | 2,574956 | -422,5456893 |
| 579 | 2,501881 | -181,9225051 | -68,06014 | -34,2894325 | -102,35 | 2,574956 | -422,5456893 |
| 579 | 5,003762 | -181,9225051 | -68,06014 | -34,2894325 | -102,35 | 2,574956 | -422,5456893 |
| 614 | 0 | -151,5848478 | -69,71957 | 5,50500498 | -64,2146 | 19,01736 | -295,1730718 |
| 614 | 2,705585 | -151,5848478 | -69,71957 | 5,50500498 | -64,2146 | 19,01736 | -295,1730718 |
| 614 | 5,41117 | -151,5848478 | -69,71957 | 5,50500498 | -64,2146 | 19,01736 | -295,1730718 |
| 615 | 0 | -161,1033061 | -66,75511 | 15,3824693 | -51,3726 | 10,43202 | -303,0658837 |
| 615 | 2,651523 | -161,1033061 | -66,75511 | 15,3824693 | -51,3726 | 10,43202 | -303,0658837 |
| 615 | 5,303045 | -161,1033061 | -66,75511 | 15,3824693 | -51,3726 | 10,43202 | -303,0658837 |
| 616 | 0 | -189,7233793 | -80,34645 | 10,5306159 | -69,8158 | 11,26918 | -372,4050458 |
| 616 | 2,607363 | -189,7233793 | -80,34645 | 10,5306159 | -69,8158 | 11,26918 | -372,4050458 |
| 616 | 5,214725 | -189,7233793 | -80,34645 | 10,5306159 | -69,8158 | 11,26918 | -372,4050458 |
| 617 | 0 | -214,7322474 | -89,50404 | 6,59252409 | -82,9115 | 10,22889 | -431,1223108 |
| 617 | 2,572163 | -214,7322474 | -89,50404 | 6,59252409 | -82,9115 | 10,22889 | -431,1223108 |
| 617 | 5,144327 | -214,7322474 | -89,50404 | 6,59252409 | -82,9115 | 10,22889 | -431,1223108 |
| 618 | 0 | -238,1125161 | -51,01349 | 8,62183497 | -42,3917 | 0,563088 | -419,9116256 |
| 618 | 2,623968 | -238,1125161 | -51,01349 | 8,62183497 | -42,3917 | 0,563088 | -419,9116256 |
| 618 | 5,247936 | -238,1125161 | -51,01349 | 8,62183497 | -42,3917 | 0,563088 | -419,9116256 |
| 619 | 0 | -181,8396672 | -64,73902 | 7,16600606 | -57,573 | 0,077206 | -359,0032161 |
| 619 | 2,585908 | -181,8396672 | -64,73902 | 7,16600606 | -57,573 | 0,077206 | -359,0032161 |
| 619 | 5,171816 | -181,8396672 | -64,73902 | 7,16600606 | -57,573 | 0,077206 | -359,0032161 |
| 620 | 0 | -237,8288133 | -86,65293 | -5,14143287 | -91,7944 | 3,773192 | -488,7749714 |
| 620 | 2,555252 | -237,8288133 | -86,65293 | -5,14143287 | -91,7944 | 3,773192 | -488,7749714 |
| 620 | 5,110504 | -237,8288133 | -86,65293 | -5,14143287 | -91,7944 | 3,773192 | -488,7749714 |
| 621 | 0 | -268,4658697 | -106,1622 | -21,5573045 | -127,72 | 8,389739 | -581,693467 |
| 621 | 2,531798 | -268,4658697 | -106,1622 | -21,5573045 | -127,72 | 8,389739 | -581,693467 |
| 621 | 5,063596 | -268,4658697 | -106,1622 | -21,5573045 | -127,72 | 8,389739 | -581,693467 |
| 622 | 0 | -239,1411685 | -103,7683 | -40,2114146 | -143,98 | 12,653 | -555,7017574 |
| 622 | 2,515189 | -239,1411685 | -103,7683 | -40,2114146 | -143,98 | 12,653 | -555,7017574 |
| 622 | 5,030378 | -239,1411685 | -103,7683 | -40,2114146 | -143,98 | 12,653 | -555,7017574 |
| 623 | 0 | -128,0105356 | -65,30331 | -37,972269 | -103,276 | 13,30054 | -326,9783625 |
| 623 | 2,504407 | -128,0105356 | -65,30331 | -37,972269 | -103,276 | 13,30054 | -326,9783625 |
| 623 | 5,008813 | -128,0105356 | -65,30331 | -37,972269 | -103,276 | 13,30054 | -326,9783625 |
| 624 | 0 | 17,28078931 | -9,305799 | 25,9948346 | 16,68904 | 10,8966 | 67,29963062 |
| 624 | 2,500135 | 17,28078931 | -9,305799 | 25,9948346 | 16,68904 | 10,8966 | 67,29963062 |

| | | | | | | | |
|-----|----------|--------------|-----------|-------------|----------|-----------|--------------|
| 624 | 5,00027 | 17,28078931 | -9,305799 | 25,9948346 | 16,68904 | 10,8966 | 67,29963062 |
| 625 | 0 | 163,7674086 | 51,12003 | 32,2988516 | 83,41888 | 5,423743 | 378,9150467 |
| 625 | 2,501979 | 163,7674086 | 51,12003 | 32,2988516 | 83,41888 | 5,423743 | 378,9150467 |
| 625 | 5,003959 | 163,7674086 | 51,12003 | 32,2988516 | 83,41888 | 5,423743 | 378,9150467 |
| 626 | 0 | 247,5775276 | 90,08785 | 19,1967207 | 109,2846 | -0,753758 | 534,1625114 |
| 626 | 2,509487 | 247,5775276 | 90,08785 | 19,1967207 | 109,2846 | -0,753758 | 534,1625114 |
| 626 | 5,018974 | 247,5775276 | 90,08785 | 19,1967207 | 109,2846 | -0,753758 | 534,1625114 |
| 627 | 0 | 257,5552502 | 100,5873 | 6,97843471 | 107,5657 | -5,796926 | 538,9860595 |
| 627 | 2,52383 | 257,5552502 | 100,5873 | 6,97843471 | 107,5657 | -5,796926 | 538,9860595 |
| 627 | 5,047659 | 257,5552502 | 100,5873 | 6,97843471 | 107,5657 | -5,796926 | 538,9860595 |
| 628 | 0 | 241,1445786 | 97,87144 | -1,14990418 | 96,72154 | -8,614553 | 493,8773477 |
| 628 | 2,544352 | 241,1445786 | 97,87144 | -1,14990418 | 96,72154 | -8,614553 | 493,8773477 |
| 628 | 5,088705 | 241,1445786 | 97,87144 | -1,14990418 | 96,72154 | -8,614553 | 493,8773477 |
| 629 | 0 | -13,41691574 | -42,82521 | -27,3695907 | -70,1948 | 29,93834 | -80,51005833 |
| 629 | 2,672821 | -13,41691574 | -42,82521 | -27,3695907 | -70,1948 | 29,93834 | -80,51005833 |
| 629 | 5,345641 | -13,41691574 | -42,82521 | -27,3695907 | -70,1948 | 29,93834 | -80,51005833 |
| 630 | 0 | -228,1888086 | -134,5389 | -3,38392712 | -137,923 | 19,00265 | -520,6634474 |
| 630 | 2,502183 | -228,1888086 | -134,5389 | -3,38392712 | -137,923 | 19,00265 | -520,6634474 |
| 630 | 5,004366 | -228,1888086 | -134,5389 | -3,38392712 | -137,923 | 19,00265 | -520,6634474 |
| 631 | 0 | 60,00239321 | 21,35334 | -1,72116683 | 19,63218 | 6,971641 | 129,9093151 |
| 631 | 2,506689 | 60,00239321 | 21,35334 | -1,72116683 | 19,63218 | 6,971641 | 129,9093151 |
| 631 | 5,013378 | 60,00239321 | 21,35334 | -1,72116683 | 19,63218 | 6,971641 | 129,9093151 |
| 632 | 0 | 242,3622111 | 120,8791 | -0,94072822 | 119,9384 | -4,591554 | 536,5635468 |
| 632 | 2,513691 | 242,3622111 | 120,8791 | -0,94072822 | 119,9384 | -4,591554 | 536,5635468 |
| 632 | 5,027383 | 242,3622111 | 120,8791 | -0,94072822 | 119,9384 | -4,591554 | 536,5635468 |
| 633 | 0 | 334,039115 | 172,3886 | -2,53899269 | 169,8496 | -11,49554 | 738,589739 |
| 633 | 2,523556 | 334,039115 | 172,3886 | -2,53899269 | 169,8496 | -11,49554 | 738,589739 |
| 633 | 5,047112 | 334,039115 | 172,3886 | -2,53899269 | 169,8496 | -11,49554 | 738,589739 |
| 634 | 0 | 374,1643142 | 195,1049 | 6,66076198 | 201,7657 | -15,76065 | 840,2539827 |
| 634 | 2,537563 | 374,1643142 | 195,1049 | 6,66076198 | 201,7657 | -15,76065 | 840,2539827 |
| 634 | 5,075126 | 374,1643142 | 195,1049 | 6,66076198 | 201,7657 | -15,76065 | 840,2539827 |
| 635 | 0 | 141,3235555 | 210,979 | 62,1270195 | 273,106 | -17,33318 | 595,644547 |
| 635 | 2,55129 | 141,3235555 | 210,979 | 62,1270195 | 273,106 | -17,33318 | 595,644547 |
| 635 | 5,10258 | 141,3235555 | 210,979 | 62,1270195 | 273,106 | -17,33318 | 595,644547 |
| 636 | 0 | 223,3388986 | 207,511 | 48,8410986 | 256,3521 | -13,626 | 699,0974487 |
| 636 | 2,567192 | 223,3388986 | 207,511 | 48,8410986 | 256,3521 | -13,626 | 699,0974487 |
| 636 | 5,134383 | 223,3388986 | 207,511 | 48,8410986 | 256,3521 | -13,626 | 699,0974487 |
| 637 | 0 | 374,6875943 | 314,3513 | 59,6435447 | 373,9949 | -47,69112 | 1051,487003 |
| 637 | 2,586036 | 374,6875943 | 314,3513 | 59,6435447 | 373,9949 | -47,69112 | 1051,487003 |
| 637 | 5,172072 | 374,6875943 | 314,3513 | 59,6435447 | 373,9949 | -47,69112 | 1051,487003 |
| 771 | 0 | -333,3935087 | -156,4696 | -2,09517518 | -158,565 | -2,729768 | -742,0321113 |
| 771 | 2,537563 | -333,3935087 | -156,4696 | -2,09517518 | -158,565 | -2,729768 | -742,0321113 |
| 771 | 5,075126 | -333,3935087 | -156,4696 | -2,09517518 | -158,565 | -2,729768 | -742,0321113 |
| 772 | 0 | 302,1106316 | 142,2492 | -6,10997683 | 136,1392 | 3,014477 | 661,8964968 |
| 772 | 2,523556 | 302,1106316 | 142,2492 | -6,10997683 | 136,1392 | 3,014477 | 661,8964968 |
| 772 | 5,047112 | 302,1106316 | 142,2492 | -6,10997683 | 136,1392 | 3,014477 | 661,8964968 |

TABEL GAYA GESER KOLOM TEPI

| FRAME | STA | VD | VL | | VL TOT | VE | COMB 1 |
|-------|----------|-----------|-----------|---------------|----------|-----------|---------------|
| | | | VL merata | VL.Koef kejut | | | 1,5(VD+VL+VE) |
| 1 | 0 | -12,22529 | -8,824256 | -1,03552324 | -9,85978 | 4,160579 | -26,88673521 |
| 1 | 5,5 | -12,22529 | -8,824256 | -1,03552324 | -9,85978 | 4,160579 | -26,88673521 |
| 1 | 11 | -12,22529 | -8,824256 | -1,03552324 | -9,85978 | 4,160579 | -26,88673521 |
| 2 | 0 | 151,2839 | 65,78349 | -16,5540112 | 49,22948 | 3,526998 | 306,0605798 |
| 2 | 2,811 | 151,2839 | 65,78349 | -16,5540112 | 49,22948 | 3,526998 | 306,0605798 |
| 2 | 5,622 | 151,2839 | 65,78349 | -16,5540112 | 49,22948 | 3,526998 | 306,0605798 |
| 12 | 0 | -47,96903 | -6,463038 | -8,91081995 | -15,3739 | -6,49939 | -104,7634152 |
| 12 | 3,683 | -47,96903 | -6,463038 | -8,91081995 | -15,3739 | -6,49939 | -104,7634152 |
| 12 | 7,366 | -47,96903 | -6,463038 | -8,91081995 | -15,3739 | -6,49939 | -104,7634152 |
| 41 | 0 | 161,8558 | 78,73878 | -14,9213171 | 63,81746 | -3,522344 | 333,2264338 |
| 41 | 2,811 | 161,8558 | 78,73878 | -14,9213171 | 63,81746 | -3,522344 | 333,2264338 |
| 41 | 5,622 | 161,8558 | 78,73878 | -14,9213171 | 63,81746 | -3,522344 | 333,2264338 |
| 128 | 0 | -810,0533 | -484,8834 | -13,5145435 | -498,398 | 65,39593 | -1864,582944 |
| 128 | 0,179563 | -810,0533 | -484,8834 | -13,5145435 | -498,398 | 65,39593 | -1864,582944 |
| 128 | 0,359125 | -810,0533 | -484,8834 | -13,5145435 | -498,398 | 65,39593 | -1864,582944 |
| 137 | 0 | 582,7361 | 206,9785 | -14,3309345 | 192,6476 | 27,77427 | 1204,736886 |
| 137 | 0,437625 | 582,7361 | 206,9785 | -14,3309345 | 192,6476 | 27,77427 | 1204,736886 |
| 137 | 0,87525 | 582,7361 | 206,9785 | -14,3309345 | 192,6476 | 27,77427 | 1204,736886 |
| 151 | 0 | 440,2964 | 415,767 | 65,3952906 | 481,1623 | -0,318497 | 1381,710191 |
| 151 | 1,703813 | 440,2964 | 415,767 | 65,3952906 | 481,1623 | -0,318497 | 1381,710191 |
| 151 | 3,407625 | 440,2964 | 415,767 | 65,3952906 | 481,1623 | -0,318497 | 1381,710191 |
| 153 | 0 | 206,2128 | 341,6476 | 75,7917649 | 417,4394 | -0,210432 | 935,1626084 |
| 153 | 2,287875 | 206,2128 | 341,6476 | 75,7917649 | 417,4394 | -0,210432 | 935,1626084 |
| 153 | 4,57575 | 206,2128 | 341,6476 | 75,7917649 | 417,4394 | -0,210432 | 935,1626084 |
| 155 | 0 | 227,5299 | 252,5796 | 47,4962214 | 300,0759 | 0,529185 | 792,2024725 |
| 155 | 2,946438 | 227,5299 | 252,5796 | 47,4962214 | 300,0759 | 0,529185 | 792,2024725 |
| 155 | 5,892875 | 227,5299 | 252,5796 | 47,4962214 | 300,0759 | 0,529185 | 792,2024725 |
| 274 | 0 | 177,056 | 94,82413 | 20,0353313 | 114,8595 | -0,741788 | 436,7605641 |
| 274 | 0,451281 | 177,056 | 94,82413 | 20,0353313 | 114,8595 | -0,741788 | 436,7605641 |
| 274 | 0,902563 | 177,056 | 94,82413 | 20,0353313 | 114,8595 | -0,741788 | 436,7605641 |
| 275 | 0 | 440,7442 | 173,498 | 105,683948 | 279,1819 | -8,62978 | 1066,944487 |
| 275 | 0,50025 | 440,7442 | 173,498 | 105,683948 | 279,1819 | -8,62978 | 1066,944487 |
| 275 | 1,0005 | 440,7442 | 173,498 | 105,683948 | 279,1819 | -8,62978 | 1066,944487 |
| 278 | 0 | 1087,548 | 443,2015 | 131,855662 | 575,0571 | -17,84184 | 2467,145207 |
| 278 | 0,672219 | 1087,548 | 443,2015 | 131,855662 | 575,0571 | -17,84184 | 2467,145207 |
| 278 | 1,344438 | 1087,548 | 443,2015 | 131,855662 | 575,0571 | -17,84184 | 2467,145207 |
| 281 | 0 | -960,0649 | -395,3937 | -56,0765401 | -451,47 | 14,43617 | -2095,648459 |
| 281 | 0,967688 | -960,0649 | -395,3937 | -56,0765401 | -451,47 | 14,43617 | -2095,648459 |
| 281 | 1,935375 | -960,0649 | -395,3937 | -56,0765401 | -451,47 | 14,43617 | -2095,648459 |
| 283 | 0 | -692,6893 | -288,5652 | -13,0739687 | -301,639 | 9,952211 | -1476,564366 |
| 283 | 1,388656 | -692,6893 | -288,5652 | -13,0739687 | -301,639 | 9,952211 | -1476,564366 |
| 283 | 2,777313 | -692,6893 | -288,5652 | -13,0739687 | -301,639 | 9,952211 | -1476,564366 |
| 285 | 0 | -453,7578 | -193,6884 | 7,12274353 | -186,566 | 6,485339 | -950,7570986 |
| 285 | 1,936625 | -453,7578 | -193,6884 | 7,12274353 | -186,566 | 6,485339 | -950,7570986 |
| 285 | 3,87325 | -453,7578 | -193,6884 | 7,12274353 | -186,566 | 6,485339 | -950,7570986 |
| 287 | 0 | -280,317 | -126,1346 | 15,0208222 | -111,114 | 4,246218 | -580,7769407 |
| 287 | 2,616594 | -280,317 | -126,1346 | 15,0208222 | -111,114 | 4,246218 | -580,7769407 |

| | | | | | | | |
|-----|----------|-----------|-----------|-------------|----------|-----------|--------------|
| 287 | 5,233188 | -280,317 | -126,1346 | 15,0208222 | -111,114 | 4,246218 | -580,7769407 |
| 294 | 0 | -157,1557 | -79,44453 | 16,7929088 | -62,6516 | 2,829834 | -325,4662121 |
| 294 | 3,432063 | -157,1557 | -79,44453 | 16,7929088 | -62,6516 | 2,829834 | -325,4662121 |
| 294 | 6,864125 | -157,1557 | -79,44453 | 16,7929088 | -62,6516 | 2,829834 | -325,4662121 |
| 296 | 0 | -68,00211 | -44,27235 | 12,2195501 | -32,0528 | 2,157088 | -146,8467392 |
| 296 | 4,390531 | -68,00211 | -44,27235 | 12,2195501 | -32,0528 | 2,157088 | -146,8467392 |
| 296 | 8,781063 | -68,00211 | -44,27235 | 12,2195501 | -32,0528 | 2,157088 | -146,8467392 |
| 301 | 0 | 881,9282 | 373,5412 | 52,026915 | 425,5682 | -11,33846 | 1944,236917 |
| 301 | 1,050875 | 881,9282 | 373,5412 | 52,026915 | 425,5682 | -11,33846 | 1944,236917 |
| 301 | 2,10175 | 881,9282 | 373,5412 | 52,026915 | 425,5682 | -11,33846 | 1944,236917 |
| 303 | 0 | 1173,082 | 504,8463 | 140,583223 | 645,4295 | -15,55838 | 2704,429567 |
| 303 | 0,725844 | 1173,082 | 504,8463 | 140,583223 | 645,4295 | -15,55838 | 2704,429567 |
| 303 | 1,451688 | 1173,082 | 504,8463 | 140,583223 | 645,4295 | -15,55838 | 2704,429567 |
| 307 | 0 | -675,9933 | -303,7228 | -129,802025 | -433,525 | 8,903569 | -1650,921871 |
| 307 | 0,524813 | -675,9933 | -303,7228 | -129,802025 | -433,525 | 8,903569 | -1650,921871 |
| 307 | 1,049625 | -675,9933 | -303,7228 | -129,802025 | -433,525 | 8,903569 | -1650,921871 |
| 309 | 0 | -363,6424 | -147,8581 | 11,2376983 | -136,62 | 4,875965 | -743,0803016 |
| 309 | 2,090438 | -363,6424 | -147,8581 | 11,2376983 | -136,62 | 4,875965 | -743,0803016 |
| 309 | 4,180875 | -363,6424 | -147,8581 | 11,2376983 | -136,62 | 4,875965 | -743,0803016 |
| 311 | 0 | -569,6493 | -245,1451 | -6,28715232 | -251,432 | 7,499764 | -1220,372612 |
| 311 | 1,504406 | -569,6493 | -245,1451 | -6,28715232 | -251,432 | 7,499764 | -1220,372612 |
| 311 | 3,008813 | -569,6493 | -245,1451 | -6,28715232 | -251,432 | 7,499764 | -1220,372612 |
| 321 | 0 | 1089,814 | 501,2196 | -8,28243653 | 492,9371 | 6,595931 | 2384,020878 |
| 321 | 0,774688 | 1089,814 | 501,2196 | -8,28243653 | 492,9371 | 6,595931 | 2384,020878 |
| 321 | 1,549375 | 1089,814 | 501,2196 | -8,28243653 | 492,9371 | 6,595931 | 2384,020878 |
| 385 | 0 | 91,64735 | 62,72493 | -10,0460454 | 52,67889 | -10,92413 | 200,1031525 |
| 385 | 4,390531 | 91,64735 | 62,72493 | -10,0460454 | 52,67889 | -10,92413 | 200,1031525 |
| 385 | 8,781063 | 91,64735 | 62,72493 | -10,0460454 | 52,67889 | -10,92413 | 200,1031525 |
| 386 | 0 | -191,9711 | -106,6808 | 13,5822473 | -93,0986 | 15,79901 | -403,9059764 |
| 386 | 3,432063 | -191,9711 | -106,6808 | 13,5822473 | -93,0986 | 15,79901 | -403,9059764 |
| 386 | 6,864125 | -191,9711 | -106,6808 | 13,5822473 | -93,0986 | 15,79901 | -403,9059764 |
| 389 | 0 | 320,8654 | 158,0659 | -11,2545682 | 146,8113 | -19,47419 | 672,3038324 |
| 389 | 2,616594 | 320,8654 | 158,0659 | -11,2545682 | 146,8113 | -19,47419 | 672,3038324 |
| 389 | 5,233188 | 320,8654 | 158,0659 | -11,2545682 | 146,8113 | -19,47419 | 672,3038324 |
| 393 | 0 | 495,7029 | 227,3542 | -3,15286847 | 224,2013 | -22,5444 | 1046,039778 |
| 393 | 1,936625 | 495,7029 | 227,3542 | -3,15286847 | 224,2013 | -22,5444 | 1046,039778 |
| 393 | 3,87325 | 495,7029 | 227,3542 | -3,15286847 | 224,2013 | -22,5444 | 1046,039778 |
| 398 | 0 | -723,866 | -315,4326 | -16,2359241 | -331,669 | 22,73627 | -1549,197358 |
| 398 | 1,388656 | -723,866 | -315,4326 | -16,2359241 | -331,669 | 22,73627 | -1549,197358 |
| 398 | 2,777313 | -723,866 | -315,4326 | -16,2359241 | -331,669 | 22,73627 | -1549,197358 |
| 401 | 0 | 953,6706 | 393,9987 | 55,954614 | 449,9534 | -13,18352 | 2085,660623 |
| 401 | 0,967688 | 953,6706 | 393,9987 | 55,954614 | 449,9534 | -13,18352 | 2085,660623 |
| 401 | 1,935375 | 953,6706 | 393,9987 | 55,954614 | 449,9534 | -13,18352 | 2085,660623 |
| 411 | 0 | 290,37 | 45,38135 | 90,6495349 | 136,0309 | 51,95021 | 717,5266613 |
| 411 | 0,50025 | 290,37 | 45,38135 | 90,6495349 | 136,0309 | 51,95021 | 717,5266613 |
| 411 | 1,0005 | 290,37 | 45,38135 | 90,6495349 | 136,0309 | 51,95021 | 717,5266613 |
| 412 | 0 | 389,3842 | 270,4971 | 40,6176803 | 311,1148 | -83,8423 | 924,9849588 |
| 412 | 0,451281 | 389,3842 | 270,4971 | 40,6176803 | 311,1148 | -83,8423 | 924,9849588 |
| 412 | 0,902563 | 389,3842 | 270,4971 | 40,6176803 | 311,1148 | -83,8423 | 924,9849588 |
| 414 | 0 | 864,8136 | 437,6217 | 145,426585 | 583,0483 | -71,65983 | 2064,303224 |
| 414 | 0,524812 | 864,8136 | 437,6217 | 145,426585 | 583,0483 | -71,65983 | 2064,303224 |

| | | | | | | | |
|-----|----------|-----------|-----------|-------------|----------|-----------|--------------|
| 414 | 1,049625 | 864,8136 | 437,6217 | 145,426585 | 583,0483 | -71,65983 | 2064,303224 |
| 416 | 0 | -974,3139 | -361,106 | -121,927113 | -483,033 | -20,89655 | -2217,365267 |
| 416 | 0,674719 | -974,3139 | -361,106 | -121,927113 | -483,033 | -20,89655 | -2217,365267 |
| 416 | 1,349438 | -974,3139 | -361,106 | -121,927113 | -483,033 | -20,89655 | -2217,365267 |
| 436 | 0 | -1179,75 | -599,71 | -3,2378946 | -602,948 | 39,40202 | -2614,943815 |
| 436 | 0,774688 | -1179,75 | -599,71 | -3,2378946 | -602,948 | 39,40202 | -2614,943815 |
| 436 | 1,549375 | -1179,75 | -599,71 | -3,2378946 | -602,948 | 39,40202 | -2614,943815 |
| 438 | 0 | -474,7229 | -186,2894 | 16,8529596 | -169,436 | -38,5076 | -1024,000307 |
| 438 | 0,437625 | -474,7229 | -186,2894 | 16,8529596 | -169,436 | -38,5076 | -1024,000307 |
| 438 | 0,87525 | -474,7229 | -186,2894 | 16,8529596 | -169,436 | -38,5076 | -1024,000307 |
| 440 | 0 | 1260,889 | 722,5469 | 41,4482082 | 763,9951 | -177,6013 | 2770,924263 |
| 440 | 0,179563 | 1260,889 | 722,5469 | 41,4482082 | 763,9951 | -177,6013 | 2770,924263 |
| 440 | 0,359125 | 1260,889 | 722,5469 | 41,4482082 | 763,9951 | -177,6013 | 2770,924263 |
| 442 | 0 | -297,189 | -423,69 | -85,4321648 | -509,122 | 38,98037 | -1150,996089 |
| 442 | 2,287875 | -297,189 | -423,69 | -85,4321648 | -509,122 | 38,98037 | -1150,996089 |
| 442 | 4,57575 | -297,189 | -423,69 | -85,4321648 | -509,122 | 38,98037 | -1150,996089 |
| 444 | 0 | -558,5207 | -518,5644 | -77,4778395 | -596,042 | 48,92008 | -1658,464254 |
| 444 | 1,703813 | -558,5207 | -518,5644 | -77,4778395 | -596,042 | 48,92008 | -1658,464254 |
| 444 | 3,407625 | -558,5207 | -518,5644 | -77,4778395 | -596,042 | 48,92008 | -1658,464254 |
| 446 | 0 | -1115,053 | -610,5581 | -25,2047288 | -635,763 | 54,75754 | -2544,086999 |
| 446 | 1,19375 | -1115,053 | -610,5581 | -25,2047288 | -635,763 | 54,75754 | -2544,086999 |
| 446 | 2,3875 | -1115,053 | -610,5581 | -25,2047288 | -635,763 | 54,75754 | -2544,086999 |
| 453 | 0 | 279,8849 | 305,4274 | 53,695146 | 359,1225 | -24,3405 | 922,0003417 |
| 453 | 2,946438 | 279,8849 | 305,4274 | 53,695146 | 359,1225 | -24,3405 | 922,0003417 |
| 453 | 5,892875 | 279,8849 | 305,4274 | 53,695146 | 359,1225 | -24,3405 | 922,0003417 |
| 457 | 0 | 110,6676 | 95,03631 | 2,87168011 | 97,90799 | -53,08779 | 233,2317311 |
| 457 | 3,683 | 110,6676 | 95,03631 | 2,87168011 | 97,90799 | -53,08779 | 233,2317311 |
| 457 | 7,366 | 110,6676 | 95,03631 | 2,87168011 | 97,90799 | -53,08779 | 233,2317311 |
| 462 | 0 | -342,7509 | -124,6329 | 14,1066317 | -110,526 | -7,360104 | -690,9558374 |
| 462 | 2,090438 | -342,7509 | -124,6329 | 14,1066317 | -110,526 | -7,360104 | -690,9558374 |
| 462 | 4,180875 | -342,7509 | -124,6329 | 14,1066317 | -110,526 | -7,360104 | -690,9558374 |
| 465 | 0 | 925,3164 | 389,6216 | 53,7079503 | 443,3296 | -17,09083 | 2027,332818 |
| 465 | 1,050875 | 925,3164 | 389,6216 | 53,7079503 | 443,3296 | -17,09083 | 2027,332818 |
| 465 | 2,10175 | 925,3164 | 389,6216 | 53,7079503 | 443,3296 | -17,09083 | 2027,332818 |
| 467 | 0 | 565,9121 | 230,8164 | 4,42280562 | 235,2392 | 0,914191 | 1203,098195 |
| 467 | 1,504406 | 565,9121 | 230,8164 | 4,42280562 | 235,2392 | 0,914191 | 1203,098195 |
| 467 | 3,008813 | 565,9121 | 230,8164 | 4,42280562 | 235,2392 | 0,914191 | 1203,098195 |
| 472 | 0 | 1326,16 | 599,9129 | 151,549692 | 751,4626 | -58,87117 | 3028,127727 |
| 472 | 0,725844 | 1326,16 | 599,9129 | 151,549692 | 751,4626 | -58,87117 | 3028,127727 |
| 472 | 1,451688 | 1326,16 | 599,9129 | 151,549692 | 751,4626 | -58,87117 | 3028,127727 |
| 535 | 0 | 982,2818 | 492,7048 | 11,3709849 | 504,0758 | 0,774148 | 2230,697642 |
| 535 | 1,19375 | 982,2818 | 492,7048 | 11,3709849 | 504,0758 | 0,774148 | 2230,697642 |
| 535 | 2,3875 | 982,2818 | 492,7048 | 11,3709849 | 504,0758 | 0,774148 | 2230,697642 |

GAYA GESER RENCANA KOLOM TEPI

| Kolom | 128 dan 440 | 137 dan 438 | 321 dan 436 | 535 dan 446 | 151 dan 444 | 153 dan 442 | 155 dan 453 | 12 dan 457 |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tinggi kolom | 0,359 | 0,875 | 1,549 | 2,383 | 3,378 | 4,538 | 5,866 | 7,365 |
| Bawah MU | 640,58 | 547,27 | 2276,15 | 2859,27 | 2703,15 | 2573,8 | 2732,29 | 416,89 |
| Atas MU | 496,81 | 477,31 | 1968,46 | 2598,29 | 2526,56 | 2473,04 | 2549,93 | 2619 |
| VU 1 | 3168,21727 | 1170,948571 | 2740,225952 | 2290,205623 | 1548,167555 | 1112,128691 | 900,4807364 | 412,2050238 |
| VD | 810,05 | 582,73 | 1089,81 | 1115,05 | 558,521 | 297,189 | 279,88 | 110,66 |
| VL | 498,398 | 192,64 | 492,93 | 635,76 | 596,042 | 509,122 | 359,122 | 97,9 |
| VE | 65,395 | 27,774 | 6,595 | 54,757 | 48,92 | 38,98 | 24,34 | 53,087 |
| VU2 =1,5(VD+VL+VE) | 2060,7645 | 1204,716 | 2384,0025 | 2708,3505 | 1805,2245 | 1267,9365 | 995,013 | 392,4705 |
| VU pakai | 2060,7645 | 1170,948571 | 2384,0025 | 2290,205623 | 1548,167555 | 1112,128691 | 900,4807364 | 392,4705 |

| Kolom | 41 dan 2 | 309 dan 462 | 311 dan 467 | 301 dan 465 | 303 dan 472 | 307 dan 414 | 274 dan 412 | 275 dan 411 |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tinggi kolom | 5,624 | 4,172 | 2,999 | 2,093 | 1,445 | 1,049 | 0,902 | 1 |
| Bawah MU | 1039,53 | 1561,61 | 1892,39 | 2267,27 | 2462,83 | 1229,47 | 525,41 | 575 |
| Atas MU | 860,94 | 1557,22 | 1822,29 | 2125,42 | 2221,96 | 1174,53 | 493,06 | 553,22 |
| Vu 1 | 337,9214083 | 747,5623202 | 1238,639547 | 2098,752986 | 3242,069204 | 2291,706387 | 1129,124169 | 1128,22 |
| VD | 161,85 | 363,64 | 569,64 | 925,31 | 1326,16 | 864,81 | 389,38 | 440,74 |
| VL | 63,81 | 136,62 | 251,43 | 443,32 | 751,46 | 583,04 | 311,11 | 279,8 |
| VE | 3,522 | 4,875 | 7,499 | 17,09 | 58,871 | 71,659 | 83,842 | 8,629 |
| VU2 =1,5(VD+VL+VE) | 343,773 | 757,7025 | 1242,8535 | 2078,58 | 3204,7365 | 2279,2635 | 1176,498 | 1093,7535 |
| VU pakai | 337,9214083 | 747,5623202 | 1238,639547 | 2078,58 | 3204,7365 | 2279,2635 | 1129,124169 | 1093,7535 |

| Kolom | 278 dan 416 | 281 dan 401 | 283 dan 398 | 285 dan 393 | 287 dan 389 | 294 dan 386 | 296 dan 385 | 1 |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tinggi kolom | 1,344 | 1,935 | 2,777 | 3,873 | 5,245 | 6,864 | 8,781 | 11 |
| Bawah MU | 1839,07 | 1988,17 | 2309,37 | 2071,07 | 1844,55 | 1485,24 | 995,85 | 567,78 |
| Atas MU | 1627,2 | 2199,34 | 2147,43 | 2162,7 | 1876,09 | 1507,25 | 978,72 | 1196,3 |
| Vu 1 | 2579,06994 | 2164,087855 | 1604,897371 | 1093,150013 | 709,3689228 | 435,9688228 | 224,868466 | 160,3709091 |
| VD | 1087,54 | 953,67 | 723,86 | 495,7 | 320,86 | 191,97 | 91,64 | 12,22 |
| VL | 575,05 | 449,95 | 331,66 | 224,2 | 146,81 | 93,09 | 52,67 | 9,85 |
| VE | 17,841 | 13,183 | 22,736 | 22,544 | 19,474 | 15,799 | 10,924 | 4,16 |
| VU2 =1,5(VD+VL+VE) | 2520,6465 | 2125,2045 | 1617,384 | 1113,666 | 730,716 | 451,2885 | 232,851 | 39,345 |
| VU pakai | 2520,6465 | 2125,2045 | 1604,897371 | 1093,150013 | 709,3689228 | 435,9688228 | 224,868466 | 160,3709091 |

TABEL GAYA GESER KOLOM TENGAH

| FRAME | STA | VD | VL | | VL TOT | VE | COMB 1 |
|-------|----------|-----------|-----------|---------------|--------------|-----------|---------------|
| | | | VL merata | VL.Koef kejut | | | 1,5(VD+VL+VE) |
| 4 | 0 | 252,7769 | 73,03183 | -19,06276237 | 53,96906669 | -0,456311 | 459,4345571 |
| 4 | 2,811 | 252,7769 | 73,03183 | -19,06276237 | 53,96906669 | -0,456311 | 459,4345571 |
| 4 | 5,622 | 252,7769 | 73,03183 | -19,06276237 | 53,96906669 | -0,456311 | 459,4345571 |
| 43 | 0 | 265,9669 | 87,38626 | -17,49830389 | 69,88795768 | -5,915329 | 494,9093649 |
| 43 | 2,811 | 265,9669 | 87,38626 | -17,49830389 | 69,88795768 | -5,915329 | 494,9093649 |
| 43 | 5,622 | 265,9669 | 87,38626 | -17,49830389 | 69,88795768 | -5,915329 | 494,9093649 |
| 543 | 0 | -10,11886 | -9,40631 | -1,122266045 | -10,52857569 | 4,581701 | -24,09859584 |
| 543 | 5,5 | -10,11886 | -9,40631 | -1,122266045 | -10,52857569 | 4,581701 | -24,09859584 |
| 543 | 11 | -10,11886 | -9,40631 | -1,122266045 | -10,52857569 | 4,581701 | -24,09859584 |
| 544 | 0 | -39,17754 | -9,217172 | -12,14491501 | -21,36208674 | -12,23197 | -109,1573938 |
| 544 | 3,683 | -39,17754 | -9,217172 | -12,14491501 | -21,36208674 | -12,23197 | -109,1573938 |
| 544 | 7,366 | -39,17754 | -9,217172 | -12,14491501 | -21,36208674 | -12,23197 | -109,1573938 |
| 551 | 0 | -1010,506 | -572,0036 | -8,745003589 | -580,7486146 | 115,6978 | -2213,335814 |
| 551 | 0,179563 | -1010,506 | -572,0036 | -8,745003589 | -580,7486146 | 115,6978 | -2213,335814 |
| 551 | 0,359125 | -1010,506 | -572,0036 | -8,745003589 | -580,7486146 | 115,6978 | -2213,335814 |
| 555 | 0 | 805,3714 | 332,6128 | -18,12094745 | 314,4918362 | 62,1588 | 1773,033064 |
| 555 | 0,437625 | 805,3714 | 332,6128 | -18,12094745 | 314,4918362 | 62,1588 | 1773,033064 |
| 555 | 0,87525 | 805,3714 | 332,6128 | -18,12094745 | 314,4918362 | 62,1588 | 1773,033064 |
| 560 | 0 | 602,1415 | 466,1625 | 87,92291173 | 554,0853882 | 8,24334 | 1746,705299 |
| 560 | 1,703813 | 602,1415 | 466,1625 | 87,92291173 | 554,0853882 | 8,24334 | 1746,705299 |
| 560 | 3,407625 | 602,1415 | 466,1625 | 87,92291173 | 554,0853882 | 8,24334 | 1746,705299 |
| 561 | 0 | 346,3344 | 374,8829 | 105,3590514 | 480,2419866 | 5,386002 | 1247,943558 |
| 561 | 2,287875 | 346,3344 | 374,8829 | 105,3590514 | 480,2419866 | 5,386002 | 1247,943558 |
| 561 | 4,57575 | 346,3344 | 374,8829 | 105,3590514 | 480,2419866 | 5,386002 | 1247,943558 |
| 562 | 0 | 337,947 | 276,7879 | 64,79456797 | 341,5824757 | 4,071163 | 1025,401021 |
| 562 | 2,946438 | 337,947 | 276,7879 | 64,79456797 | 341,5824757 | 4,071163 | 1025,401021 |
| 562 | 5,892875 | 337,947 | 276,7879 | 64,79456797 | 341,5824757 | 4,071163 | 1025,401021 |
| 585 | 0 | 216,6991 | 99,05566 | 23,75371543 | 122,8093767 | -4,917714 | 501,8860928 |
| 585 | 0,451281 | 216,6991 | 99,05566 | 23,75371543 | 122,8093767 | -4,917714 | 501,8860928 |
| 585 | 0,902563 | 216,6991 | 99,05566 | 23,75371543 | 122,8093767 | -4,917714 | 501,8860928 |
| 586 | 0 | 569,0028 | 205,6781 | 152,441129 | 358,1192609 | -7,646659 | 1379,213163 |
| 586 | 0,50025 | 569,0028 | 205,6781 | 152,441129 | 358,1192609 | -7,646659 | 1379,213163 |
| 586 | 1,0005 | 569,0028 | 205,6781 | 152,441129 | 358,1192609 | -7,646659 | 1379,213163 |
| 587 | 0 | 1362,986 | 512,6721 | 172,2445481 | 684,9165982 | -19,56973 | 3042,499483 |
| 587 | 0,672219 | 1362,986 | 512,6721 | 172,2445481 | 684,9165982 | -19,56973 | 3042,499483 |
| 587 | 1,344438 | 1362,986 | 512,6721 | 172,2445481 | 684,9165982 | -19,56973 | 3042,499483 |
| 588 | 0 | -1179,756 | -447,278 | -61,58987194 | -508,8678391 | 16,97246 | -2507,476481 |
| 588 | 0,967688 | -1179,756 | -447,278 | -61,58987194 | -508,8678391 | 16,97246 | -2507,476481 |
| 588 | 1,935375 | -1179,756 | -447,278 | -61,58987194 | -508,8678391 | 16,97246 | -2507,476481 |
| 589 | 0 | -844,3392 | -319,0903 | -8,471688873 | -327,5619687 | 12,14346 | -1739,636511 |
| 589 | 1,388656 | -844,3392 | -319,0903 | -8,471688873 | -327,5619687 | 12,14346 | -1739,636511 |
| 589 | 2,777313 | -844,3392 | -319,0903 | -8,471688873 | -327,5619687 | 12,14346 | -1739,636511 |
| 590 | 0 | -561,4822 | -210,058 | 12,68977536 | -197,3682004 | 8,164455 | -1126,028979 |
| 590 | 1,936625 | -561,4822 | -210,058 | 12,68977536 | -197,3682004 | 8,164455 | -1126,028979 |
| 590 | 3,87325 | -561,4822 | -210,058 | 12,68977536 | -197,3682004 | 8,164455 | -1126,028979 |

| | | | | | | | |
|-----|----------|-----------|-----------|--------------|--------------|-----------|--------------|
| 591 | 0 | -369,0095 | -135,4134 | 19,67378666 | -115,7396498 | 5,501223 | -718,871945 |
| 591 | 2,616594 | -369,0095 | -135,4134 | 19,67378666 | -115,7396498 | 5,501223 | -718,871945 |
| 591 | 5,233188 | -369,0095 | -135,4134 | 19,67378666 | -115,7396498 | 5,501223 | -718,871945 |
| 596 | 0 | -241,2195 | -85,43595 | 20,59460471 | -64,84134218 | 3,754841 | -453,4589895 |
| 596 | 3,432063 | -241,2195 | -85,43595 | 20,59460471 | -64,84134218 | 3,754841 | -453,4589895 |
| 596 | 6,864125 | -241,2195 | -85,43595 | 20,59460471 | -64,84134218 | 3,754841 | -453,4589895 |
| 597 | 0 | -143,4375 | -48,31099 | 13,39387684 | -34,91711747 | 2,795445 | -263,3386922 |
| 597 | 4,390531 | -143,4375 | -48,31099 | 13,39387684 | -34,91711747 | 2,795445 | -263,3386922 |
| 597 | 8,781063 | -143,4375 | -48,31099 | 13,39387684 | -34,91711747 | 2,795445 | -263,3386922 |
| 601 | 0 | 1127,997 | 425,6419 | 59,69049018 | 485,3323506 | -19,51528 | 2390,720731 |
| 601 | 1,050875 | 1127,997 | 425,6419 | 59,69049018 | 485,3323506 | -19,51528 | 2390,720731 |
| 601 | 2,10175 | 1127,997 | 425,6419 | 59,69049018 | 485,3323506 | -19,51528 | 2390,720731 |
| 602 | 0 | 1502,206 | 578,6904 | 184,205575 | 762,895971 | -25,50703 | 3359,393065 |
| 602 | 0,725844 | 1502,206 | 578,6904 | 184,205575 | 762,895971 | -25,50703 | 3359,393065 |
| 602 | 1,451688 | 1502,206 | 578,6904 | 184,205575 | 762,895971 | -25,50703 | 3359,393065 |
| 605 | 0 | -864,3115 | -342,3069 | -180,5824914 | -522,8893744 | 15,02802 | -2058,259206 |
| 605 | 0,524813 | -864,3115 | -342,3069 | -180,5824914 | -522,8893744 | 15,02802 | -2058,259206 |
| 605 | 1,049625 | -864,3115 | -342,3069 | -180,5824914 | -522,8893744 | 15,02802 | -2058,259206 |
| 606 | 0 | -527,8203 | -164,6757 | 15,41665089 | -149,2590149 | 8,812312 | -1002,400477 |
| 606 | 2,090438 | -527,8203 | -164,6757 | 15,41665089 | -149,2590149 | 8,812312 | -1002,400477 |
| 606 | 4,180875 | -527,8203 | -164,6757 | 15,41665089 | -149,2590149 | 8,812312 | -1002,400477 |
| 607 | 0 | -739,7588 | -276,2964 | -2,306281312 | -278,6026892 | 13,55126 | -1507,215383 |
| 607 | 1,504406 | -739,7588 | -276,2964 | -2,306281312 | -278,6026892 | 13,55126 | -1507,215383 |
| 607 | 3,008813 | -739,7588 | -276,2964 | -2,306281312 | -278,6026892 | 13,55126 | -1507,215383 |
| 613 | 0 | 1372,597 | 636,3411 | -22,25111137 | 614,0900323 | 27,21596 | 3020,854706 |
| 613 | 0,774688 | 1372,597 | 636,3411 | -22,25111137 | 614,0900323 | 27,21596 | 3020,854706 |
| 613 | 1,549375 | 1372,597 | 636,3411 | -22,25111137 | 614,0900323 | 27,21596 | 3020,854706 |
| 641 | 0 | 162,5616 | 66,71687 | -11,23396756 | 55,48290278 | -11,58942 | 309,6826665 |
| 641 | 4,390531 | 162,5616 | 66,71687 | -11,23396756 | 55,48290278 | -11,58942 | 309,6826665 |
| 641 | 8,781063 | 162,5616 | 66,71687 | -11,23396756 | 55,48290278 | -11,58942 | 309,6826665 |
| 642 | 0 | -268,8088 | -112,0213 | 17,4801733 | -94,54109906 | 16,39878 | -520,4266649 |
| 642 | 3,432063 | -268,8088 | -112,0213 | 17,4801733 | -94,54109906 | 16,39878 | -520,4266649 |
| 642 | 6,864125 | -268,8088 | -112,0213 | 17,4801733 | -94,54109906 | 16,39878 | -520,4266649 |
| 643 | 0 | 400,9939 | 166,2704 | -16,06789514 | 150,2025521 | -20,1164 | 796,6200204 |
| 643 | 2,616594 | 400,9939 | 166,2704 | -16,06789514 | 150,2025521 | -20,1164 | 796,6200204 |
| 643 | 5,233188 | 400,9939 | 166,2704 | -16,06789514 | 150,2025521 | -20,1164 | 796,6200204 |
| 644 | 0 | 594,532 | 241,7575 | -8,992838115 | 232,7646741 | -23,12492 | 1206,257636 |
| 644 | 1,936625 | 594,532 | 241,7575 | -8,992838115 | 232,7646741 | -23,12492 | 1206,257636 |
| 644 | 3,87325 | 594,532 | 241,7575 | -8,992838115 | 232,7646741 | -23,12492 | 1206,257636 |
| 648 | 0 | -869,574 | -342,3173 | -11,18207023 | -353,4993711 | 22,97707 | -1800,144424 |
| 648 | 1,388656 | -869,574 | -342,3173 | -11,18207023 | -353,4993711 | 22,97707 | -1800,144424 |
| 648 | 2,777313 | -869,574 | -342,3173 | -11,18207023 | -353,4993711 | 22,97707 | -1800,144424 |
| 649 | 0 | 1176,766 | 439,0582 | 60,7504209 | 499,8085727 | -12,08886 | 2496,7286 |
| 649 | 0,967688 | 1176,766 | 439,0582 | 60,7504209 | 499,8085727 | -12,08886 | 2496,7286 |
| 649 | 1,935375 | 1176,766 | 439,0582 | 60,7504209 | 499,8085727 | -12,08886 | 2496,7286 |
| 652 | 0 | 417,6558 | 67,17172 | 136,171981 | 203,3436984 | 58,65728 | 1019,485154 |
| 652 | 0,50025 | 417,6558 | 67,17172 | 136,171981 | 203,3436984 | 58,65728 | 1019,485154 |
| 652 | 1,0005 | 417,6558 | 67,17172 | 136,171981 | 203,3436984 | 58,65728 | 1019,485154 |
| 653 | 0 | 421,3159 | 286,7713 | 46,04390346 | 332,8151832 | -95,49333 | 987,9565932 |

| | | | | | | | |
|-----|----------|-----------|-----------|--------------|--------------|-----------|--------------|
| 653 | 0,451281 | 421,3159 | 286,7713 | 46,04390346 | 332,8151832 | -95,49333 | 987,9565932 |
| 653 | 0,902563 | 421,3159 | 286,7713 | 46,04390346 | 332,8151832 | -95,49333 | 987,9565932 |
| 654 | 0 | 1017,446 | 486,1407 | 197,7890679 | 683,929766 | -85,47371 | 2423,853315 |
| 654 | 0,524812 | 1017,446 | 486,1407 | 197,7890679 | 683,929766 | -85,47371 | 2423,853315 |
| 654 | 1,049625 | 1017,446 | 486,1407 | 197,7890679 | 683,929766 | -85,47371 | 2423,853315 |
| 655 | 0 | -1265,689 | -418,4004 | -160,9291675 | -579,3295553 | -25,55506 | -2805,861134 |
| 655 | 0,674719 | -1265,689 | -418,4004 | -160,9291675 | -579,3295553 | -25,55506 | -2805,861134 |
| 655 | 1,349438 | -1265,689 | -418,4004 | -160,9291675 | -579,3295553 | -25,55506 | -2805,861134 |
| 661 | 0 | -1480,523 | -737,863 | 10,18878595 | -727,6742308 | 21,95979 | -3279,356522 |
| 661 | 0,774688 | -1480,523 | -737,863 | 10,18878595 | -727,6742308 | 21,95979 | -3279,356522 |
| 661 | 1,549375 | -1480,523 | -737,863 | 10,18878595 | -727,6742308 | 21,95979 | -3279,356522 |
| 662 | 0 | -788,1195 | -313,9231 | 20,12372134 | -293,7994245 | -69,22056 | -1726,709179 |
| 662 | 0,437625 | -788,1195 | -313,9231 | 20,12372134 | -293,7994245 | -69,22056 | -1726,709179 |
| 662 | 0,87525 | -788,1195 | -313,9231 | 20,12372134 | -293,7994245 | -69,22056 | -1726,709179 |
| 663 | 0 | 1240,141 | 792,5019 | 34,62121163 | 827,1231133 | -219,5988 | 2771,498424 |
| 663 | 0,179563 | 1240,141 | 792,5019 | 34,62121163 | 827,1231133 | -219,5988 | 2771,498424 |
| 663 | 0,359125 | 1240,141 | 792,5019 | 34,62121163 | 827,1231133 | -219,5988 | 2771,498424 |
| 664 | 0 | -434,1104 | -458,5819 | -115,206574 | -573,7884296 | 34,30712 | -1460,387572 |
| 664 | 2,287875 | -434,1104 | -458,5819 | -115,206574 | -573,7884296 | 34,30712 | -1460,387572 |
| 664 | 4,57575 | -434,1104 | -458,5819 | -115,206574 | -573,7884296 | 34,30712 | -1460,387572 |
| 665 | 0 | -713,7316 | -572,5109 | -100,44159 | -672,9525257 | 42,19763 | -2016,729803 |
| 665 | 1,703813 | -713,7316 | -572,5109 | -100,44159 | -672,9525257 | 42,19763 | -2016,729803 |
| 665 | 3,407625 | -713,7316 | -572,5109 | -100,44159 | -672,9525257 | 42,19763 | -2016,729803 |
| 666 | 0 | -1317,429 | -701,0575 | -17,1756347 | -718,2330904 | 44,59014 | -2986,607868 |
| 666 | 1,19375 | -1317,429 | -701,0575 | -17,1756347 | -718,2330904 | 44,59014 | -2986,607868 |
| 666 | 2,3875 | -1317,429 | -701,0575 | -17,1756347 | -718,2330904 | 44,59014 | -2986,607868 |
| 670 | 0 | 394,9199 | 330,921 | 71,17875133 | 402,0997165 | -21,76195 | 1162,886514 |
| 670 | 2,946438 | 394,9199 | 330,921 | 71,17875133 | 402,0997165 | -21,76195 | 1162,886514 |
| 670 | 5,892875 | 394,9199 | 330,921 | 71,17875133 | 402,0997165 | -21,76195 | 1162,886514 |
| 673 | 0 | 72,54911 | 93,24981 | 0,238083784 | 93,48788987 | -63,96729 | 153,1045685 |
| 673 | 3,683 | 72,54911 | 93,24981 | 0,238083784 | 93,48788987 | -63,96729 | 153,1045685 |
| 673 | 7,366 | 72,54911 | 93,24981 | 0,238083784 | 93,48788987 | -63,96729 | 153,1045685 |
| 676 | 0 | -505,6406 | -140,775 | 18,01568759 | -122,7592876 | -0,404781 | -943,2069495 |
| 676 | 2,090438 | -505,6406 | -140,775 | 18,01568759 | -122,7592876 | -0,404781 | -943,2069495 |
| 676 | 4,180875 | -505,6406 | -140,775 | 18,01568759 | -122,7592876 | -0,404781 | -943,2069495 |
| 678 | 0 | 1152,793 | 446,0322 | 62,45867867 | 508,4908496 | -32,82402 | 2442,690184 |
| 678 | 1,050875 | 1152,793 | 446,0322 | 62,45867867 | 508,4908496 | -32,82402 | 2442,690184 |
| 678 | 2,10175 | 1152,793 | 446,0322 | 62,45867867 | 508,4908496 | -32,82402 | 2442,690184 |
| 679 | 0 | 729,5691 | 263,135 | 1,053056633 | 264,1880415 | -10,26241 | 1475,242099 |
| 679 | 1,504406 | 729,5691 | 263,135 | 1,053056633 | 264,1880415 | -10,26241 | 1475,242099 |
| 679 | 3,008813 | 729,5691 | 263,135 | 1,053056633 | 264,1880415 | -10,26241 | 1475,242099 |
| 682 | 0 | 1614,944 | 684,5482 | 197,0587353 | 881,6069472 | -79,53971 | 3625,516959 |
| 682 | 0,725844 | 1614,944 | 684,5482 | 197,0587353 | 881,6069472 | -79,53971 | 3625,516959 |
| 682 | 1,451688 | 1614,944 | 684,5482 | 197,0587353 | 881,6069472 | -79,53971 | 3625,516959 |
| 773 | 0 | 1188,399 | 578,5808 | 2,719766267 | 581,3005293 | 13,85102 | 2675,326161 |
| 773 | 1,19375 | 1188,399 | 578,5808 | 2,719766267 | 581,3005293 | 13,85102 | 2675,326161 |
| 773 | 2,3875 | 1188,399 | 578,5808 | 2,719766267 | 581,3005293 | 13,85102 | 2675,326161 |

GAYA GESER RENCANA KOLOM TENGAH

| Kolom | 551 dan 663 | 555 dan 662 | 613 dan 661 | 773 dan 666 | 560 dan 665 | 561 dan 664 | 562 dan 670 | 544 dan 673 |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tinggi kolom | 0,359 | 0,875 | 1,549 | 2,383 | 3,378 | 4,538 | 5,866 | 7,365 |
| Bawah MU | 654,04 | 818,41 | 2795,61 | 3394,95 | 3337,64 | 3297,43 | 3434,25 | 2393,19 |
| Atas MU | 518,48 | 702,88 | 2441,31 | 3102,32 | 3134,1 | 3182,3 | 3204,46 | 321,21 |
| VU 1 | 3266,072423 | 1738,617143 | 3380,839251 | 2726,508603 | 1915,849615 | 1427,882327 | 1131,726901 | 368,5539715 |
| VD | 1010,51 | 805,37 | 1372,59 | 1317,43 | 602,14 | 434,11 | 394,91 | 72,54 |
| VL | 580,74 | 314,49 | 614,09 | 718,23 | 554,08 | 573,78 | 402,09 | 93,48 |
| VE | 115,6978 | 62,1588 | 27,21596 | 13,85102 | 8,243 | 34,307 | 21,762 | 63,967 |
| VU2 =1,5(VD+VL+VE) | 2560,4217 | 1773,0282 | 3020,84394 | 3074,26653 | 1746,6945 | 1563,2955 | 1228,143 | 344,9805 |
| VU pakai | 2560,4217 | 1738,617143 | 3020,84394 | 2726,508603 | 1746,6945 | 1427,882327 | 1131,726901 | 344,9805 |

| Kolom | 43 dan 4 | 606 dan 676 | 607 dan 679 | 601 dan 678 | 602 dan 682 | 605 dan 684 | 585 dan 653 | 586 dan 652 |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tinggi kolom | 5,624 | 4,172 | 2,999 | 2,093 | 1,445 | 1,049 | 0,902 | 1 |
| Bawah MU | 1474,45 | 2072,36 | 2286,16 | 2723,59 | 2938,5 | 1442,95 | 564,7 | 742,65 |
| Atas MU | 1286,36 | 2052,75 | 2243,11 | 2563,59 | 2668,84 | 1381,39 | 530,83 | 714,01 |
| Vu 1 | 490,8979374 | 988,7607862 | 1510,260087 | 2526,125179 | 3880,512111 | 2692,41821 | 1214,556541 | 1456,66 |
| VD | 265,96 | 527,82 | 729,56 | 1152,79 | 1502,2 | 864,31 | 421,31 | 569 |
| VL | 69,88 | 149,23 | 264,18 | 508,49 | 762,89 | 522,88 | 332,81 | 358,11 |
| VE | 5,915 | 8,812 | 10,262 | 32,824 | 25,507 | 15,028 | 95,493 | 7,646 |
| VU2 =1,5(VD+VL+VE) | 512,6325 | 1028,793 | 1506,003 | 2541,156 | 3435,8955 | 2103,327 | 1274,4195 | 1402,134 |
| VU pakai | 490,8979374 | 988,7607862 | 1506,003 | 2526,125179 | 3435,8955 | 2103,327 | 1214,556541 | 1402,134 |

| Kolom | 587 dan 655 | 588 dan 649 | 589 dan 648 | 590 dan 644 | 591 dan 643 | 596 dan 642 | 597 dan 641 | 543 |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Tinggi kolom | 1,344 | 1,935 | 2,777 | 3,873 | 5,245 | 6,864 | 8,781 | 11 |
| Bawah MU | 2233,84 | 2352,03 | 2635,71 | 2354,43 | 1867,88 | 1831,46 | 1420,51 | 504,44 |
| Atas MU | 1989,99 | 2585,91 | 2467,44 | 2442,27 | 1865,74 | 1862,25 | 1410,81 | 1497,48 |
| Vu 1 | 3142,730655 | 2551,906977 | 1837,648542 | 1238,497289 | 711,8436606 | 538,1279138 | 322,4370801 | 181,9927273 |
| VD | 1265,69 | 1176,76 | 844,33 | 561,48 | 369,01 | 268,808 | 162,56 | 10,11 |
| VL | 579,33 | 499,8 | 327,56 | 197,36 | 115,74 | 94,541 | 55,48 | 10,52 |
| VE | 25,555 | 12,0888 | 12,143 | 8,164 | 5,501 | 16,398 | 11,589 | 4,581 |
| VU2 =1,5(VD+VL+VE) | 2805,8625 | 2532,9732 | 1776,0495 | 1150,506 | 735,3765 | 569,6205 | 344,4435 | 37,8165 |
| VU pakai | 2805,8625 | 2551,906977 | 1776,0495 | 1150,506 | 711,8436606 | 538,1279138 | 322,4370801 | 181,9927273 |

LAMPIRAN

OUTPUT SAP :

**GAYA AXIAL BALOK LENGKUNG TEPI
GAYA AXIAL BALOK LENGKUNG TENGAH
GAYA AXIAL KOLOM TEPI
GAYA AXIAL KOLOM TENGAH**

UNIVERSITAS ISLAMAH WINDOANINGRA
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GAYA AXIAL BALOK LENGKUNG TEPI

| FRAME | STA | PD | PL | | PL TOT | ME | | COMB1 1,3PD + 2 (PQ+PP) | COMB 2 1,3PD + 2 (PQ+PP)+1PEX | COMB 3 1,3PD + 2 (PQ+PP)+1PEY |
|-------|----------|-----------|-----------|---------------|-----------|-----------|-----------|----------------------------|----------------------------------|----------------------------------|
| | | | PL merata | PL.Koef kejut | | PE X | PE Y | | | |
| 13 | 0 | -3085,103 | -2403,884 | -272,1917444 | -2676,076 | 22,33319 | 0,265191 | -9362,785371 | -9340,452184 | -9362,52018 |
| 13 | 2,586036 | -3085,103 | -2403,884 | -272,1917444 | -2676,076 | 22,33319 | 0,265191 | -9362,785371 | -9340,452184 | -9362,52018 |
| 13 | 5,172072 | -3085,103 | -2403,884 | -272,1917444 | -2676,076 | 22,33319 | 0,265191 | -9362,785371 | -9340,452184 | -9362,52018 |
| 14 | 0 | -2810,248 | -2111,235 | -219,9143919 | -2331,15 | 22,24224 | -0,598497 | -8315,622177 | -8293,379935 | -8316,220674 |
| 14 | 2,567192 | -2810,248 | -2111,235 | -219,9143919 | -2331,15 | 22,24224 | -0,598497 | -8315,622177 | -8293,379935 | -8316,220674 |
| 14 | 5,134383 | -2810,248 | -2111,235 | -219,9143919 | -2331,15 | 22,24224 | -0,598497 | -8315,622177 | -8293,379935 | -8316,220674 |
| 15 | 0 | -2561,195 | -1743,825 | -141,7894072 | -1885,615 | 22,01153 | -0,815073 | -7100,783594 | -7078,77206 | -7101,598667 |
| 15 | 2,55129 | -2561,195 | -1743,825 | -141,7894072 | -1885,615 | 22,01153 | -0,815073 | -7100,783594 | -7078,77206 | -7101,598667 |
| 15 | 5,10258 | -2561,195 | -1743,825 | -141,7894072 | -1885,615 | 22,01153 | -0,815073 | -7100,783594 | -7078,77206 | -7101,598667 |
| 19 | 0 | 590,6806 | -61,61395 | -77,13671682 | -138,7507 | 56,48126 | 4,836888 | 490,3834838 | 546,8647399 | 485,5465953 |
| 19 | 2,506689 | 590,6806 | -61,61395 | -77,13671682 | -138,7507 | 56,48126 | 4,836888 | 490,3834838 | 546,8647399 | 485,5465953 |
| 19 | 5,013378 | 590,6806 | -61,61395 | -77,13671682 | -138,7507 | 56,48126 | 4,836888 | 490,3834838 | 546,8647399 | 485,5465953 |
| 20 | 0 | -212,3433 | -542,7682 | -90,61015095 | -633,3784 | 121,8743 | -3,286117 | -1542,803021 | -1420,928734 | -1546,089138 |
| 20 | 2,502183 | -212,3433 | -542,7682 | -90,61015095 | -633,3784 | 121,8743 | -3,286117 | -1542,803021 | -1420,928734 | -1546,089138 |
| 20 | 5,004366 | -212,3433 | -542,7682 | -90,61015095 | -633,3784 | 121,8743 | -3,286117 | -1542,803021 | -1420,928734 | -1546,089138 |
| 164 | 0 | -8,554791 | -277,4067 | -62,85744549 | -340,2642 | 28,77985 | -2,450406 | -691,649597 | -662,86975 | -694,1000034 |
| 164 | 2,513691 | -8,554791 | -277,4067 | -62,85744549 | -340,2642 | 28,77985 | -2,450406 | -691,649597 | -662,86975 | -694,1000034 |
| 164 | 5,027383 | -8,554791 | -277,4067 | -62,85744549 | -340,2642 | 28,77985 | -2,450406 | -691,649597 | -662,86975 | -694,1000034 |
| 167 | 0 | -5903,91 | -2229,787 | -204,3327125 | -2434,12 | -7,134563 | -18,38598 | -12543,32299 | -12550,45755 | -12561,70897 |
| 167 | 2,705585 | -5903,91 | -2229,787 | -204,3327125 | -2434,12 | -7,134563 | -18,38598 | -12543,32299 | -12550,45755 | -12561,70897 |
| 167 | 5,41117 | -5903,91 | -2229,787 | -204,3327125 | -2434,12 | -7,134563 | -18,38598 | -12543,32299 | -12550,45755 | -12561,70897 |
| 187 | 0 | -5746,395 | -2146,181 | -213,4317748 | -2359,613 | -7,35053 | -19,89967 | -12189,53945 | -12196,88998 | -12209,43912 |
| 187 | 2,651523 | -5746,395 | -2146,181 | -213,4317748 | -2359,613 | -7,35053 | -19,89967 | -12189,53945 | -12196,88998 | -12209,43912 |
| 187 | 5,303045 | -5746,395 | -2146,181 | -213,4317748 | -2359,613 | -7,35053 | -19,89967 | -12189,53945 | -12196,88998 | -12209,43912 |
| 213 | 0 | -5689,737 | -2203,588 | -271,9644098 | -2475,552 | -20,52212 | -10,97038 | -12347,76175 | -12368,28387 | -12358,73213 |
| 213 | 2,672821 | -5689,737 | -2203,588 | -271,9644098 | -2475,552 | -20,52212 | -10,97038 | -12347,76175 | -12368,28387 | -12358,73213 |
| 213 | 5,345641 | -5689,737 | -2203,588 | -271,9644098 | -2475,552 | -20,52212 | -10,97038 | -12347,76175 | -12368,28387 | -12358,73213 |
| 214 | 0 | -5463,813 | -2092,595 | -286,8877501 | -2379,483 | -23,27731 | -15,29073 | -11861,9226 | -11885,1999 | -11877,21333 |
| 214 | 2,623968 | -5463,813 | -2092,595 | -286,8877501 | -2379,483 | -23,27731 | -15,29073 | -11861,9226 | -11885,1999 | -11877,21333 |
| 214 | 5,247936 | -5463,813 | -2092,595 | -286,8877501 | -2379,483 | -23,27731 | -15,29073 | -11861,9226 | -11885,1999 | -11877,21333 |
| 215 | 0 | -5011,042 | -1909,637 | -295,4541934 | -2205,091 | -28,11106 | -16,03839 | -10924,5368 | -10952,64786 | -10940,57519 |
| 215 | 2,585908 | -5011,042 | -1909,637 | -295,4541934 | -2205,091 | -28,11106 | -16,03839 | -10924,5368 | -10952,64786 | -10940,57519 |
| 215 | 5,171816 | -5011,042 | -1909,637 | -295,4541934 | -2205,091 | -28,11106 | -16,03839 | -10924,5368 | -10952,64786 | -10940,57519 |

| | | | | | | | | | | |
|-----|----------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 216 | 0 | -4382,444 | -1635,728 | -287,5824263 | -1923,311 | -35,52065 | -17,36101 | -9543,798993 | -9579,319638 | -9561,160006 |
| 216 | 2,555252 | -4382,444 | -1635,728 | -287,5824263 | -1923,311 | -35,52065 | -17,36101 | -9543,798993 | -9579,319638 | -9561,160006 |
| 216 | 5,110504 | -4382,444 | -1635,728 | -287,5824263 | -1923,311 | -35,52065 | -17,36101 | -9543,798993 | -9579,319638 | -9561,160006 |
| 217 | 0 | -3453,77 | -1239,538 | -233,6709002 | -1473,209 | -46,81314 | -18,47403 | -7436,318678 | -7483,13182 | -7454,792707 |
| 217 | 2,531798 | -3453,77 | -1239,538 | -233,6709002 | -1473,209 | -46,81314 | -18,47403 | -7436,318678 | -7483,13182 | -7454,792707 |
| 217 | 5,063596 | -3453,77 | -1239,538 | -233,6709002 | -1473,209 | -46,81314 | -18,47403 | -7436,318678 | -7483,13182 | -7454,792707 |
| 218 | 0 | -2247,37 | -717,9052 | -90,96598328 | -808,8912 | -62,37124 | -15,80892 | -4539,363951 | -4601,735195 | -4555,17287 |
| 218 | 2,515189 | -2247,37 | -717,9052 | -90,96598328 | -808,8912 | -62,37124 | -15,80892 | -4539,363951 | -4601,735195 | -4555,17287 |
| 218 | 5,030378 | -2247,37 | -717,9052 | -90,96598328 | -808,8912 | -62,37124 | -15,80892 | -4539,363951 | -4601,735195 | -4555,17287 |
| 219 | 0 | -1553,507 | -404,5506 | 41,11038204 | -363,4402 | -71,26951 | -8,125661 | -2746,439235 | -2817,708745 | -2754,564896 |
| 219 | 2,504407 | -1553,507 | -404,5506 | 41,11038204 | -363,4402 | -71,26951 | -8,125661 | -2746,439235 | -2817,708745 | -2754,564896 |
| 219 | 5,008813 | -1553,507 | -404,5506 | 41,11038204 | -363,4402 | -71,26951 | -8,125661 | -2746,439235 | -2817,708745 | -2754,564896 |
| 221 | 0 | -1370,563 | -306,7052 | 62,67729632 | -244,0279 | -71,99095 | 4,011141 | -2269,78806 | -2341,779015 | -2265,776919 |
| 221 | 2,500135 | -1370,563 | -306,7052 | 62,67729632 | -244,0279 | -71,99095 | 4,011141 | -2269,78806 | -2341,779015 | -2265,776919 |
| 221 | 5,00027 | -1370,563 | -306,7052 | 62,67729632 | -244,0279 | -71,99095 | 4,011141 | -2269,78806 | -2341,779015 | -2265,776919 |
| 224 | 0 | -3907,446 | -1343,907 | -234,6241744 | -1578,531 | -31,04057 | -19,13767 | -8236,742849 | -8267,783423 | -8255,880524 |
| 224 | 2,52383 | -3907,446 | -1343,907 | -234,6241744 | -1578,531 | -31,04057 | -19,13767 | -8236,742849 | -8267,783423 | -8255,880524 |
| 224 | 5,047659 | -3907,446 | -1343,907 | -234,6241744 | -1578,531 | -31,04057 | -19,13767 | -8236,742849 | -8267,783423 | -8255,880524 |
| 227 | 0 | -5503,213 | -2028,268 | -229,1118783 | -2257,38 | -10,40837 | -20,87417 | -11668,93777 | -11679,34614 | -11689,81193 |
| 227 | 2,607363 | -5503,213 | -2028,268 | -229,1118783 | -2257,38 | -10,40837 | -20,87417 | -11668,93777 | -11679,34614 | -11689,81193 |
| 227 | 5,214725 | -5503,213 | -2028,268 | -229,1118783 | -2257,38 | -10,40837 | -20,87417 | -11668,93777 | -11679,34614 | -11689,81193 |
| 230 | 0 | -5152,527 | -1870,82 | -242,9444103 | -2113,764 | -14,61874 | -21,967 | -10925,81352 | -10940,43226 | -10947,78052 |
| 230 | 2,572163 | -5152,527 | -1870,82 | -242,9444103 | -2113,764 | -14,61874 | -21,967 | -10925,81352 | -10940,43226 | -10947,78052 |
| 230 | 5,144327 | -5152,527 | -1870,82 | -242,9444103 | -2113,764 | -14,61874 | -21,967 | -10925,81352 | -10940,43226 | -10947,78052 |
| 231 | 0 | -4642,176 | -1651,783 | -248,859522 | -1900,642 | -21,09804 | -22,38687 | -9836,11283 | -9857,210874 | -9858,499704 |
| 231 | 2,544352 | -4642,176 | -1651,783 | -248,859522 | -1900,642 | -21,09804 | -22,38687 | -9836,11283 | -9857,210874 | -9858,499704 |
| 231 | 5,088705 | -4642,176 | -1651,783 | -248,859522 | -1900,642 | -21,09804 | -22,38687 | -9836,11283 | -9857,210874 | -9858,499704 |
| 235 | 0 | -2918,817 | -934,7603 | -177,3965119 | -1112,157 | -45,47646 | -6,967507 | -6018,775593 | -6064,252048 | -6025,7431 |
| 235 | 2,509705 | -2918,817 | -934,7603 | -177,3965119 | -1112,157 | -45,47646 | -6,967507 | -6018,775593 | -6064,252048 | -6025,7431 |
| 235 | 5,01941 | -2918,817 | -934,7603 | -177,3965119 | -1112,157 | -45,47646 | -6,967507 | -6018,775593 | -6064,252048 | -6025,7431 |
| 236 | 0 | -1815,197 | -483,0705 | 44,28725856 | -527,3578 | -63,33737 | 7,282212 | -3414,471133 | -3477,8085 | -3407,188921 |
| 236 | 2,501881 | -1815,197 | -483,0705 | 44,28725856 | -527,3578 | -63,33737 | 7,282212 | -3414,471133 | -3477,8085 | -3407,188921 |
| 236 | 5,003762 | -1815,197 | -483,0705 | 44,28725856 | -527,3578 | -63,33737 | 7,282212 | -3414,471133 | -3477,8085 | -3407,188921 |
| 323 | 0 | -5588,546 | -2023,601 | -180,3159322 | -2203,917 | -101,988 | 0,186994 | -11672,94409 | -11774,9321 | -11672,7571 |
| 323 | 2,705585 | -5588,546 | -2023,601 | -180,3159322 | -2203,917 | -101,988 | 0,186994 | -11672,94409 | -11774,9321 | -11672,7571 |
| 323 | 5,41117 | -5588,546 | -2023,601 | -180,3159322 | -2203,917 | -101,988 | 0,186994 | -11672,94409 | -11774,9321 | -11672,7571 |
| 324 | 0 | -5397,669 | -1913,11 | -186,2477575 | -2099,357 | -114,9911 | -0,419049 | -11215,68428 | -11330,6754 | -11216,10333 |

| | | | | | | | | | | |
|-----|----------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 324 | 2,651523 | -5397,669 | -1913,11 | -186,2477575 | -2099,357 | -114,9911 | -0,419049 | -11215,68428 | -11330,6754 | -11216,10333 |
| 324 | 5,303045 | -5397,669 | -1913,11 | -186,2477575 | -2099,357 | -114,9911 | -0,419049 | -11215,68428 | -11330,6754 | -11216,10333 |
| 325 | 0 | -5124,978 | -1770,572 | -199,0215802 | -1969,594 | -129,8136 | -0,222993 | -10601,65927 | -10731,47287 | -10601,88226 |
| 325 | 2,607363 | -5124,978 | -1770,572 | -199,0215802 | -1969,594 | -129,8136 | -0,222993 | -10601,65927 | -10731,47287 | -10601,88226 |
| 325 | 5,214725 | -5124,978 | -1770,572 | -199,0215802 | -1969,594 | -129,8136 | -0,222993 | -10601,65927 | -10731,47287 | -10601,88226 |
| 326 | 0 | -4736,658 | -1582,177 | -209,2016284 | -1791,379 | -148,8083 | 0,028762 | -9740,413006 | -9889,221326 | -9740,384244 |
| 326 | 2,572163 | -4736,658 | -1582,177 | -209,2016284 | -1791,379 | -148,8083 | 0,028762 | -9740,413006 | -9889,221326 | -9740,384244 |
| 326 | 5,144327 | -4736,658 | -1582,177 | -209,2016284 | -1791,379 | -148,8083 | 0,028762 | -9740,413006 | -9889,221326 | -9740,384244 |
| 342 | 0 | -5831,641 | -2353,437 | -317,0016115 | -2670,439 | 95,6521 | 0,718321 | -12922,01116 | -12826,35907 | -12921,29284 |
| 342 | 2,623968 | -5831,641 | -2353,437 | -317,0016115 | -2670,439 | 95,6521 | 0,718321 | -12922,01116 | -12826,35907 | -12921,29284 |
| 342 | 5,247936 | -5831,641 | -2353,437 | -317,0016115 | -2670,439 | 95,6521 | 0,718321 | -12922,01116 | -12826,35907 | -12921,29284 |
| 343 | 0 | -5393,353 | -2190,446 | -328,0681325 | -2518,514 | 101,6285 | 1,502817 | -12048,38798 | -11946,75952 | -12046,88516 |
| 343 | 2,585908 | -5393,353 | -2190,446 | -328,0681325 | -2518,514 | 101,6285 | 1,502817 | -12048,38798 | -11946,75952 | -12046,88516 |
| 343 | 5,171816 | -5393,353 | -2190,446 | -328,0681325 | -2518,514 | 101,6285 | 1,502817 | -12048,38798 | -11946,75952 | -12046,88516 |
| 344 | 0 | -4765,479 | -1929,703 | -321,931133 | -2251,635 | 102,1472 | 2,144893 | -10696,39164 | -10596,24439 | -10696,24675 |
| 344 | 2,555252 | -4765,479 | -1929,703 | -321,931133 | -2251,635 | 102,1472 | 2,144893 | -10696,39164 | -10596,24439 | -10696,24675 |
| 344 | 5,110504 | -4765,479 | -1929,703 | -321,931133 | -2251,635 | 102,1472 | 2,144893 | -10696,39164 | -10596,24439 | -10696,24675 |
| 345 | 0 | -3790,731 | -1516,055 | -266,1817043 | -1782,237 | 84,49041 | 2,586191 | -8492,424764 | -8407,934351 | -8489,838573 |
| 345 | 2,531798 | -3790,731 | -1516,055 | -266,1817043 | -1782,237 | 84,49041 | 2,586191 | -8492,424764 | -8407,934351 | -8489,838573 |
| 345 | 5,063596 | -3790,731 | -1516,055 | -266,1817043 | -1782,237 | 84,49041 | 2,586191 | -8492,424764 | -8407,934351 | -8489,838573 |
| 346 | 0 | -2429,251 | -897,8002 | -112,3472462 | -1010,147 | 24,88273 | 2,781094 | -5178,32103 | -5153,438301 | -5175,539936 |
| 346 | 2,515189 | -2429,251 | -897,8002 | -112,3472462 | -1010,147 | 24,88273 | 2,781094 | -5178,32103 | -5153,438301 | -5175,539936 |
| 346 | 5,030378 | -2429,251 | -897,8002 | -112,3472462 | -1010,147 | 24,88273 | 2,781094 | -5178,32103 | -5153,438301 | -5175,539936 |
| 347 | 0 | -1546,193 | -448,9828 | 35,56050317 | -413,4223 | -47,53863 | 2,636282 | -2836,895851 | -2884,434481 | -2834,259569 |
| 347 | 2,504407 | -1546,193 | -448,9828 | 35,56050317 | -413,4223 | -47,53863 | 2,636282 | -2836,895851 | -2884,434481 | -2834,259569 |
| 347 | 5,008813 | -1546,193 | -448,9828 | 35,56050317 | -413,4223 | -47,53863 | 2,636282 | -2836,895851 | -2884,434481 | -2834,259569 |
| 348 | 0 | -1153,562 | -174,1341 | 77,87095445 | -96,26319 | -132,0246 | 2,238483 | -1692,156415 | -1824,180968 | -1689,917932 |
| 348 | 2,500135 | -1153,562 | -174,1341 | 77,87095445 | -96,26319 | -132,0246 | 2,238483 | -1692,156415 | -1824,180968 | -1689,917932 |
| 348 | 5,00027 | -1153,562 | -174,1341 | 77,87095445 | -96,26319 | -132,0246 | 2,238483 | -1692,156415 | -1824,180968 | -1689,917932 |
| 349 | 0 | -1451,001 | -221,3088 | -13,9424841 | -235,2512 | -184,5218 | 1,767953 | -2356,803771 | -2541,325615 | -2355,035818 |
| 349 | 2,501979 | -1451,001 | -221,3088 | -13,9424841 | -235,2512 | -184,5218 | 1,767953 | -2356,803771 | -2541,325615 | -2355,035818 |
| 349 | 5,003959 | -1451,001 | -221,3088 | -13,9424841 | -235,2512 | -184,5218 | 1,767953 | -2356,803771 | -2541,325615 | -2355,035818 |
| 350 | 0 | -2441,348 | -589,7969 | -136,9646163 | -726,7615 | -205,865 | 1,138964 | -4627,275108 | -4833,140132 | -4626,136144 |
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| 350 | 5,018974 | -2441,348 | -589,7969 | -136,9646163 | -726,7615 | -205,865 | 1,138964 | -4627,275108 | -4833,140132 | -4626,136144 |
| 351 | 0 | -3422,912 | -996,756 | -193,9859561 | -1190,742 | -193,1254 | 0,662929 | -6831,269071 | -7024,394508 | -6830,606143 |
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|-----|----------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 351 | 5,047659 | -3422,912 | -996,756 | -193,9859561 | -1190,742 | -193,1254 | 0,662929 | -6831,269071 | -7024,394508 | -6830,606143 |
| 352 | 0 | -4186,957 | -1330,541 | -211,271078 | -1541,812 | -170,8537 | 0,302048 | -8526,668779 | -8697,522479 | -8526,366731 |
| 352 | 2,544352 | -4186,957 | -1330,541 | -211,271078 | -1541,812 | -170,8537 | 0,302048 | -8526,668779 | -8697,522479 | -8526,366731 |
| 352 | 5,088705 | -4186,957 | -1330,541 | -211,271078 | -1541,812 | -170,8537 | 0,302048 | -8526,668779 | -8697,522479 | -8526,366731 |
| 354 | 0 | -6024,787 | -2435,412 | -298,5523298 | -2733,964 | 83,78016 | 3,868813 | -13300,15115 | -13216,37099 | -13296,28234 |
| 354 | 2,672821 | -6024,787 | -2435,412 | -298,5523298 | -2733,964 | 83,78016 | 3,868813 | -13300,15115 | -13216,37099 | -13296,28234 |
| 354 | 5,345641 | -6024,787 | -2435,412 | -298,5523298 | -2733,964 | 83,78016 | 3,868813 | -13300,15115 | -13216,37099 | -13296,28234 |
| 365 | 0 | 806,0596 | 402,8443 | 16,59804617 | 419,4423 | -287,653 | -0,074431 | 1886,762197 | 1599,109155 | 1886,687766 |
| 365 | 2,502183 | 806,0596 | 402,8443 | 16,59804617 | 419,4423 | -287,653 | -0,074431 | 1886,762197 | 1599,109155 | 1886,687766 |
| 365 | 5,004366 | 806,0596 | 402,8443 | 16,59804617 | 419,4423 | -287,653 | -0,074431 | 1886,762197 | 1599,109155 | 1886,687766 |
| 366 | 0 | 2081,147 | 1123,02 | 58,19030988 | 1181,21 | -466,1098 | -0,160628 | 5067,910685 | 4601,800873 | 5067,750057 |
| 366 | 2,506689 | 2081,147 | 1123,02 | 58,19030988 | 1181,21 | -466,1098 | -0,160628 | 5067,910685 | 4601,800873 | 5067,750057 |
| 366 | 5,013378 | 2081,147 | 1123,02 | 58,19030988 | 1181,21 | -466,1098 | -0,160628 | 5067,910685 | 4601,800873 | 5067,750057 |
| 367 | 0 | 1611,603 | 929,3474 | 75,17678606 | 1004,524 | -505,3841 | -0,10744 | 4104,131928 | 3598,74786 | 4104,024489 |
| 367 | 2,513691 | 1611,603 | 929,3474 | 75,17678606 | 1004,524 | -505,3841 | -0,10744 | 4104,131928 | 3598,74786 | 4104,024489 |
| 367 | 5,027383 | 1611,603 | 929,3474 | 75,17678606 | 1004,524 | -505,3841 | -0,10744 | 4104,131928 | 3598,74786 | 4104,024489 |
| 368 | 0 | 428,2187 | 317,2823 | 72,10191305 | 389,3842 | -466,7555 | 0,016926 | 1335,452785 | 868,6972383 | 1335,469712 |
| 368 | 2,523556 | 428,2187 | 317,2823 | 72,10191305 | 389,3842 | -466,7555 | 0,016926 | 1335,452785 | 868,6972383 | 1335,469712 |
| 368 | 5,047112 | 428,2187 | 317,2823 | 72,10191305 | 389,3842 | -466,7555 | 0,016926 | 1335,452785 | 868,6972383 | 1335,469712 |
| 369 | 0 | -700,3541 | -310,9814 | 45,7557504 | -265,2257 | -412,83 | 0,146448 | -1440,911623 | -1853,741665 | -1440,765175 |
| 369 | 2,537563 | -700,3541 | -310,9814 | 45,7557504 | -265,2257 | -412,83 | 0,146448 | -1440,911623 | -1853,741665 | -1440,765175 |
| 369 | 5,075126 | -700,3541 | -310,9814 | 45,7557504 | -265,2257 | -412,83 | 0,146448 | -1440,911623 | -1853,741665 | -1440,765175 |
| 370 | 0 | -1214,362 | -850,9276 | -40,57049557 | -891,4981 | -364,5213 | 0,192208 | -3361,666575 | -3726,187918 | -3361,474367 |
| 370 | 2,55129 | -1214,362 | -850,9276 | -40,57049557 | -891,4981 | -364,5213 | 0,192208 | -3361,666575 | -3726,187918 | -3361,474367 |
| 370 | 5,10258 | -1214,362 | -850,9276 | -40,57049557 | -891,4981 | -364,5213 | 0,192208 | -3361,666575 | -3726,187918 | -3361,474367 |
| 371 | 0 | -1530,88 | -1296,693 | -127,9149283 | -1424,608 | -327,1438 | 0,201434 | -4839,359933 | -5166,503719 | -4839,158499 |
| 371 | 2,567192 | -1530,88 | -1296,693 | -127,9149283 | -1424,608 | -327,1438 | 0,201434 | -4839,359933 | -5166,503719 | -4839,158499 |
| 371 | 5,134383 | -1530,88 | -1296,693 | -127,9149283 | -1424,608 | -327,1438 | 0,201434 | -4839,359933 | -5166,503719 | -4839,158499 |
| 372 | 0 | -1851,647 | -1654,228 | -187,8067758 | -1842,035 | -296,4923 | 0,95955 | -6104,210549 | -6400,702809 | -6103,250999 |
| 372 | 2,586036 | -1851,647 | -1654,228 | -187,8067758 | -1842,035 | -296,4923 | 0,95955 | -6104,210549 | -6400,702809 | -6103,250999 |
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| 532 | 0 | -2143,232 | -1305,051 | -67,36070378 | -1372,411 | 21,59484 | -1,112542 | -5531,024573 | -5509,429729 | -5532,137115 |
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| 533 | 0 | -1124,364 | -792,638 | -54,61448981 | -847,2525 | 22,26918 | -1,593901 | -3156,178351 | -3133,909169 | -3157,772252 |
| 533 | 2,523556 | -1124,364 | -792,638 | -54,61448981 | -847,2525 | 22,26918 | -1,593901 | -3156,178351 | -3133,909169 | -3157,772252 |
| 533 | 5,047112 | -1124,364 | -792,638 | -54,61448981 | -847,2525 | 22,26918 | -1,593901 | -3156,178351 | -3133,909169 | -3157,772252 |

GAYA AXIAL BALOK LENKUNG TENGAH

| FRAME | STA | PD | PL | | PL TOT | ME | | COMB1 | | COMB 2 | | COMB 3 |
|-------|---------|-----------|-----------|---------------|-----------|---------|-----------|-------------------|------------------------|------------------------|--|--------|
| | | | PL merata | PL Koef kejut | | PEX | PEY | 1,3PD + 2 (PQ+PP) | 1,3PD + 2 (PQ+PP)+1PEX | 1,3PD + 2 (PQ+PP)+1PEY | | |
| 545 | 0 | -4165,308 | -2762,301 | -349,746336 | -3112,048 | -9,0833 | -4,0041 | -11638,9962 | -11648,07946 | -11643,0003 | | |
| 545 | 2,58604 | -4165,308 | -2762,301 | -349,746336 | -3112,048 | -9,0833 | -4,0041 | -11638,9962 | -11548,07946 | -11643,0003 | | |
| 545 | 5,17207 | -4165,308 | -2762,301 | -349,746336 | -3112,048 | -9,0833 | -4,0041 | -11638,9962 | -11648,07946 | -11643,0003 | | |
| 546 | 0 | -3759,643 | -2440,51 | -278,345227 | -2718,855 | -5,8515 | -1,245278 | -10325,24712 | -10331,09862 | -10326,49239 | | |
| 546 | 2,56719 | -3759,643 | -2440,51 | -278,345227 | -2718,855 | -5,8515 | -1,245278 | -10325,24712 | -10331,09862 | -10326,49239 | | |
| 546 | 5,13438 | -3759,643 | -2440,51 | -278,345227 | -2718,855 | -5,8515 | -1,245278 | -10325,24712 | -10331,09862 | -10326,49239 | | |
| 547 | 0 | -3359,076 | -2037,241 | -170,242587 | -2207,484 | -0,2597 | -1,27873 | -8781,765282 | -8782,025004 | -8783,044012 | | |
| 547 | 2,55129 | -3359,076 | -2037,241 | -170,242587 | -2207,484 | -0,2597 | -1,27873 | -8781,765282 | -8782,025004 | -8783,044012 | | |
| 547 | 5,10258 | -3359,076 | -2037,241 | -170,242587 | -2207,484 | -0,2597 | -1,27873 | -8781,765282 | -8782,025004 | -8783,044012 | | |
| 548 | 0 | 694,1286 | 48,26847 | -104,771517 | -56,50304 | 111,241 | -0,481329 | 789,3611425 | 900,6017774 | 788,8798131 | | |
| 548 | 2,50669 | 694,1286 | 48,26847 | -104,771517 | -56,50304 | 111,241 | -0,481329 | 789,3611425 | 900,6017774 | 788,8798131 | | |
| 548 | 5,01338 | 694,1286 | 48,26847 | -104,771517 | -56,50304 | 111,241 | -0,481329 | 789,3611425 | 900,6017774 | 788,8798131 | | |
| 549 | 0 | -305,3041 | -518,1104 | -113,417077 | -631,5275 | 226,993 | -3,423748 | -1659,950415 | -1432,95713 | -1663,374162 | | |
| 549 | 2,50218 | -305,3041 | -518,1104 | -113,417077 | -631,5275 | 226,993 | -3,423748 | -1659,950415 | -1432,95713 | -1663,374162 | | |
| 549 | 5,00437 | -305,3041 | -518,1104 | -113,417077 | -631,5275 | 226,993 | -3,423748 | -1659,950415 | -1432,95713 | -1663,374162 | | |
| 563 | 0 | -132,7514 | -294,8439 | -86,6785938 | -381,5225 | 49,145 | -1,089526 | -935,6219186 | -886,4768844 | -936,7114443 | | |
| 563 | 2,51369 | -132,7514 | -294,8439 | -86,6785938 | -381,5225 | 49,145 | -1,089526 | -935,6219186 | -886,4768844 | -936,7114443 | | |
| 563 | 5,02738 | -132,7514 | -294,8439 | -86,6785938 | -381,5225 | 49,145 | -1,089526 | -935,6219186 | -886,4768844 | -936,7114443 | | |
| 564 | 0 | -7329,422 | -2448,527 | -249,749896 | -2698,277 | -15,129 | 38,05826 | -14924,80289 | -14939,93162 | -14886,74464 | | |
| 564 | 2,70559 | -7329,422 | -2448,527 | -249,749896 | -2698,277 | -15,129 | 38,05826 | -14924,80289 | -14939,93162 | -14886,74464 | | |
| 564 | 5,41117 | -7329,422 | -2448,527 | -249,749896 | -2698,277 | -15,129 | 38,05826 | -14924,80289 | -14939,93162 | -14886,74464 | | |
| 565 | 0 | -7039,037 | -2355,967 | -257,222617 | -2613,19 | -15,839 | 42,06734 | -14377,12853 | -14392,96737 | -14335,06119 | | |
| 565 | 2,65152 | -7039,037 | -2355,967 | -257,222617 | -2613,19 | -15,839 | 42,06734 | -14377,12853 | -14392,96737 | -14335,06119 | | |
| 565 | 5,30305 | -7039,037 | -2355,967 | -257,222617 | -2613,19 | -15,839 | 42,06734 | -14377,12853 | -14392,96737 | -14335,06119 | | |
| 566 | 0 | -7189,625 | -2427,193 | -339,293124 | -2766,486 | 2,82647 | 17,34684 | -14879,48421 | -14876,65774 | -14862,13737 | | |
| 566 | 2,67282 | -7189,625 | -2427,193 | -339,293124 | -2766,486 | 2,82647 | 17,34684 | -14879,48421 | -14876,65774 | -14862,13737 | | |
| 566 | 5,34564 | -7189,625 | -2427,193 | -339,293124 | -2766,486 | 2,82647 | 17,34684 | -14879,48421 | -14876,65774 | -14862,13737 | | |
| 567 | 0 | -6838,657 | -2303,285 | -356,52078 | -2659,805 | -2,1371 | 26,37401 | -14209,86491 | -14212,00199 | -14183,4909 | | |
| 567 | 2,62397 | -6838,657 | -2303,285 | -356,52078 | -2659,805 | -2,1371 | 26,37401 | -14209,86491 | -14212,00199 | -14183,4909 | | |
| 567 | 5,24794 | -6838,657 | -2303,285 | -356,52078 | -2659,805 | -2,1371 | 26,37401 | -14209,86491 | -14212,00199 | -14183,4909 | | |
| 568 | 0 | -6166,877 | -2100,671 | -368,231655 | -2468,903 | -11,285 | 28,1253 | -12954,74501 | -12966,0296 | -12926,61971 | | |
| 568 | 2,58591 | -6166,877 | -2100,671 | -368,231655 | -2468,903 | -11,285 | 28,1253 | -12954,74501 | -12966,0296 | -12926,61971 | | |
| 568 | 5,17182 | -6166,877 | -2100,671 | -368,231655 | -2468,903 | -11,285 | 28,1253 | -12954,74501 | -12966,0296 | -12926,61971 | | |

| | | | | | | | | | | |
|-----|---------|-----------|-----------|-------------|-----------|---------|-----------|--------------|--------------|--------------|
| 569 | 0 | -5338,695 | -1793,116 | -364,400143 | -2,57,516 | -25,015 | 29,56959 | -11255,33546 | -11280,35016 | -11225,76587 |
| 569 | 2,55525 | -5338,695 | -1793,116 | -364,400143 | -2157,516 | -25,015 | 29,56959 | -11255,33546 | -11280,35016 | -11225,76587 |
| 569 | 5,1105 | -5338,695 | -1793,116 | -364,400143 | -2157,516 | -25,015 | 29,56959 | -11255,33546 | -11280,35016 | -11225,76587 |
| 570 | 0 | -4139,268 | -1342,979 | -302,953393 | -1645,932 | -44,647 | 30,58975 | -8672,912751 | -8717,559577 | -8642,322999 |
| 570 | 2,5318 | -4139,268 | -1342,979 | -302,953393 | -1645,932 | -44,647 | 30,58975 | -8672,912751 | -8717,559577 | -8642,322999 |
| 570 | 5,0636 | -4139,268 | -1342,979 | -302,953393 | -1645,932 | -44,647 | 30,58975 | -8672,912751 | -8717,559577 | -8642,322999 |
| 571 | 0 | -2584,046 | -745,9314 | -116,710957 | -862,6423 | -70,208 | 24,41586 | -5084,544733 | -5154,752566 | -5060,128868 |
| 571 | 2,51519 | -2584,046 | -745,9314 | -116,710957 | -862,6423 | -70,208 | 24,41586 | -5084,544733 | -5154,752566 | -5060,128868 |
| 571 | 5,03038 | -2584,046 | -745,9314 | -116,710957 | -862,6423 | -70,208 | 24,41586 | -5084,544733 | -5154,752566 | -5060,128868 |
| 572 | 0 | -1688,927 | -392,9475 | 66,68613111 | -326,2614 | -85,164 | 10,36265 | -2848,128358 | -2933,292687 | -2837,76571 |
| 572 | 2,50441 | -1688,927 | -392,9475 | 66,68613111 | -326,2614 | -85,164 | 10,36265 | -2848,128358 | -2933,292687 | -2837,76571 |
| 572 | 5,00881 | -1688,927 | -392,9475 | 66,68613111 | -326,2614 | -85,164 | 10,36265 | -2848,128358 | -2933,292687 | -2837,76571 |
| 573 | 0 | -1462,569 | -290,5488 | 92,75397194 | -197,7949 | -89,951 | -7,36429 | -2296,92967 | -2386,880792 | -2304,29396 |
| 573 | 2,50014 | -1462,569 | -290,5488 | 92,75397194 | -197,7949 | -89,951 | -7,36429 | -2296,92967 | -2386,880792 | -2304,29396 |
| 573 | 5,00027 | -1462,569 | -290,5488 | 92,75397194 | -197,7949 | -89,951 | -7,36429 | -2296,92967 | -2386,880792 | -2304,29396 |
| 574 | 0 | -4651,177 | -1482,423 | -296,970388 | -1779,394 | -45,507 | 38,31118 | -9605,31726 | -9650,824404 | -9567,006082 |
| 574 | 2,52383 | -4651,177 | -1482,423 | -296,970388 | -1779,394 | -45,507 | 38,31118 | -9605,31726 | -9650,824404 | -9567,006082 |
| 574 | 5,04766 | -4651,177 | -1482,423 | -296,970388 | -1779,394 | -45,507 | 38,31118 | -9605,31726 | -9650,824404 | -9567,006082 |
| 575 | 0 | -6669,979 | -2228,312 | -276,727055 | -2505,039 | -19,763 | 44,07772 | -13681,05066 | -13700,81364 | -13636,97294 |
| 575 | 2,60736 | -6669,979 | -2228,312 | -276,727055 | -2505,039 | -19,763 | 44,07772 | -13681,05066 | -13700,81364 | -13636,97294 |
| 575 | 5,21473 | -6669,979 | -2228,312 | -276,727055 | -2505,039 | -19,763 | 44,07772 | -13681,05066 | -13700,81364 | -13636,97294 |
| 576 | 0 | -6198,324 | -2058,924 | -295,041633 | -2353,965 | -25,202 | 46,10551 | -12765,75108 | -12790,95343 | -12719,64557 |
| 576 | 2,57216 | -6198,324 | -2058,924 | -295,041633 | -2353,965 | -25,202 | 46,10551 | -12765,75108 | -12790,95343 | -12719,64557 |
| 576 | 5,14433 | -6198,324 | -2058,924 | -295,041633 | -2353,965 | -25,202 | 46,10551 | -12765,75108 | -12790,95343 | -12719,64557 |
| 577 | 0 | -5555,886 | -1821,823 | -306,46695 | -2128,29 | -33,355 | 46,32078 | -11479,23228 | -11512,58761 | -11432,9115 |
| 577 | 2,54435 | -5555,886 | -1821,823 | -306,46695 | -2128,29 | -33,355 | 46,32078 | -11479,23228 | -11512,58761 | -11432,9115 |
| 577 | 5,0887 | -5555,886 | -1821,823 | -306,46695 | -2128,29 | -33,355 | 46,32078 | -11479,23228 | -11512,58761 | -11432,9115 |
| 578 | 0 | -3429,066 | -1020,751 | -234,520691 | -1255,271 | -62,523 | 15,68356 | -6968,328637 | -7030,851678 | -6952,645078 |
| 578 | 2,50971 | -3429,066 | -1020,751 | -234,520691 | -1255,271 | -62,523 | 15,68356 | -6968,328637 | -7030,851678 | -6952,645078 |
| 578 | 5,01941 | -3429,066 | -1020,751 | -234,520691 | -1255,271 | -62,523 | 15,68356 | -6968,328637 | -7030,851678 | -6952,645078 |
| 579 | 0 | -2040,139 | -499,1338 | -61,1945626 | -560,3284 | -82,185 | -9,002289 | -3772,83738 | -3855,021888 | -3781,839669 |
| 579 | 2,50188 | -2040,139 | -499,1338 | -61,1945626 | -560,3284 | -82,185 | -9,002289 | -3772,83738 | -3855,021888 | -3781,839669 |
| 579 | 5,00376 | -2040,139 | -499,1338 | -61,1945626 | -560,3284 | -82,185 | -9,002289 | -3772,83738 | -3855,021888 | -3781,839669 |
| 614 | 0 | -7071,096 | -2208,371 | -220,923737 | -2429,295 | -136,29 | -1,196136 | -14051,01402 | -14187,3046 | -14052,21016 |
| 614 | 2,70559 | -7071,096 | -2208,371 | -220,923737 | -2429,295 | -136,29 | -1,196136 | -14051,01402 | -14187,3046 | -14052,21016 |
| 614 | 5,41117 | -7071,096 | -2208,371 | -220,923737 | -2429,295 | -136,29 | -1,196136 | -14051,01402 | -14187,3046 | -14052,21016 |
| 615 | 0 | -6752,431 | -2088,705 | -225,211071 | -2313,916 | -149,94 | 0,825371 | -13405,99311 | -13555,9288 | -13405,16774 |

| | | | | | | | | | | |
|-----|---------|-----------|-----------|-------------|-----------|---------|-----------|--------------|--------------|--------------|
| 615 | 2,65152 | -6752,431 | -2088,705 | -225,211071 | -2313,916 | -149,94 | 0,825371 | -13405,99311 | -13555,9288 | -13405,16774 |
| 615 | 5,30305 | -6752,431 | -2088,705 | -225,211071 | -2313,916 | -149,94 | 0,825371 | -13405,99311 | -13555,9288 | -13405,16774 |
| 616 | 0 | -6359,191 | -1937,622 | -241,980032 | -2179,602 | -164,92 | 0,454393 | -12626,15287 | -12791,07128 | -12625,69847 |
| 616 | 2,60736 | -6359,191 | -1937,622 | -241,980032 | -2179,602 | -164,92 | 0,454393 | -12626,15287 | -12791,07128 | -12625,69847 |
| 616 | 5,21473 | -6359,191 | -1937,622 | -241,980032 | -2179,602 | -164,92 | 0,454393 | -12626,15287 | -12791,07128 | -12625,69847 |
| 617 | 0 | -5856,93 | -1738,626 | -256,840536 | -1995,467 | -184,33 | -0,162634 | -11604,94205 | -11789,26835 | -11605,10468 |
| 617 | 2,57216 | -5856,93 | -1738,626 | -256,840536 | -1995,467 | -184,33 | -0,162634 | -11604,94205 | -11789,26835 | -11605,10468 |
| 617 | 5,14433 | -5856,93 | -1738,626 | -256,840536 | -1995,467 | -184,33 | -0,162634 | -11604,94205 | -11789,26835 | -11605,10468 |
| 618 | 0 | -7169,883 | -2605,121 | -393,438716 | -2998,559 | 152,707 | -0,811244 | -15317,96662 | -15165,25938 | -15318,77787 |
| 618 | 2,62397 | -7169,883 | -2605,121 | -393,438716 | -2998,559 | 152,707 | -0,811244 | -15317,96662 | -15165,25938 | -15318,77787 |
| 618 | 5,24794 | -7169,883 | -2605,121 | -393,438716 | -2998,559 | 152,707 | -0,811244 | -15317,96662 | -15165,25938 | -15318,77787 |
| 619 | 0 | -6516,389 | -2423,071 | -407,321577 | -2830,392 | 150,928 | -1,332269 | -14132,0908 | -13961,1624 | -14133,42307 |
| 619 | 2,58591 | -6516,389 | -2423,071 | -407,321577 | -2830,392 | 150,928 | -1,332269 | -14132,0908 | -13961,1624 | -14133,42307 |
| 619 | 5,17182 | -6516,389 | -2423,071 | -407,321577 | -2830,392 | 150,928 | -1,332269 | -14132,0908 | -13961,1624 | -14133,42307 |
| 620 | 0 | -5696,67 | -2127,181 | -404,556675 | -2531,737 | 139,655 | -2,781992 | -12469,14599 | -12329,49095 | -12471,92799 |
| 620 | 2,55525 | -5696,67 | -2127,181 | -404,556675 | -2531,737 | 139,655 | -2,781992 | -12469,14599 | -12329,49095 | -12471,92799 |
| 620 | 5,1105 | -5696,67 | -2127,181 | -404,556675 | -2531,737 | 139,655 | -2,781992 | -12469,14599 | -12329,49095 | -12471,92799 |
| 621 | 0 | -4470,78 | -1655,237 | -340,160608 | -1995,398 | 105,937 | -3,613014 | -9802,809694 | -9696,872561 | -9806,422708 |
| 621 | 2,5318 | -4470,78 | -1655,237 | -340,160608 | -1995,398 | 105,937 | -3,613014 | -9802,809694 | -9696,872561 | -9806,422708 |
| 621 | 5,0636 | -4470,78 | -1655,237 | -340,160608 | -1995,398 | 105,937 | -3,613014 | -9802,809694 | -9696,872561 | -9806,422708 |
| 622 | 0 | -2801,09 | -950,6542 | -140,868273 | -1091,522 | 25,5404 | -3,705641 | -5824,461803 | -5798,921417 | -5828,167444 |
| 622 | 2,51519 | -2801,09 | -950,6542 | -140,868273 | -1091,522 | 25,5404 | -3,705641 | -5824,461803 | -5798,921417 | -5828,167444 |
| 622 | 5,03038 | -2801,09 | -950,6542 | -140,868273 | -1091,522 | 25,5404 | -3,705641 | -5824,461803 | -5798,921417 | -5828,167444 |
| 623 | 0 | -1751,598 | -452,3327 | 59,9081935 | -392,4246 | -60,536 | -3,412339 | -3061,926067 | -3122,462471 | -3065,338405 |
| 623 | 2,50441 | -1751,598 | -452,3327 | 59,9081935 | -392,4246 | -60,536 | -3,412339 | -3061,926067 | -3122,462471 | -3065,338405 |
| 623 | 5,00881 | -1751,598 | -452,3327 | 59,9081935 | -392,4246 | -60,536 | -3,412339 | -3061,926067 | -3122,462471 | -3065,338405 |
| 624 | 0 | -1319,403 | -161,1132 | 108,3877049 | -52,72551 | -156,37 | -2,933939 | -1820,674684 | -1977,039877 | -1823,608624 |
| 624 | 2,50014 | -1319,403 | -161,1132 | 108,3877049 | -52,72551 | -156,37 | -2,933939 | -1820,674684 | -1977,039877 | -1823,608624 |
| 624 | 5,00027 | -1319,403 | -161,1132 | 108,3877049 | -52,72551 | -156,37 | -2,933939 | -1820,674684 | -1977,039877 | -1823,608624 |
| 625 | 0 | -1744,789 | -230,3486 | -29,2334216 | -259,582 | -215,28 | -2,458977 | -2787,389684 | -3002,674207 | -2789,848662 |
| 625 | 2,50198 | -1744,789 | -230,3486 | -29,2334216 | -259,582 | -215,28 | -2,458977 | -2787,389684 | -3002,674207 | -2789,848662 |
| 625 | 5,00396 | -1744,789 | -230,3486 | -29,2334216 | -259,582 | -215,28 | -2,458977 | -2787,389684 | -3002,674207 | -2789,848662 |
| 626 | 0 | -3035,257 | -656,658 | -191,085133 | -847,7432 | -241,09 | -1,78021 | -5541,320254 | -5882,414277 | -5643,100464 |
| 626 | 2,50949 | -3035,257 | -656,658 | -191,085133 | -847,7432 | -241,09 | -1,78021 | -5541,320254 | -5882,414277 | -5643,100464 |
| 626 | 5,01897 | -3035,257 | -656,658 | -191,085133 | -847,7432 | -241,09 | -1,78021 | -5541,320254 | -5882,414277 | -5643,100464 |
| 627 | 0 | -4253,907 | -1109,401 | -252,62577 | -1362,026 | -229,34 | -1,177057 | -8254,131969 | -8483,474455 | -8255,309026 |
| 627 | 2,52383 | -4253,907 | -1109,401 | -252,62577 | -1362,026 | -229,34 | -1,177057 | -8254,131969 | -8483,474455 | -8255,309026 |

| | | | | | | | | | | |
|-----|---------|-----------|-----------|-------------|-----------|---------|-----------|--------------|--------------|--------------|
| 627 | 5,04766 | -4253,907 | -1109,401 | -252,62577 | -1362,026 | -229,34 | -1,177057 | -8254,131969 | -8483,474455 | -8255,309026 |
| 628 | 0 | -5182,773 | -1471,039 | -264,715055 | -1735,754 | -206,83 | -0,654624 | -10209,11182 | -10415,94436 | -10209,76645 |
| 628 | 2,54435 | -5182,773 | -1471,039 | -264,715055 | -1735,754 | -206,83 | -0,654624 | -10209,11182 | -10415,94436 | -10209,76645 |
| 628 | 5,0887 | -5182,773 | -1471,039 | -264,715055 | -1735,754 | -206,83 | -0,654624 | -10209,11182 | -10415,94436 | -10209,76645 |
| 629 | 0 | -7490,58 | -2698,777 | -372,738995 | -3071,516 | 144,422 | -8,182334 | -15880,78574 | -15736,36413 | -15888,96807 |
| 629 | 2,67282 | -7490,58 | -2698,777 | -372,738995 | -3071,516 | 144,422 | -8,182334 | -15880,78574 | -15736,36413 | -15888,96807 |
| 629 | 5,34564 | -7490,58 | -2698,777 | -372,738995 | -3071,516 | 144,422 | -8,182334 | -15880,78574 | -15736,36413 | -15888,96807 |
| 630 | 0 | 856,2155 | 489,6531 | 13,18057419 | 502,8337 | -326,99 | -0,135282 | 2118,747614 | 1791,752866 | 2118,612332 |
| 630 | 2,50218 | 856,2155 | 489,6531 | 13,18057419 | 502,8337 | -326,99 | -0,135282 | 2118,747614 | 1791,752866 | 2118,612332 |
| 630 | 5,00437 | 856,2155 | 489,6531 | 13,18057419 | 502,8337 | -326,99 | -0,135282 | 2118,747614 | 1791,752866 | 2118,612332 |
| 631 | 0 | 2085,661 | 1277,881 | 47,81001616 | 1325,691 | -546,86 | -0,465657 | 5362,741868 | 4815,881792 | 5362,276212 |
| 631 | 2,50669 | 2085,661 | 1277,881 | 47,81001616 | 1325,691 | -546,86 | -0,465657 | 5362,741868 | 4815,881792 | 5362,276212 |
| 631 | 5,01338 | 2085,661 | 1277,881 | 47,81001616 | 1325,691 | -546,86 | -0,465657 | 5362,741868 | 4815,881792 | 5362,276212 |
| 632 | 0 | 1277,056 | 954,8198 | 68,03242786 | 1022,852 | -616,34 | -0,771581 | 3705,87696 | 3089,537289 | 3705,105379 |
| 632 | 2,51369 | 1277,056 | 954,8198 | 68,03242786 | 1022,852 | -616,34 | -0,771581 | 3705,87696 | 3089,537289 | 3705,105379 |
| 632 | 5,02738 | 1277,056 | 954,8198 | 68,03242786 | 1022,852 | -616,34 | -0,771581 | 3705,87696 | 3089,537289 | 3705,105379 |
| 633 | 0 | -233,5761 | 203,0268 | 78,66443159 | 281,6912 | -594,9 | -1,023819 | 259,7334462 | -335,1677824 | 258,7096272 |
| 633 | 2,52356 | -233,5761 | 203,0268 | 78,66443159 | 281,6912 | -594,9 | -1,023819 | 259,7334462 | -335,1677824 | 258,7096272 |
| 633 | 5,04711 | -233,5761 | 203,0268 | 78,66443159 | 281,6912 | -594,9 | -1,023819 | 259,7334462 | -335,1677824 | 258,7096272 |
| 634 | 0 | -1591,626 | -517,2599 | 59,91874047 | -457,3411 | -551,28 | -1,105862 | -2983,795463 | -3535,078223 | -2984,901325 |
| 634 | 2,53756 | -1591,626 | -517,2599 | 59,91874047 | -457,3411 | -551,28 | -1,105862 | -2983,795463 | -3535,078223 | -2984,901325 |
| 634 | 5,07513 | -1591,626 | -517,2599 | 59,91874047 | -457,3411 | -551,28 | -1,105862 | -2983,795463 | -3535,078223 | -2984,901325 |
| 635 | 0 | -2292,623 | -1112,987 | -53,9878866 | -1166,975 | -510,02 | -0,774946 | -5314,359371 | -5824,381449 | -5315,134317 |
| 635 | 2,55129 | -2292,623 | -1112,987 | -53,9878866 | -1166,975 | -510,02 | -0,774946 | -5314,359371 | -5824,381449 | -5315,134317 |
| 635 | 5,10258 | -2292,623 | -1112,987 | -53,9878866 | -1166,975 | -510,02 | -0,774946 | -5314,359371 | -5824,381449 | -5315,134317 |
| 636 | 0 | -2776,466 | -1596,009 | -171,445228 | -1767,454 | -478,05 | -0,629586 | -7144,313768 | -7622,3666 | -7144,943354 |
| 636 | 2,56719 | -2776,466 | -1596,009 | -171,445228 | -1767,454 | -478,05 | -0,629586 | -7144,313768 | -7622,3666 | -7144,943354 |
| 636 | 5,13438 | -2776,466 | -1596,009 | -171,445228 | -1767,454 | -478,05 | -0,629586 | -7144,313768 | -7622,3666 | -7144,943354 |
| 637 | 0 | -3252,243 | -1984,385 | -250,702773 | -2235,088 | -449,49 | -3,333329 | -8698,090929 | -9147,578102 | -8701,424258 |
| 637 | 2,58604 | -3252,243 | -1984,385 | -250,702773 | -2235,088 | -449,49 | -3,333329 | -8698,090929 | -9147,578102 | -8701,424258 |
| 637 | 5,17207 | -3252,243 | -1984,385 | -250,702773 | -2235,088 | -449,49 | -3,333329 | -8698,090929 | -9147,578102 | -8701,424258 |
| 771 | 0 | -2767,826 | -1546,26 | -58,653725 | -1614,913 | 8,04305 | -1,523636 | -5827,99895 | -6819,956843 | -6829,52353 |
| 771 | 2,53756 | -2767,826 | -1546,26 | -58,653725 | -1614,913 | 8,04305 | -1,523636 | -5827,99895 | -6819,956843 | -6829,52353 |
| 771 | 5,07513 | -2767,826 | -1546,26 | -58,653725 | -1614,913 | 8,04305 | -1,523636 | -5827,99895 | -6819,956843 | -6829,52353 |
| 772 | 0 | -1536,79 | -946,5662 | -64,1392819 | -1010,705 | 21,9437 | -1,440705 | -4019,237765 | -3997,294017 | -4020,678471 |
| 772 | 2,52356 | -1536,79 | -946,5662 | -64,1392819 | -1010,705 | 21,9437 | -1,440705 | -4019,237765 | -3997,294017 | -4020,678471 |
| 772 | 5,04711 | -1536,79 | -946,5662 | -64,1392819 | -1010,705 | 21,9437 | -1,440705 | -4019,237765 | -3997,294017 | -4020,678471 |

TABEL GAYA AXIAL KOLOM TEPI

| FRAME | STA | PD | PL | | PL TOT | ME | | COMB1 | COMB2 | COMB3 |
|-------|----------|----------|-----------|---------------|----------|----------|----------|--------------|------------------------|------------------------|
| | | | PL merata | PL Koef kejut | | PE X | PE Y | | | |
| 1 | 0 | -490,394 | -282,401 | -60,9712993 | -343,373 | 22,77967 | 4,495402 | -1324,257285 | 1,3PD + 2 (PQ+PP)+1PEX | 1,3PD + 2 (PQ+PP)+1PEY |
| 1 | 5,5 | -490,394 | -282,401 | -60,9712993 | -343,373 | 22,77967 | 4,495402 | -1324,257285 | -1301,477615 | -1319,761883 |
| 1 | 11 | -490,394 | -282,401 | -60,9712993 | -343,373 | 22,77967 | 4,495402 | -1324,257285 | -1301,477615 | -1319,761883 |
| 2 | 0 | -168,005 | -59,133 | 5,96452635 | -53,1685 | -23,3829 | 1,226091 | -324,7440198 | -348,1269171 | -1319,761883 |
| 2 | 2,811 | -168,005 | -59,133 | 5,96452635 | -53,1685 | -23,3829 | 1,226091 | -324,7440198 | -348,1269171 | -323,5179285 |
| 2 | 5,622 | -168,005 | -59,133 | 5,96452635 | -53,1685 | -23,3829 | 1,226091 | -324,7440198 | -348,1269171 | -323,5179285 |
| 12 | 0 | 21,64251 | -381,777 | -107,001562 | -488,778 | 1,774144 | 8,295916 | -949,4210026 | -947,6468585 | -323,5179285 |
| 12 | 3,683 | 21,64251 | -381,777 | -107,001562 | -488,778 | 1,774144 | 8,295916 | -949,4210026 | -947,6468585 | -941,1250868 |
| 12 | 7,366 | 21,64251 | -381,777 | -107,001562 | -488,778 | 1,774144 | 8,295916 | -949,4210026 | -947,6468585 | -941,1250868 |
| 41 | 0 | -232,853 | -104,68 | 0,590311054 | -104,09 | -1,86076 | 1,358546 | -510,8882865 | -512,74905 | -941,1250868 |
| 41 | 2,811 | -232,853 | -104,68 | 0,590311054 | -104,09 | -1,86076 | 1,358546 | -510,8882865 | -512,74905 | -509,5297408 |
| 41 | 5,622 | -232,853 | -104,68 | 0,590311054 | -104,09 | -1,86076 | 1,358546 | -510,8882865 | -512,74905 | -509,5297408 |
| 128 | 0 | -134,821 | -81,5191 | -1,05451189 | -82,5736 | -0,19232 | 0,114857 | -340,415168 | -340,6074897 | -509,5297408 |
| 128 | 0,179563 | -134,821 | -81,5191 | -1,05451189 | -82,5736 | -0,19232 | 0,114857 | -340,415168 | -340,6074897 | -340,3003115 |
| 128 | 0,359125 | -134,821 | -81,5191 | -1,05451189 | -82,5736 | -0,19232 | 0,114857 | -340,415168 | -340,6074897 | -340,3003115 |
| 137 | 0 | -163,713 | -93,7179 | -0,41626526 | -94,1341 | 0,139493 | -0,16677 | -401,0953776 | -400,9558851 | -401,262147 |
| 137 | 0,437625 | -163,713 | -93,7179 | -0,41626526 | -94,1341 | 0,139493 | -0,16677 | -401,0953776 | -400,9558851 | -401,262147 |
| 137 | 0,87525 | -163,713 | -93,7179 | -0,41626526 | -94,1341 | 0,139493 | -0,16677 | -401,0953776 | -400,9558851 | -401,262147 |
| 151 | 0 | 122,1003 | -135,435 | -49,3223757 | -184,758 | 0,399888 | 0,056937 | -210,7852843 | -210,3853962 | -401,262147 |
| 151 | 1,703813 | 122,1003 | -135,435 | -49,3223757 | -184,758 | 0,399888 | 0,056937 | -210,7852843 | -210,3853962 | -210,7283474 |
| 151 | 3,407625 | 122,1003 | -135,435 | -49,3223757 | -184,758 | 0,399888 | 0,056937 | -210,7852843 | -210,3853962 | -210,7283474 |
| 153 | 0 | -199,016 | -132,889 | -12,5453539 | -145,434 | 0,034809 | -0,00124 | -549,58907 | -549,5542613 | -210,7283474 |
| 153 | 2,287875 | -199,016 | -132,889 | -12,5453539 | -145,434 | 0,034809 | -0,00124 | -549,58907 | -549,5542613 | -549,5903088 |
| 153 | 4,57575 | -199,016 | -132,889 | -12,5453539 | -145,434 | 0,034809 | -0,00124 | -549,58907 | -549,5542613 | -549,5903088 |
| 155 | 0 | -198,383 | -172,385 | -20,5891515 | -192,975 | 2,376355 | -0,81264 | -643,8468532 | -549,5542613 | -549,5903088 |
| 155 | 2,946438 | -198,383 | -172,385 | -20,5891515 | -192,975 | 2,376355 | -0,81264 | -643,8468532 | -641,4704985 | -644,6594979 |
| 155 | 5,892875 | -198,383 | -172,385 | -20,5891515 | -192,975 | 2,376355 | -0,81264 | -643,8468532 | -641,4704985 | -644,6594979 |
| 274 | 0 | -179,081 | -69,3119 | -38,2756402 | -107,588 | -1,74417 | 0,306899 | -447,9807615 | -449,72493 | -644,6594979 |
| 274 | 0,451281 | -179,081 | -69,3119 | -38,2756402 | -107,588 | -1,74417 | 0,306899 | -447,9807615 | -449,72493 | -447,6738626 |
| 274 | 0,902563 | -179,081 | -69,3119 | -38,2756402 | -107,588 | -1,74417 | 0,306899 | -447,9807615 | -449,72493 | -447,6738626 |
| 275 | 0 | -181,048 | -66,9646 | -4,96349371 | -71,9281 | -1,59741 | -1,2954 | -379,2191888 | -380,8166011 | -380,5145904 |
| 275 | 0,50025 | -181,048 | -66,9646 | -4,96349371 | -71,9281 | -1,59741 | -1,2954 | -379,2191888 | -380,8166011 | -380,5145904 |
| 275 | 1,0005 | -181,048 | -66,9646 | -4,96349371 | -71,9281 | -1,59741 | -1,2954 | -379,2191888 | -380,8166011 | -380,5145904 |

| | | | | | | | | | | |
|-----|----------|----------|----------|-------------|----------|----------|----------|--------------|--------------|--------------|
| 278 | 0 | -226.5 | -87,2084 | 4,46184371 | -91,6702 | -0,93403 | -1,25519 | -477,7908006 | -478,7248319 | -479,0459869 |
| 278 | 0,672219 | -226.5 | -87,2084 | 4,46184371 | -91,6702 | -0,93403 | -1,25519 | -477,7908006 | -478,7248319 | -479,0459869 |
| 278 | 1,344438 | -226.5 | -87,2084 | 4,46184371 | -91,6702 | -0,93403 | -1,25519 | -477,7908006 | -478,7248319 | -479,0459869 |
| 281 | 0 | -265,104 | -102,823 | -6,50961224 | -109,332 | -0,38951 | 0,328434 | -563,2994666 | -563,6889731 | -562,9710328 |
| 281 | 0,967688 | -265,104 | -102,823 | -6,50961224 | -109,332 | -0,38951 | 0,328434 | -563,2994666 | -563,6889731 | -562,9710328 |
| 281 | 1,935375 | -265,104 | -102,823 | -6,50961224 | -109,332 | -0,38951 | 0,328434 | -563,2994666 | -563,6889731 | -562,9710328 |
| 283 | 0 | -291,725 | -114,072 | -6,47581468 | -120,548 | -0,0499 | -0,49423 | -620,3384531 | -620,3883545 | -620,8326819 |
| 283 | 1,388656 | -291,725 | -114,072 | -6,47581468 | -120,548 | -0,0499 | -0,49423 | -620,3384531 | -620,3883545 | -620,8326819 |
| 283 | 2,777313 | -291,725 | -114,072 | -6,47581468 | -120,548 | -0,0499 | -0,49423 | -620,3384531 | -620,3883545 | -620,8326819 |
| 285 | 0 | -306,004 | -120,264 | -5,48615293 | -125,75 | 0,097662 | -0,58878 | -649,3054405 | -649,2077786 | -649,8942167 |
| 285 | 1,936625 | -306,004 | -120,264 | -5,48615293 | -125,75 | 0,097662 | -0,58878 | -649,3054405 | -649,2077786 | -649,8942167 |
| 285 | 3,87325 | -306,004 | -120,264 | -5,48615293 | -125,75 | 0,097662 | -0,58878 | -649,3054405 | -649,2077786 | -649,8942167 |
| 287 | 0 | -309,977 | -122,521 | -4,14052634 | -126,662 | 0,024646 | -0,40846 | -656,2939929 | -656,2693471 | -656,7024501 |
| 287 | 2,616594 | -309,977 | -122,521 | -4,14052634 | -126,662 | 0,024646 | -0,40846 | -656,2939929 | -656,2693471 | -656,7024501 |
| 287 | 5,233188 | -309,977 | -122,521 | -4,14052634 | -126,662 | 0,024646 | -0,40846 | -656,2939929 | -656,2693471 | -656,7024501 |
| 294 | 0 | -316,497 | -126,458 | -2,95258962 | -129,411 | 0,836258 | -0,47143 | -670,2681572 | -669,4318995 | -670,7395852 |
| 294 | 3,432063 | -316,497 | -126,458 | -2,95258962 | -129,411 | 0,836258 | -0,47143 | -670,2681572 | -669,4318995 | -670,7395852 |
| 294 | 6,864125 | -316,497 | -126,458 | -2,95258962 | -129,411 | 0,836258 | -0,47143 | -670,2681572 | -669,4318995 | -670,7395852 |
| 296 | 0 | -283,725 | -111,617 | -8,19636828 | -119,813 | -4,99363 | -0,75379 | -608,4682888 | -613,4619172 | -609,2220759 |
| 296 | 4,390531 | -283,725 | -111,617 | -8,19636828 | -119,813 | -4,99363 | -0,75379 | -608,4682888 | -613,4619172 | -609,2220759 |
| 296 | 8,781063 | -283,725 | -111,617 | -8,19636828 | -119,813 | -4,99363 | -0,75379 | -608,4682888 | -613,4619172 | -609,2220759 |
| 301 | 0 | -330,036 | -133,254 | -10,9843318 | -144,238 | 0,127913 | -0,3003 | -717,5240772 | -717,396164 | -717,8243768 |
| 301 | 1,050875 | -330,036 | -133,254 | -10,9843318 | -144,238 | 0,127913 | -0,3003 | -717,5240772 | -717,396164 | -717,8243768 |
| 301 | 2,10175 | -330,036 | -133,254 | -10,9843318 | -144,238 | 0,127913 | -0,3003 | -717,5240772 | -717,396164 | -717,8243768 |
| 303 | 0 | -314,885 | -127,162 | -14,9472394 | -142,109 | 0,009023 | -0,66314 | -693,5691747 | -693,5601517 | -694,232314 |
| 303 | 0,725844 | -314,885 | -127,162 | -14,9472394 | -142,109 | 0,009023 | -0,66314 | -693,5691747 | -693,5601517 | -694,232314 |
| 303 | 1,451688 | -314,885 | -127,162 | -14,9472394 | -142,109 | 0,009023 | -0,66314 | -693,5691747 | -693,5601517 | -694,232314 |
| 307 | 0 | -231,563 | -89,9395 | -13,8738763 | -103,813 | -1,06883 | -0,44126 | -508,6591888 | -509,728016 | -509,1004507 |
| 307 | 0,524813 | -231,563 | -89,9395 | -13,8738763 | -103,813 | -1,06883 | -0,44126 | -508,6591888 | -509,728016 | -509,1004507 |
| 307 | 1,049625 | -231,563 | -89,9395 | -13,8738763 | -103,813 | -1,06883 | -0,44126 | -508,6591888 | -509,728016 | -509,1004507 |
| 309 | 0 | -378,534 | -134,123 | -8,7582019 | -142,881 | 0,285228 | -0,95888 | -777,8567368 | -777,5715088 | -778,8156128 |
| 309 | 2,090438 | -378,534 | -134,123 | -8,7582019 | -142,881 | 0,285228 | -0,95888 | -777,8567368 | -777,5715088 | -778,8156128 |
| 309 | 4,180875 | -378,534 | -134,123 | -8,7582019 | -142,881 | 0,285228 | -0,95888 | -777,8567368 | -777,5715088 | -778,8156128 |
| 311 | 0 | -325,244 | -135,092 | -6,97036964 | -142,063 | 0,104654 | -0,19977 | -706,9426203 | -706,8379665 | -707,1423948 |
| 311 | 1,504406 | -325,244 | -135,092 | -6,97036964 | -142,063 | 0,104654 | -0,19977 | -706,9426203 | -706,8379665 | -707,1423948 |
| 311 | 3,008813 | -325,244 | -135,092 | -6,97036964 | -142,063 | 0,104654 | -0,19977 | -706,9426203 | -706,8379665 | -707,1423948 |
| 321 | 0 | -206,651 | -115,986 | 0,245947956 | -115,74 | 0,288765 | 0,030826 | -500,1268398 | -499,8380747 | -500,096014 |

| | | | | | | | | | | |
|-----|----------|----------|----------|-------------|----------|----------|----------|--------------|--------------|--------------|
| 321 | 0,774688 | -206,651 | -115,986 | 0,245947956 | -115,74 | 0,288765 | 0,030826 | -500,1268398 | -499,8380747 | -500,096014 |
| 321 | 1,549375 | -206,651 | -115,986 | 0,245947956 | -115,74 | 0,288765 | 0,030826 | -500,1268398 | -499,8380747 | -500,096014 |
| 385 | 0 | -312,536 | -134,156 | -10,8518485 | -145,008 | 5,741988 | -0,44491 | -696,3132239 | -690,5712358 | -696,7581342 |
| 385 | 4,390531 | -312,536 | -134,156 | -10,8518485 | -145,008 | 5,741988 | -0,44491 | -696,3132239 | -690,5712358 | -696,7581342 |
| 385 | 8,781063 | -312,536 | -134,156 | -10,8518485 | -145,008 | 5,741988 | -0,44491 | -696,3132239 | -690,5712358 | -696,7581342 |
| 386 | 0 | -305,635 | -119,265 | -2,11378755 | -121,379 | -2,48685 | -0,08922 | -640,0829438 | -642,5697962 | -640,17216 |
| 386 | 3,432063 | -305,635 | -119,265 | -2,11378755 | -121,379 | -2,48685 | -0,08922 | -640,0829438 | -642,5697962 | -640,17216 |
| 386 | 6,864125 | -305,635 | -119,265 | -2,11378755 | -121,379 | -2,48685 | -0,08922 | -640,0829438 | -642,5697962 | -640,17216 |
| 389 | 0 | -304,817 | -119,498 | -3,79137805 | -123,289 | -1,33032 | 0,019603 | -642,8407983 | -644,1711218 | -642,8211952 |
| 389 | 2,616594 | -304,817 | -119,498 | -3,79137805 | -123,289 | -1,33032 | 0,019603 | -642,8407983 | -644,1711218 | -642,8211952 |
| 389 | 5,233188 | -304,817 | -119,498 | -3,79137805 | -123,289 | -1,33032 | 0,019603 | -642,8407983 | -644,1711218 | -642,8211952 |
| 393 | 0 | -298,533 | -115,432 | -4,92346742 | -120,355 | -2,11668 | -0,0055 | -628,8040831 | -630,9207613 | -628,8095793 |
| 393 | 1,936625 | -298,533 | -115,432 | -4,92346742 | -120,355 | -2,11668 | -0,0055 | -628,8040831 | -630,9207613 | -628,8095793 |
| 393 | 3,87325 | -298,533 | -115,432 | -4,92346742 | -120,355 | -2,11668 | -0,0055 | -628,8040831 | -630,9207613 | -628,8095793 |
| 398 | 0 | -282,43 | -107,757 | -5,73863684 | -113,495 | -2,98226 | -0,01204 | -594,1494241 | -597,1316831 | -594,1614642 |
| 398 | 1,388656 | -282,43 | -107,757 | -5,73863684 | -113,495 | -2,98226 | -0,01204 | -594,1494241 | -597,1316831 | -594,1614642 |
| 398 | 2,777313 | -282,43 | -107,757 | -5,73863684 | -113,495 | -2,98226 | -0,01204 | -594,1494241 | -597,1316831 | -594,1614642 |
| 401 | 0 | -254,867 | -95,1394 | -5,64454165 | -100,784 | -4,20489 | 0,003289 | -532,8945914 | -537,0994841 | -532,8913022 |
| 401 | 0,967688 | -254,867 | -95,1394 | -5,64454165 | -100,784 | -4,20489 | 0,003289 | -532,8945914 | -537,0994841 | -532,8913022 |
| 401 | 1,935375 | -254,867 | -95,1394 | -5,64454165 | -100,784 | -4,20489 | 0,003289 | -532,8945914 | -537,0994841 | -532,8913022 |
| 411 | 0 | -170,347 | -62,9893 | -4,49602386 | -67,4853 | 3,54261 | 0,050369 | -356,4219738 | -359,9645799 | -356,3716049 |
| 411 | 0,50025 | -170,347 | -62,9893 | -4,49602386 | -67,4853 | 3,54261 | 0,050369 | -356,4219738 | -359,9645799 | -356,3716049 |
| 411 | 1,0005 | -170,347 | -62,9893 | -4,49602386 | -67,4853 | 3,54261 | 0,050369 | -356,4219738 | -359,9645799 | -356,3716049 |
| 412 | 0 | -188,045 | -73,8998 | -38,8258778 | -112,726 | 0,473629 | 0,072728 | -469,9098948 | -469,436266 | -469,8371671 |
| 412 | 0,451281 | -188,045 | -73,8998 | -38,8258778 | -112,726 | 0,473629 | 0,072728 | -469,9098948 | -469,436266 | -469,8371671 |
| 412 | 0,902563 | -188,045 | -73,8998 | -38,8258778 | -112,726 | 0,473629 | 0,072728 | -469,9098948 | -469,436266 | -469,8371671 |
| 414 | 0 | -243,167 | -100,605 | -15,1291077 | -115,735 | 3,996849 | 0,072989 | -547,5863248 | -543,5894757 | -547,5133355 |
| 414 | 0,524812 | -243,167 | -100,605 | -15,1291077 | -115,735 | 3,996849 | 0,072989 | -547,5863248 | -543,5894757 | -547,5133355 |
| 414 | 1,049625 | -243,167 | -100,605 | -15,1291077 | -115,735 | 3,996849 | 0,072989 | -547,5863248 | -543,5894757 | -547,5133355 |
| 416 | 0 | -214,575 | -78,157 | -3,37879295 | -81,5358 | -4,80588 | 0,022088 | -442,0189081 | -446,8247928 | -441,9968203 |
| 416 | 0,674719 | -214,575 | -78,157 | -3,37879295 | -81,5358 | -4,80588 | 0,022088 | -442,0189081 | -446,8247928 | -441,9968203 |
| 416 | 1,349438 | -214,575 | -78,157 | -3,37879295 | -81,5358 | -4,80588 | 0,022088 | -442,0189081 | -446,8247928 | -441,9968203 |
| 436 | 0 | -184,845 | -102,396 | 1,78368617 | -100,612 | -5,56982 | 0,003518 | -441,5226808 | -447,0924983 | -441,5191632 |
| 436 | 0,774688 | -184,845 | -102,396 | 1,78368617 | -100,612 | -5,56982 | 0,003518 | -441,5226808 | -447,0924983 | -441,5191632 |
| 436 | 1,549375 | -184,845 | -102,396 | 1,78368617 | -100,612 | -5,56982 | 0,003518 | -441,5226808 | -447,0924983 | -441,5191632 |
| 438 | 0 | -135,988 | -75,114 | 1,713503755 | -73,4005 | -8,1064 | -0,00121 | -323,5851611 | -331,6915605 | -323,5863724 |
| 438 | 0,437625 | -135,988 | -75,114 | 1,713503755 | -73,4005 | -8,1064 | -0,00121 | -323,5851611 | -331,6915605 | -323,5863724 |

| | | | | | | | | | | |
|-----|----------|----------|----------|-------------|----------|----------|----------|--------------|--------------|--------------|
| 438 | 0,87525 | -135,988 | -75,114 | 1,713503755 | -73,4005 | -8,1064 | -0,00121 | -323,5851611 | -331,6915605 | -323,5863724 |
| 440 | 0 | -108,545 | -62,0449 | 1,176435422 | -60,8685 | -8,85467 | -0,00264 | -262,8454762 | -271,7001471 | -262,8481162 |
| 440 | 0,179563 | -108,545 | -62,0449 | 1,176435422 | -60,8685 | -8,85467 | -0,00264 | -262,8454762 | -271,7001471 | -262,8481162 |
| 440 | 0,359125 | -108,545 | -62,0449 | 1,176435422 | -60,8685 | -8,85467 | -0,00264 | -262,8454762 | -271,7001471 | -262,8481162 |
| 442 | 0 | -174,808 | -119,473 | -11,029087 | -130,502 | -5,72542 | -0,04437 | -488,2550806 | -493,9804997 | -488,2994544 |
| 442 | 2,287875 | -174,808 | -119,473 | -11,029087 | -130,502 | -5,72542 | -0,04437 | -488,2550806 | -493,9804997 | -488,2994544 |
| 442 | 4,57575 | -174,808 | -119,473 | -11,029087 | -130,502 | -5,72542 | -0,04437 | -488,2550806 | -493,9804997 | -488,2994544 |
| 444 | 0 | 133,6435 | -130,348 | 48,7773378 | -179,125 | -1,49802 | 0,062398 | -184,5135355 | -186,0115595 | -184,4511372 |
| 444 | 1,703813 | 133,6435 | -130,348 | 48,7773378 | -179,125 | -1,49802 | 0,062398 | -184,5135355 | -186,0115595 | -184,4511372 |
| 444 | 3,407625 | 133,6435 | -130,348 | 48,7773378 | -179,125 | -1,49802 | 0,062398 | -184,5135355 | -186,0115595 | -184,4511372 |
| 446 | 0 | -211,935 | -119,515 | -7,02016514 | -126,535 | -4,35275 | 0,030516 | -528,5870322 | -532,9397841 | -528,5565162 |
| 446 | 1,19375 | -211,935 | -119,515 | -7,02016514 | -126,535 | -4,35275 | 0,030516 | -528,5870322 | -532,9397841 | -528,5565162 |
| 446 | 2,3875 | -211,935 | -119,515 | -7,02016514 | -126,535 | -4,35275 | 0,030516 | -528,5870322 | -532,9397841 | -528,5565162 |
| 453 | 0 | -261,206 | -220,96 | -26,3025015 | -247,262 | 25,35363 | -0,5456 | -834,0917591 | -808,7381291 | -834,637355 |
| 453 | 2,946438 | -261,206 | -220,96 | -26,3025015 | -247,262 | 25,35363 | -0,5456 | -834,0917591 | -808,7381291 | -834,637355 |
| 453 | 5,892875 | -261,206 | -220,96 | -26,3025015 | -247,262 | 25,35363 | -0,5456 | -834,0917591 | -808,7381291 | -834,637355 |
| 457 | 0 | 3,47229 | -407,951 | -109,986415 | -517,937 | 13,40703 | 7,465898 | -1031,3607 | -1017,953671 | -1023,894803 |
| 457 | 3,683 | 3,47229 | -407,951 | -109,986415 | -517,937 | 13,40703 | 7,465898 | -1031,3607 | -1017,953671 | -1023,894803 |
| 457 | 7,366 | 3,47229 | -407,951 | -109,986415 | -517,937 | 13,40703 | 7,465898 | -1031,3607 | -1017,953671 | -1023,894803 |
| 462 | 0 | -394,759 | -144,105 | -9,88184542 | -153,986 | 4,616354 | -0,70681 | -821,1593715 | -816,5430177 | -821,8661843 |
| 462 | 2,090438 | -394,759 | -144,105 | -9,88184542 | -153,986 | 4,616354 | -0,70681 | -821,1593715 | -816,5430177 | -821,8661843 |
| 462 | 4,180875 | -394,759 | -144,105 | -9,88184542 | -153,986 | 4,616354 | -0,70681 | -821,1593715 | -816,5430177 | -821,8661843 |
| 465 | 0 | -343,013 | -141,713 | -11,9431788 | -153,656 | 3,876201 | 0,050267 | -753,2299619 | -749,3537609 | -753,1796945 |
| 465 | 1,050875 | -343,013 | -141,713 | -11,9431788 | -153,656 | 3,876201 | 0,050267 | -753,2299619 | -749,3537609 | -753,1796945 |
| 465 | 2,10175 | -343,013 | -141,713 | -11,9431788 | -153,656 | 3,876201 | 0,050267 | -753,2299619 | -749,3537609 | -753,1796945 |
| 467 | 0 | -333,411 | -139,85 | -7,49729328 | -147,347 | 2,083832 | 0,027428 | -728,1292122 | -726,0453798 | -728,1017845 |
| 467 | 1,504406 | -333,411 | -139,85 | -7,49729328 | -147,347 | 2,083832 | 0,027428 | -728,1292122 | -726,0453798 | -728,1017845 |
| 467 | 3,008813 | -333,411 | -139,85 | -7,49729328 | -147,347 | 2,083832 | 0,027428 | -728,1292122 | -726,0453798 | -728,1017845 |
| 472 | 0 | -333,743 | -140,411 | -16,4887648 | -156,9 | 6,162514 | 0,043764 | -747,6654569 | -741,5029432 | -747,6216931 |
| 472 | 0,725844 | -333,743 | -140,411 | -16,4887648 | -156,9 | 6,162514 | 0,043764 | -747,6654569 | -741,5029432 | -747,6216931 |
| 472 | 1,451688 | -333,743 | -140,411 | -16,4887648 | -156,9 | 6,162514 | 0,043764 | -747,6654569 | -741,5029432 | -747,6216931 |
| 535 | 0 | -231,637 | -130,916 | -8,29448385 | -139,21 | 0,411119 | 0,038052 | -579,5495398 | -579,1384205 | -579,5114881 |
| 535 | 1,19375 | -231,637 | -130,916 | -8,29448385 | -139,21 | 0,411119 | 0,038052 | -579,5495398 | -579,1384205 | -579,5114881 |
| 535 | 2,3875 | -231,637 | -130,916 | -8,29448385 | -139,21 | 0,411119 | 0,038052 | -579,5495398 | -579,1384205 | -579,5114881 |

TABEL GAYA AXIAL KOLOM TENGAH

| FRAME | STA | PD | PL | | PL TOT | ME | | COMB1 1,3PD + 2 (PQ+PP) | COMB 2 1,3PD + 2 (PQ+PP)+1PEX | COMB 3 1,3PD + 2 (PQ+PP)+1PEY |
|-------|----------|-----------|-----------|---------------|-----------|-----------|-----------|----------------------------|----------------------------------|----------------------------------|
| | | | PL merata | PL.Koef kejut | | PE X | PE Y | | | |
| 4 | 0 | -238,9299 | -76,33756 | 5,324840199 | -71,01272 | -24,42949 | -2,647398 | -452,6343149 | -477,0638088 | -455,2817129 |
| 4 | 2,811 | -238,9299 | -76,33756 | 5,324840199 | -71,01272 | -24,42949 | -2,647398 | -452,6343149 | -477,0638088 | -455,2817129 |
| 4 | 5,622 | -238,9299 | -76,33756 | 5,324840199 | -71,01272 | -24,42949 | -2,647398 | -452,6343149 | -477,0638088 | -455,2817129 |
| 43 | 0 | -287,5174 | -121,5509 | -0,103021527 | -121,6539 | -2,282803 | -2,390452 | -617,080348 | -619,3631513 | -619,4707996 |
| 43 | 2,811 | -287,5174 | -121,5509 | -0,103021527 | -121,6539 | -2,282803 | -2,390452 | -617,080348 | -619,3631513 | -619,4707996 |
| 43 | 5,622 | -287,5174 | -121,5509 | -0,103021527 | -121,6539 | -2,282803 | -2,390452 | -617,080348 | -619,3631513 | -619,4707996 |
| 543 | 0 | -945,7678 | -331,7017 | -121,119991 | -452,8216 | 30,16129 | -6,903924 | -2135,141448 | -2104,980159 | -2142,045371 |
| 543 | 5,5 | -945,7678 | -331,7017 | -121,119991 | -452,8216 | 30,16129 | -6,903924 | -2135,141448 | -2104,980159 | -2142,045371 |
| 543 | 11 | -945,7678 | -331,7017 | -121,119991 | -452,8216 | 30,16129 | -6,903924 | -2135,141448 | -2104,980159 | -2142,045371 |
| 544 | 0 | -406,258 | -453,8868 | -185,6351344 | -639,5219 | 1,268544 | -13,73197 | -1807,179244 | -1805,9107 | -1820,911214 |
| 544 | 3,683 | -406,258 | -453,8868 | -185,6351344 | -639,5219 | 1,268544 | -13,73197 | -1807,179244 | -1805,9107 | -1820,911214 |
| 544 | 7,366 | -406,258 | -453,8868 | -185,6351344 | -639,5219 | 1,268544 | -13,73197 | -1807,179244 | -1805,9107 | -1820,911214 |
| 551 | 0 | -194,3467 | -83,78826 | -1,583711043 | -85,37197 | -0,72972 | 0,180197 | -423,3946763 | -424,124396 | -423,214479 |
| 551 | 0,179563 | -194,3467 | -83,78826 | -1,583711043 | -85,37197 | -0,72972 | 0,180197 | -423,3946763 | -424,124396 | -423,214479 |
| 551 | 0,359125 | -194,3467 | -83,78826 | -1,583711043 | -85,37197 | -0,72972 | 0,180197 | -423,3946763 | -424,124396 | -423,214479 |
| 555 | 0 | -247,3456 | -108,4158 | -0,459369306 | -108,8752 | -0,222867 | -0,113707 | -539,2995582 | -539,5224251 | -539,4132651 |
| 555 | 0,437625 | -247,3456 | -108,4158 | -0,459369306 | -108,8752 | -0,222867 | -0,113707 | -539,2995582 | -539,5224251 | -539,4132651 |
| 555 | 0,87525 | -247,3456 | -108,4158 | -0,459369306 | -108,8752 | -0,222867 | -0,113707 | -539,2995582 | -539,5224251 | -539,4132651 |
| 560 | 0 | 0,460815 | -161,6324 | -81,32641496 | -242,9589 | -0,457629 | 0,082073 | -485,3186693 | -485,776298 | -485,2365965 |
| 560 | 1,703813 | 0,460815 | -161,6324 | -81,32641496 | -242,9589 | -0,457629 | 0,082073 | -485,3186693 | -485,776298 | -485,2365965 |
| 560 | 3,407625 | 0,460815 | -161,6324 | -81,32641496 | -242,9589 | -0,457629 | 0,082073 | -485,3186693 | -485,776298 | -485,2365965 |
| 561 | 0 | -298,6613 | -157,7374 | -20,68367623 | -178,4211 | -1,062061 | -0,039739 | -745,1018432 | -746,1639039 | -745,1415825 |
| 561 | 2,287875 | -298,6613 | -157,7374 | -20,68367623 | -178,4211 | -1,062061 | -0,039739 | -745,1018432 | -746,1639039 | -745,1415825 |
| 561 | 4,57575 | -298,6613 | -157,7374 | -20,68367623 | -178,4211 | -1,062061 | -0,039739 | -745,1018432 | -746,1639039 | -745,1415825 |
| 562 | 0 | -307,6266 | -200,8775 | -31,29393995 | -232,1714 | 3,109288 | -0,676401 | -864,2574316 | -861,1481433 | -864,9338333 |
| 562 | 2,946438 | -307,6266 | -200,8775 | -31,29393995 | -232,1714 | 3,109288 | -0,676401 | -864,2574316 | -861,1481433 | -864,9338333 |
| 562 | 5,892875 | -307,6266 | -200,8775 | -31,29393995 | -232,1714 | 3,109288 | -0,676401 | -864,2574316 | -861,1481433 | -864,9338333 |
| 585 | 0 | -267,0666 | -78,45621 | -66,26033745 | -144,7165 | -2,1417 | 0,908215 | -636,6197097 | -638,7614096 | -635,7114949 |
| 585 | 0,451281 | -267,0666 | -78,45621 | -66,26033745 | -144,7165 | -2,1417 | 0,908215 | -636,6197097 | -638,7614096 | -635,7114949 |
| 585 | 0,902563 | -267,0666 | -78,45621 | -66,26033745 | -144,7165 | -2,1417 | 0,908215 | -636,6197097 | -638,7614096 | -635,7114949 |
| 586 | 0 | -270,7672 | -78,71002 | -11,2873298 | -89,99735 | -2,056297 | 0,401404 | -531,9920699 | -534,0483673 | -531,5906664 |
| 586 | 0,50025 | -270,7672 | -78,71002 | -11,2873298 | -89,99735 | -2,056297 | 0,401404 | -531,9920699 | -534,0483673 | -531,5906664 |
| 586 | 1,0005 | -270,7672 | -78,71002 | -11,2873298 | -89,99735 | -2,056297 | 0,401404 | -531,9920699 | -534,0483673 | -531,5906664 |

| | | | | | | | | | | |
|-----|----------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 587 | 0 | -326,6931 | -98,64793 | -6,177894938 | -104,8258 | -1,273574 | 0,253743 | -634,3526119 | -635,6261859 | -634,0988688 |
| 587 | 0,672219 | -326,6931 | -98,64793 | -6,177894938 | -104,8258 | -1,273574 | 0,253743 | -634,3526119 | -635,6261859 | -634,0988688 |
| 587 | 1,344438 | -326,6931 | -98,64793 | -6,177894938 | -104,8258 | -1,273574 | 0,253743 | -634,3526119 | -635,6261859 | -634,0988688 |
| 588 | 0 | -374,0288 | -116,431 | -8,051157387 | -124,4822 | -0,64409 | 1,987921 | -735,2017895 | -735,8458791 | -733,213868 |
| 588 | 0,967688 | -374,0288 | -116,431 | -8,051157387 | -124,4822 | -0,64409 | 1,987921 | -735,2017895 | -735,8458791 | -733,213868 |
| 588 | 1,935375 | -374,0288 | -116,431 | -8,051157387 | -124,4822 | -0,64409 | 1,987921 | -735,2017895 | -735,8458791 | -733,213868 |
| 589 | 0 | -407,4148 | -129,0615 | -7,74742361 | -136,809 | -0,2246 | 1,358272 | -803,2571902 | -803,48179 | -801,8989182 |
| 589 | 1,388656 | -407,4148 | -129,0615 | -7,74742361 | -136,809 | -0,2246 | 1,358272 | -803,2571902 | -803,48179 | -801,8989182 |
| 589 | 2,777313 | -407,4148 | -129,0615 | -7,74742361 | -136,809 | -0,2246 | 1,358272 | -803,2571902 | -803,48179 | -801,8989182 |
| 590 | 0 | -427,0603 | -136,2718 | -6,444951017 | -142,7168 | -0,040948 | 0,980541 | -840,6529631 | -840,6529631 | -839,6314748 |
| 590 | 1,936625 | -427,0603 | -136,2718 | -6,444951017 | -142,7168 | -0,040948 | 0,980541 | -840,6529631 | -840,6529631 | -839,6314748 |
| 590 | 3,87325 | -427,0603 | -136,2718 | -6,444951017 | -142,7168 | -0,040948 | 0,980541 | -840,6529631 | -840,6529631 | -839,6314748 |
| 591 | 0 | -436,812 | -139,5482 | -4,776426943 | -144,3246 | -0,094686 | 0,936582 | -856,5048637 | -856,5995498 | -855,5682818 |
| 591 | 2,616594 | -436,812 | -139,5482 | -4,776426943 | -144,3246 | -0,094686 | 0,936582 | -856,5048637 | -856,5995498 | -855,5682818 |
| 591 | 5,233188 | -436,812 | -139,5482 | -4,776426943 | -144,3246 | -0,094686 | 0,936582 | -856,5048637 | -856,5995498 | -855,5682818 |
| 596 | 0 | -447,7429 | -144,1838 | -2,830982787 | -147,0148 | 0,667981 | 0,964744 | -876,0952938 | -875,4273131 | -875,1305502 |
| 596 | 3,432063 | -447,7429 | -144,1838 | -2,830982787 | -147,0148 | 0,667981 | 0,964744 | -876,0952938 | -875,4273131 | -875,1305502 |
| 596 | 6,864125 | -447,7429 | -144,1838 | -2,830982787 | -147,0148 | 0,667981 | 0,964744 | -876,0952938 | -875,4273131 | -875,1305502 |
| 597 | 0 | -431,1517 | -129,4478 | -16,52772701 | -145,9755 | -5,353501 | 0,077451 | -852,4482444 | -857,8017454 | -852,3707932 |
| 597 | 4,390531 | -431,1517 | -129,4478 | -16,52772701 | -145,9755 | -5,353501 | 0,077451 | -852,4482444 | -857,8017454 | -852,3707932 |
| 597 | 8,781063 | -431,1517 | -129,4478 | -16,52772701 | -145,9755 | -5,353501 | 0,077451 | -852,4482444 | -857,8017454 | -852,3707932 |
| 601 | 0 | -459,8263 | -151,1458 | -13,32129286 | -164,4671 | 1,169887 | 0,681618 | -926,7083508 | -925,538464 | -926,0267333 |
| 601 | 1,050875 | -459,8263 | -151,1458 | -13,32129286 | -164,4671 | 1,169887 | 0,681618 | -926,7083508 | -925,538464 | -926,0267333 |
| 601 | 2,10175 | -459,8263 | -151,1458 | -13,32129286 | -164,4671 | 1,169887 | 0,681618 | -926,7083508 | -925,538464 | -926,0267333 |
| 602 | 0 | -442,8079 | -144,5782 | -19,98365451 | -164,5619 | 0,864125 | 1,090644 | -904,7739948 | -903,9098695 | -903,6833505 |
| 602 | 0,725844 | -442,8079 | -144,5782 | -19,98365451 | -164,5619 | 0,864125 | 1,090644 | -904,7739948 | -903,9098695 | -903,6833505 |
| 602 | 1,451688 | -442,8079 | -144,5782 | -19,98365451 | -164,5619 | 0,864125 | 1,090644 | -904,7739948 | -903,9098695 | -903,6833505 |
| 605 | 0 | -337,5479 | -105,4832 | -23,79593784 | -129,2792 | -0,969052 | 1,058358 | -697,3706251 | -698,3396773 | -696,312267 |
| 605 | 0,524813 | -337,5479 | -105,4832 | -23,79593784 | -129,2792 | -0,969052 | 1,058358 | -697,3706251 | -698,3396773 | -696,312267 |
| 605 | 1,049625 | -337,5479 | -105,4832 | -23,79593784 | -129,2792 | -0,969052 | 1,058358 | -697,3706251 | -698,3396773 | -696,312267 |
| 606 | 0 | -572,3298 | -149,7945 | -12,49154945 | -162,2861 | 1,553127 | 0,729188 | -1068,600882 | -1067,047755 | -1067,871694 |
| 606 | 2,090438 | -572,3298 | -149,7945 | -12,49154945 | -162,2861 | 1,553127 | 0,729188 | -1068,600882 | -1067,047755 | -1067,871694 |
| 606 | 4,180875 | -572,3298 | -149,7945 | -12,49154945 | -162,2861 | 1,553127 | 0,729188 | -1068,600882 | -1067,047755 | -1067,871694 |
| 607 | 0 | -450,2509 | -153,1664 | -7,633332143 | -160,7997 | 1,253246 | 0,584384 | -906,925714 | -905,6724682 | -906,3413303 |
| 607 | 1,504406 | -450,2509 | -153,1664 | -7,633332143 | -160,7997 | 1,253246 | 0,584384 | -906,925714 | -905,6724682 | -906,3413303 |
| 607 | 3,008813 | -450,2509 | -153,1664 | -7,633332143 | -160,7997 | 1,253246 | 0,584384 | -906,925714 | -905,6724682 | -906,3413303 |
| 613 | 0 | -307,9848 | -140,6186 | 1,433839006 | -139,1848 | -0,354019 | -0,024028 | -678,7497141 | -679,1037328 | -678,7737417 |

| | | | | | | | | | | |
|-----|----------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 613 | 0,774688 | -307,9848 | -140,6186 | 1,433839006 | -139,1848 | -0,354019 | -0,024028 | -678,7497141 | -679,1037328 | -678,7737417 |
| 613 | 1,549375 | -307,9848 | -140,6186 | 1,433839006 | -139,1848 | -0,354019 | -0,024028 | -678,7497141 | -679,1037328 | -678,7737417 |
| 641 | 0 | -455,8043 | -152,8617 | -19,28845339 | -172,1501 | 5,809769 | -0,206266 | -936,8458454 | -931,0360767 | -937,0521113 |
| 641 | 4,390531 | -455,8043 | -152,8617 | -19,28845339 | -172,1501 | 5,809769 | -0,206266 | -936,8458454 | -931,0360767 | -937,0521113 |
| 641 | 8,781063 | -455,8043 | -152,8617 | -19,28845339 | -172,1501 | 5,809769 | -0,206266 | -936,8458454 | -931,0360767 | -937,0521113 |
| 642 | 0 | -438,2815 | -135,4007 | -1,77723682 | -137,178 | -3,731087 | 0,071367 | -844,1219401 | -847,8530267 | -844,0505733 |
| 642 | 3,432063 | -438,2815 | -135,4007 | -1,77723682 | -137,178 | -3,731087 | 0,071367 | -844,1219401 | -847,8530267 | -844,0505733 |
| 642 | 6,864125 | -438,2815 | -135,4007 | -1,77723682 | -137,178 | -3,731087 | 0,071367 | -844,1219401 | -847,8530267 | -844,0505733 |
| 643 | 0 | -432,458 | -135,5674 | 4,292377924 | -139,8598 | -2,164891 | 0,107565 | -841,9149371 | -844,0798277 | -841,8073726 |
| 643 | 2,616594 | -432,458 | -135,5674 | 4,292377924 | -139,8598 | -2,164891 | 0,107565 | -841,9149371 | -844,0798277 | -841,8073726 |
| 643 | 5,233188 | -432,458 | -135,5674 | 4,292377924 | -139,8598 | -2,164891 | 0,107565 | -841,9149371 | -844,0798277 | -841,8073726 |
| 644 | 0 | -420,9086 | -130,5661 | -5,757713409 | -136,3238 | -2,931183 | 0,040521 | -819,8288559 | -822,7600386 | -819,788335 |
| 644 | 1,936625 | -420,9086 | -130,5661 | -5,757713409 | -136,3238 | -2,931183 | 0,040521 | -819,8288559 | -822,7600386 | -819,788335 |
| 644 | 3,87325 | -420,9086 | -130,5661 | -5,757713409 | -136,3238 | -2,931183 | 0,040521 | -819,8288559 | -822,7600386 | -819,788335 |
| 648 | 0 | -399,7884 | -121,9147 | -6,893869962 | -128,8086 | -3,798423 | 0,006835 | -777,3420859 | -781,1405091 | -777,3352505 |
| 648 | 1,388656 | -399,7884 | -121,9147 | -6,893869962 | -128,8086 | -3,798423 | 0,006835 | -777,3420859 | -781,1405091 | -777,3352505 |
| 648 | 2,777313 | -399,7884 | -121,9147 | -6,893869962 | -128,8086 | -3,798423 | 0,006835 | -777,3420859 | -781,1405091 | -777,3352505 |
| 649 | 0 | -366,3523 | -108,0557 | -7,112563226 | -115,1682 | -5,074831 | -0,013816 | -706,5943574 | -711,6691882 | -706,6081739 |
| 649 | 0,967688 | -366,3523 | -108,0557 | -7,112563226 | -115,1682 | -5,074831 | -0,013816 | -706,5943574 | -711,6691882 | -706,6081739 |
| 649 | 1,935375 | -366,3523 | -108,0557 | -7,112563226 | -115,1682 | -5,074831 | -0,013816 | -706,5943574 | -711,6691882 | -706,6081739 |
| 652 | 0 | -265,4296 | -73,90115 | -10,6970748 | -84,59823 | -4,577692 | -0,067144 | -514,2549516 | -518,8326441 | -514,3220957 |
| 652 | 0,50025 | -265,4296 | -73,90115 | -10,6970748 | -84,59823 | -4,577692 | -0,067144 | -514,2549516 | -518,8326441 | -514,3220957 |
| 652 | 1,0005 | -265,4296 | -73,90115 | -10,6970748 | -84,59823 | -4,577692 | -0,067144 | -514,2549516 | -518,8326441 | -514,3220957 |
| 653 | 0 | -273,4134 | -83,6335 | -66,86687832 | -150,5004 | 0,249686 | -0,095452 | -656,4381227 | -656,188437 | -656,533575 |
| 653 | 0,451281 | -273,4134 | -83,6335 | -66,86687832 | -150,5004 | 0,249686 | -0,095452 | -656,4381227 | -656,188437 | -656,533575 |
| 653 | 0,902563 | -273,4134 | -83,6335 | -66,86687832 | -150,5004 | 0,249686 | -0,095452 | -656,4381227 | -656,188437 | -656,533575 |
| 654 | 0 | -350,4491 | -118,0443 | -25,29125916 | -143,3356 | 5,084222 | -0,110094 | -742,2549368 | -737,1707151 | -742,3650304 |
| 654 | 0,524812 | -350,4491 | -118,0443 | -25,29125916 | -143,3356 | 5,084222 | -0,110094 | -742,2549368 | -737,1707151 | -742,3650304 |
| 654 | 1,049625 | -350,4491 | -118,0443 | -25,29125916 | -143,3356 | 5,084222 | -0,110094 | -742,2549368 | -737,1707151 | -742,3650304 |
| 655 | 0 | -314,2902 | -88,34126 | -4,895444832 | -93,23671 | -5,892181 | -0,034103 | -595,0506914 | -600,9428722 | -595,0847947 |
| 655 | 0,674719 | -314,2902 | -88,34126 | -4,895444832 | -93,23671 | -5,892181 | -0,034103 | -595,0506914 | -600,9428722 | -595,0847947 |
| 655 | 1,349438 | -314,2902 | -88,34126 | -4,895444832 | -93,23671 | -5,892181 | -0,034103 | -595,0506914 | -600,9428722 | -595,0847947 |
| 661 | 0 | -292,1979 | -127,0135 | 3,152293217 | -123,8612 | -7,928527 | -0,031213 | -627,5795977 | -635,5081248 | -627,6108103 |
| 661 | 0,774688 | -292,1979 | -127,0135 | 3,152293217 | -123,8612 | -7,928527 | -0,031213 | -627,5795977 | -635,5081248 | -627,6108103 |
| 661 | 1,549375 | -292,1979 | -127,0135 | 3,152293217 | -123,8612 | -7,928527 | -0,031213 | -627,5795977 | -635,5081248 | -627,6108103 |
| 662 | 0 | -224,4398 | -88,05202 | 2,05382182 | -85,9982 | -10,99152 | -0,023354 | -463,7681183 | -474,759636 | -463,7914728 |
| 662 | 0,437625 | -224,4398 | -88,05202 | 2,05382182 | -85,9982 | -10,99152 | -0,023354 | -463,7681183 | -474,759636 | -463,7914728 |

| | | | | | | | | | | |
|-----|----------|-----------|-----------|--------------|-----------|-----------|-----------|--------------|--------------|--------------|
| 662 | 0,87525 | -224,4398 | -88,05202 | 2,05382182 | -85,9982 | -10,99152 | -0,023354 | -463,7681183 | -474,759636 | -463,7914728 |
| 663 | 0 | -168,6691 | -60,67818 | 1,249542256 | -59,42864 | -12,82989 | -0,012344 | -338,1270545 | -350,9569396 | -338,1393989 |
| 663 | 0,179563 | -168,6691 | -60,67818 | 1,249542256 | -59,42864 | -12,82989 | -0,012344 | -338,1270545 | -350,9569396 | -338,1393989 |
| 663 | 0,359125 | -168,6691 | -60,67818 | 1,249542256 | -59,42864 | -12,82989 | -0,012344 | -338,1270545 | -350,9569396 | -338,1393989 |
| 664 | 0 | -281,6359 | -143,1685 | -18,8313305 | -161,9998 | -9,231517 | -0,023164 | -690,1263658 | -699,3578823 | -690,1495299 |
| 664 | 2,287875 | -281,6359 | -143,1685 | -18,8313305 | -161,9998 | -9,231517 | -0,023164 | -690,1263658 | -699,3578823 | -690,1495299 |
| 664 | 4,57575 | -281,6359 | -143,1685 | -18,8313305 | -161,9998 | -9,231517 | -0,023164 | -690,1263658 | -699,3578823 | -690,1495299 |
| 665 | 0 | 7,230547 | -156,4867 | -80,61495175 | -237,1016 | -3,906776 | 0,100675 | -464,8035072 | -468,710283 | -464,7028325 |
| 665 | 1,703813 | 7,230547 | -156,4867 | -80,61495175 | -237,1016 | -3,906776 | 0,100675 | -464,8035072 | -468,710283 | -464,7028325 |
| 665 | 3,407625 | 7,230547 | -156,4867 | -80,61495175 | -237,1016 | -3,906776 | 0,100675 | -464,8035072 | -468,710283 | -464,7028325 |
| 666 | 0 | -319,9714 | -146,1243 | -13,2758349 | -159,4001 | -7,111636 | -0,002816 | -734,7629947 | -741,8746306 | -734,7658102 |
| 666 | 1,19375 | -319,9714 | -146,1243 | -13,2758349 | -159,4001 | -7,111636 | -0,002816 | -734,7629947 | -741,8746306 | -734,7658102 |
| 666 | 2,3875 | -319,9714 | -146,1243 | -13,2758349 | -159,4001 | -7,111636 | -0,002816 | -734,7629947 | -741,8746306 | -734,7658102 |
| 670 | 0 | -360,8367 | -251,3537 | -37,25756643 | -288,6113 | 27,24675 | -0,673711 | -1046,310301 | -1019,063553 | -1046,984012 |
| 670 | 2,948438 | -360,8367 | -251,3537 | -37,25756643 | -288,6113 | 27,24675 | -0,673711 | -1046,310301 | -1019,063553 | -1046,984012 |
| 670 | 5,892875 | -360,8367 | -251,3537 | -37,25756643 | -288,6113 | 27,24675 | -0,673711 | -1046,310301 | -1019,063553 | -1046,984012 |
| 673 | 0 | -434,9848 | -480,0768 | -188,790563 | -668,8674 | 14,66724 | -12,48577 | -1903,215003 | -1888,547758 | -1915,700771 |
| 673 | 3,683 | -434,9848 | -480,0768 | -188,790563 | -668,8674 | 14,66724 | -12,48577 | -1903,215003 | -1888,547758 | -1915,700771 |
| 673 | 7,366 | -434,9848 | -480,0768 | -188,790563 | -668,8674 | 14,66724 | -12,48577 | -1903,215003 | -1888,547758 | -1915,700771 |
| 676 | 0 | -584,1271 | -159,8147 | -13,78768865 | -173,6024 | 7,187745 | 0,312 | -1106,570034 | -1099,382289 | -1106,258034 |
| 676 | 2,090438 | -584,1271 | -159,8147 | -13,78768865 | -173,6024 | 7,187745 | 0,312 | -1106,570034 | -1099,382289 | -1106,258034 |
| 676 | 4,180875 | -584,1271 | -159,8147 | -13,78768865 | -173,6024 | 7,187745 | 0,312 | -1106,570034 | -1099,382289 | -1106,258034 |
| 678 | 0 | -470,5134 | -160,4634 | -14,51246095 | -174,9759 | 6,242942 | 0,076068 | -961,6191065 | -955,3761646 | -961,543038 |
| 678 | 1,050875 | -470,5134 | -160,4634 | -14,51246095 | -174,9759 | 6,242942 | 0,076068 | -961,6191065 | -955,3761646 | -961,543038 |
| 678 | 2,10175 | -470,5134 | -160,4634 | -14,51246095 | -174,9759 | 6,242942 | 0,076068 | -961,6191065 | -955,3761646 | -961,543038 |
| 679 | 0 | -457,4335 | -159,4895 | -8,42307726 | -167,9125 | 4,752794 | 0,174844 | -930,4886197 | -925,7358256 | -930,3137762 |
| 679 | 1,504406 | -457,4335 | -159,4895 | -8,42307726 | -167,9125 | 4,752794 | 0,174844 | -930,4886197 | -925,7358256 | -930,3137762 |
| 679 | 3,008813 | -457,4335 | -159,4895 | -8,42307726 | -167,9125 | 4,752794 | 0,174844 | -930,4886197 | -925,7358256 | -930,3137762 |
| 682 | 0 | -459,3353 | -160,1855 | -21,85249769 | -182,038 | 8,582687 | -0,086132 | -961,211882 | -952,6291949 | -961,2980137 |
| 682 | 0,725844 | -459,3353 | -160,1855 | -21,85249769 | -182,038 | 8,582687 | -0,086132 | -961,211882 | -952,6291949 | -961,2980137 |
| 682 | 1,451688 | -459,3353 | -160,1855 | -21,85249769 | -182,038 | 8,582687 | -0,086132 | -961,211882 | -952,6291949 | -961,2980137 |
| 773 | 0 | -333,6638 | -157,5706 | -14,75320218 | -172,3238 | -0,436703 | -0,00521 | -778,4105304 | -778,847233 | -778,4157405 |
| 773 | 1,19375 | -333,6638 | -157,5706 | -14,75320218 | -172,3238 | -0,436703 | -0,00521 | -778,4105304 | -778,847233 | -778,4157405 |
| 773 | 2,3875 | -333,6638 | -157,5706 | -14,75320218 | -172,3238 | -0,436703 | -0,00521 | -778,4105304 | -778,847233 | -778,4157405 |



Diagram Mn vs Pn kolom

| | 1% | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 700 | | | | |
| h (mm) | 700 | | | | |
| Ag(mm ²) | 490000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 620 | | | | |
| cb (mm) | 375,7575758 | | | | |
| fs' (Mpa) | 472,25806 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 4900 | | | | |
| As = As' (mm) | 2450 | | | | |
| Cc (kN) | 4732 | | | | |
| Cs (kN) | 903,64575 | | | | |
| Ts (kN) | 955,5 | | | | |
| PnB (kN) | 4680 | | | | |
| y (mm) | 350 | | | | |
| Mnb (kNm) | 1402,479659 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 400 | 470 | 540 | 610 | 680 |
| fs' Mpa | 480 | 497,87234 | 511,111111 | 521,311475 | 529,411765 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| fs pakai (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| a (mm) | 340 | 399,5 | 459 | 518,5 | 578 |
| Cc (kN) | 5037,27 | 5918,79225 | 6800,3145 | 7681,83675 | 8563,359 |
| Cs (kN) | 903,64575 | 903,64575 | 903,64575 | 903,64575 | 903,64575 |
| Ts (kN) | 808,5 | 469,148936 | 217,777778 | 24,0983607 | -129,70588 |
| Pn (kN) | 5132,41575 | 6353,28906 | 7486,18247 | 8561,38414 | 9596,71063 |
| Mn (kNm) | 1368,98795 | 1259,9531 | 1122,22225 | 947,617595 | 731,328663 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 200 | 237,5 | 275 | 312,5 | 350 |
| a (mm) | 170 | 201,875 | 233,75 | 265,625 | 297,5 |
| fs' (Mpa) | 360 | 397,894737 | 425,454545 | 446,4 | 462,857143 |
| fs' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| Cc (kN) | 2518,635 | 2990,87906 | 3463,12313 | 3935,36719 | 4407,61125 |
| Cs (kN) | 830,14575 | 903,64575 | 903,64575 | 903,64575 | 903,64575 |
| Ts (kN) | 955,5 | 955,5 | 955,5 | 955,5 | 955,5 |
| Pn (kN) | 2393,28075 | 2939,02481 | 3411,26888 | 3883,51294 | 4355,757 |
| Mn (kNm) | 1149,56263 | 1246,88517 | 1309,30993 | 1356,68191 | 1389,00112 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 12178,1415 | 12178,1415 | 12178,1415 | 12178,1415 | 12178,1415 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 64,4932672 | 64,4932672 | 64,4932672 | 64,4932672 | 64,4932672 |
| Mn (kNm) | 561,598342 | 561,598342 | 561,598342 | 561,598342 | 561,598342 |



Diagram Mn vs Pn Kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 2% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 700 | | | | |
| h (mm) | 700 | | | | |
| Ag(mm ²) | 490000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 620 | | | | |
| cb (mm) | 375,7575758 | | | | |
| fs' (Mpa) | 472,25806 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 9800 | | | | |
| As = As' (mm) | 4900 | | | | |
| Cc (kN) | 4732 | | | | |
| Cs (kN) | 1807,2915 | | | | |
| Ts (kN) | 1911 | | | | |
| PnB (kN) | 4628 | | | | |
| y (mm) | 350 | | | | |
| Mnb (kNm) | 1904,449011 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 400 | 470 | 540 | 610 | 680 |
| fs' Mpa | 480 | 497,87234 | 511,111111 | 521,311475 | 529,411765 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| fs pakai (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| a (mm) | 340 | 399,5 | 459 | 518,5 | 578 |
| Cc (kN) | 5037,27 | 5918,79225 | 6800,3145 | 7681,83675 | 8563,359 |
| Cs (kN) | 1807,2915 | 1807,2915 | 1807,2915 | 1807,2915 | 1807,2915 |
| Ts (kN) | 1617 | 938,297872 | 435,555556 | 48,1967213 | -259,41176 |
| Pn (kN) | 5227,5615 | 6787,78588 | 8172,05044 | 9440,93153 | 10630,0623 |
| Mn (kNm) | 1831,26731 | 1630,60767 | 1425,0066 | 1198,1085 | 940,292428 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 200 | 237,5 | 275 | 312,5 | 350 |
| a (mm) | 170 | 201,875 | 233,75 | 265,625 | 297,5 |
| fs' (Mpa) | 360 | 397,894737 | 425,454545 | 446,4 | 462,857143 |

| | | | | | |
|-----------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 2518,635 | 2990,87906 | 3463,12313 | 3935,36719 | 4407,61125 |
| Cs (kN) | 1660,2915 | 1807,2915 | 1807,2915 | 1807,2915 | 1807,2915 |
| Ts (kN) | 1911 | 1911 | 1911 | 1911 | 1911 |
| Pn (kN) | 2267,9265 | 2887,17056 | 3359,41463 | 3831,65869 | 4303,90275 |
| Mn (kNm) | 1631,68698 | 1748,85452 | 1811,27928 | 1858,65127 | 1890,97047 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 13985,433 | 13985,433 | 13985,433 | 13985,433 | 13985,433 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 128,986534 | 128,986534 | 128,986534 | 128,986534 | 128,986534 |
| Mn (kNm) | 1061,57337 | 1061,57337 | 1061,57337 | 1061,57337 | 1061,57337 |



Diagram M vs PN kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 3% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 700 | | | | |
| h (mm) | 700 | | | | |
| Ag(mm ²) | 490000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 620 | | | | |
| cb (mm) | 375,7575758 | | | | |
| fs' (Mpa) | 472,25806 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 14700 | | | | |
| As = As' (mm) | 7350 | | | | |
| Cc (kN) | 4732 | | | | |
| Cs (kN) | 2710,93725 | | | | |
| Ts (kN) | 2866,5 | | | | |
| PnB (kN) | 4576 | | | | |
| y (mm) | 350 | | | | |
| Mnb (kNm) | 2406,418364 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 400 | 470 | 540 | 610 | 680 |
| fs' Mpa | 480 | 497,87234 | 511,111111 | 521,311475 | 529,411765 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| fs pakai (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| a (mm) | 340 | 399,5 | 459 | 518,5 | 578 |
| Cc (kN) | 5037,27 | 5918,79225 | 6800,3145 | 7681,83675 | 8563,359 |
| Cs (kN) | 2710,93725 | 2710,93725 | 2710,93725 | 2710,93725 | 2710,93725 |
| Ts (kN) | 2425,5 | 1407,44681 | 653,333333 | 72,295082 | -389,11765 |
| Pn (kN) | 5322,70725 | 7222,28269 | 8857,91842 | 10320,4789 | 11663,4139 |
| Mn (kNm) | 2293,54666 | 2001,26223 | 1727,79095 | 1448,59941 | 1149,25619 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 200 | 237,5 | 275 | 312,5 | 350 |
| a (mm) | 170 | 201,875 | 233,75 | 265,625 | 297,5 |
| fs' (Mpa) | 360 | 397,894737 | 425,454545 | 446,4 | 462,857143 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 2518,635 | 2990,87906 | 3463,12313 | 3935,36719 | 4407,61125 |
| Cs (kN) | 2490,43725 | 2710,93725 | 2710,93725 | 2710,93725 | 2710,93725 |
| Ts (kN) | 2866,5 | 2866,5 | 2866,5 | 2866,5 | 2866,5 |
| Pn (kN) | 2142,57225 | 2835,31631 | 3307,56038 | 3779,80444 | 4252,0485 |
| Mn (kNm) | 2113,81133 | 2250,82387 | 2313,24864 | 2360,62062 | 2392,93982 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 15792,7245 | 15792,7245 | 15792,7245 | 15792,7245 | 15792,7245 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 193,479802 | 193,479802 | 193,479802 | 193,479802 | 193,479802 |
| Mn (kNm) | 1499,92507 | 1499,92507 | 1499,92507 | 1499,92507 | 1499,92507 |



Diagram M vs PN kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 4% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 700 | | | | |
| h (mm) | 700 | | | | |
| Ag(mm ²) | 490000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 620 | | | | |
| cb (mm) | 375,7575758 | | | | |
| fs' (Mpa) | 472,25806 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 19600 | | | | |
| As = As' (mm) | 9800 | | | | |
| Cc (kN) | 4732 | | | | |
| Cs (kN) | 3614,583 | | | | |
| Ts (kN) | 3822 | | | | |
| PnB (kN) | 4525 | | | | |
| y (mm) | 350 | | | | |
| Mnb (kNm) | 2908,387716 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 400 | 470 | 540 | 610 | 680 |
| fs' Mpa | 480 | 497,87234 | 511,111111 | 521,311475 | 529,411765 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| fs pakai (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| a (mm) | 340 | 399,5 | 459 | 518,5 | 578 |
| Cc (kN) | 5037,27 | 5918,79225 | 6800,3145 | 7681,83675 | 8563,359 |
| Cs (kN) | 3614,583 | 3614,583 | 3614,583 | 3614,583 | 3614,583 |
| Ts (kN) | 3234 | 1876,59574 | 871,111111 | 96,3934426 | -518,82353 |
| Pn (kN) | 5417,853 | 7656,77951 | 9543,78639 | 11200,0263 | 12696,7655 |
| Mn (kNm) | 2755,82601 | 2371,9168 | 2030,57531 | 1699,09032 | 1358,21996 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 200 | 237,5 | 275 | 312,5 | 350 |
| a (mm) | 170 | 201,875 | 233,75 | 265,625 | 297,5 |
| fs' (Mpa) | 360 | 397,894737 | 425,454545 | 446,4 | 462,857143 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 2518,635 | 2990,87906 | 3463,12313 | 3935,36719 | 4407,61125 |
| Cs (kN) | 3320,583 | 3614,583 | 3614,583 | 3614,583 | 3614,583 |
| Ts (kN) | 3822 | 3822 | 3822 | 3822 | 3822 |
| Pn (kN) | 2017,218 | 2783,46206 | 3255,70613 | 3727,95019 | 4200,19425 |
| Mn (kNm) | 2595,93569 | 2752,79323 | 2815,21799 | 2862,58997 | 2894,90917 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 17600 | 17600 | 17600,016 | 17600,016 | 17600,016 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 257,973069 | 257,973069 | 257,973069 | 257,973069 | 257,973069 |
| Mn (kNm) | 1876,65347 | 1876,65347 | 1876,65347 | 1876,65347 | 1876,65347 |



Diagram Mn vs Pn kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 5% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 700 | | | | |
| h (mm) | 700 | | | | |
| Ag(mm ²) | 490000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 620 | | | | |
| cb (mm) | 375,7575758 | | | | |
| fs' (Mpa) | 472,25806 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 24500 | | | | |
| As = As' (mm) | 12250 | | | | |
| Cc (kN) | 4732 | | | | |
| Cs (kN) | 4518,22875 | | | | |
| Ts (kN) | 4777,5 | | | | |
| PnB (kN) | 4473 | | | | |
| y (mm) | 350 | | | | |
| Mnb (kNm) | 3410,357069 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 400 | 470 | 540 | 610 | 680 |
| fs' Mpa | 480 | 497,87234 | 511,111111 | 521,311475 | 529,411765 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| fs pakai (Mpa) | 330 | 191,489362 | 88,8888889 | 9,83606557 | -52,941176 |
| a (mm) | 340 | 399,5 | 459 | 518,5 | 578 |
| Cc (kN) | 5037,27 | 5918,79225 | 6800,3145 | 7681,83675 | 8563,359 |
| Cs (kN) | 4518,22875 | 4518,22875 | 4518,22875 | 4518,22875 | 4518,22875 |
| Ts (kN) | 4042,5 | 2345,74468 | 1088,88889 | 120,491803 | -648,52941 |
| Pn (kN) | 5512,99875 | 8091,27632 | 10229,6544 | 12079,5737 | 13730,1172 |
| Mn (kNm) | 3218,10536 | 2742,57136 | 2333,35966 | 1949,58123 | 1567,18372 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 200 | 237,5 | 275 | 312,5 | 350 |
| a (mm) | 170 | 201,875 | 233,75 | 265,625 | 297,5 |
| fs' (Mpa) | 360 | 397,894737 | 425,454545 | 446,4 | 462,857143 |
| fs' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| Cc (kN) | 2518,635 | 2990,87906 | 3463,12313 | 3935,36719 | 4407,61125 |
| Cs (kN) | 4150,72875 | 4518,22875 | 4518,22875 | 4518,22875 | 4518,22875 |
| Ts (kN) | 4777,5 | 4777,5 | 4777,5 | 4777,5 | 4777,5 |
| Pn (kN) | 1891,86375 | 2731,60781 | 3203,85188 | 3676,09594 | 4148,34 |
| Mn (kNm) | 3078,06004 | 3254,76258 | 3317,18734 | 3364,55932 | 3396,87853 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 19407,3075 | 19407,3075 | 19407,3075 | 19407,3075 | 19407,3075 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 322,466336 | 322,466336 | 322,466336 | 322,466336 | 322,466336 |
| Mn (kNm) | 2191,75854 | 2191,75854 | 2191,75854 | 2191,75854 | 2191,75854 |



| | | | | | | | | | | | | | |
|--------------------|----------|---------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Ast = 1% Ag | Pn (kN) | 0 | 2393,3 | 2939,025 | 3411,269 | 3883,513 | 4355,757 | 5132,416 | 6353,289 | 7486,182 | 8561,384 | 9596,711 | 12178,14 |
| | Mn (kNm) | 561,598 | 1149,6 | 1246,885 | 1309,31 | 1356,682 | 1389,001 | 1368,988 | 1259,953 | 1122,222 | 947,6176 | 731,3287 | 0 |
| Ast = 2% Ag | Pn (kN) | 0 | 2267,9 | 2887,171 | 3359,415 | 3831,659 | 4303,903 | 5227,562 | 6787,786 | 8172,05 | 9440,932 | 10630,06 | 13985,43 |
| | Mn (kNm) | 1061,57 | 1631,7 | 1748,855 | 1811,279 | 1858,651 | 1890,97 | 1831,267 | 1630,608 | 1425,007 | 1198,109 | 940,2924 | 0 |
| Ast = 3% Ag | Pn (kN) | 0 | 2142,6 | 2835,316 | 3307,56 | 3779,804 | 4252,049 | 5322,707 | 7222,283 | 8857,918 | 10320,48 | 11663,41 | 15792,72 |
| | Mn (kNm) | 1499,93 | 2113,8 | 2250,824 | 2313,249 | 2360,621 | 2392,94 | 2293,547 | 2001,262 | 1727,791 | 1448,599 | 1149,256 | 0 |
| Ast = 4% Ag | Pn (kN) | 0 | 2017,2 | 2783,462 | 3255,706 | 3727,95 | 4200,194 | 5417,853 | 7656,78 | 9543,786 | 11200,03 | 12696,77 | 17600,02 |
| | Mn (kNm) | 1876,65 | 2595,9 | 2752,793 | 2815,218 | 2862,59 | 2894,909 | 2755,826 | 2371,917 | 2030,575 | 1699,09 | 1358,22 | 0 |
| Ast = 5% Ag | Pn (kN) | 0 | 1891,9 | 2731,608 | 3203,852 | 3676,096 | 4148,34 | 5512,999 | 8091,276 | 10229,65 | 12079,57 | 13730,12 | 19407,31 |
| | Mn (kNm) | 2191,76 | 3078,1 | 3254,763 | 3317,187 | 3364,559 | 3396,879 | 3218,105 | 2742,571 | 2333,36 | 1949,581 | 1567,184 | 0 |



GRAFIK INTERAKSI KOLOM
700X700

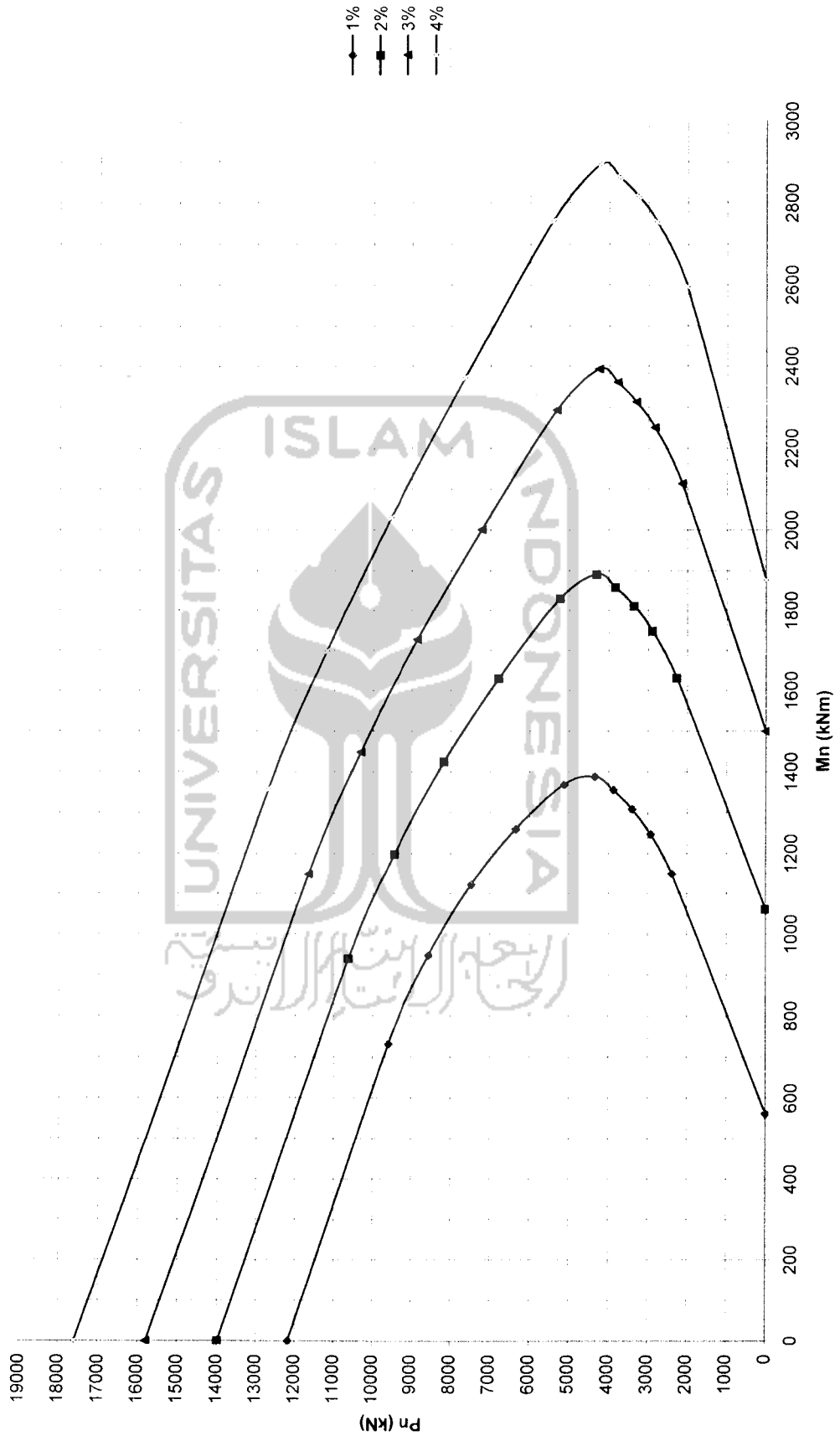


Diagram Mn vs Pn kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 1% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 1200 | | | | |
| h (mm) | 1200 | | | | |
| Ag(mm ²) | 1440000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 1120 | | | | |
| cb (mm) | 678,7878788 | | | | |
| fs' (Mpa) | 529,28571 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 14400 | | | | |
| As = As' (mm) | 7200 | | | | |
| Cc (kN) | 14654 | | | | |
| Cs (kN) | 2655,612 | | | | |
| Ts (kN) | 2808 | | | | |
| PnB (kN) | 14501 | | | | |
| y (mm) | 600 | | | | |
| Mnb (kNm) | 7405,982756 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 700 | 830 | 960 | 1090 | 1222 |
| fs' Mpa | 531,428571 | 542,168675 | 550 | 555,963303 | 560,720131 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 360 | 209,638554 | 100 | 16,5137615 | -50,081833 |
| fs pakai (Mpa) | 360 | 209,638554 | 100 | 16,5137615 | -50,081833 |
| a (mm) | 595 | 705,5 | 816 | 926,5 | 1038,7 |
| Cc (kN) | 15111,81 | 17918,289 | 20724,768 | 23531,247 | 26380,9026 |
| Cs (kN) | 2655,612 | 2655,612 | 2655,612 | 2655,612 | 2655,612 |
| Ts (kN) | 2592 | 1509,39759 | 720 | 118,899083 | -360,5892 |
| Pn (kN) | 15175,422 | 19064,5034 | 22660,38 | 26067,9599 | 29397,1038 |
| Mn (kNm) | 7300,08077 | 6596,10194 | 5734,4737 | 4660,64379 | 3321,03165 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 250 | 350 | 450 | 550 | 650 |
| a (mm) | 212,5 | 297,5 | 382,5 | 467,5 | 552,5 |
| fs' (Mpa) | 408 | 462,857143 | 493,333333 | 512,727273 | 526,153846 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 5397,075 | 7555,905 | 9714,735 | 11873,565 | 14032,395 |
| Cs (kN) | 2655,612 | 2655,612 | 2655,612 | 2655,612 | 2655,612 |
| Ts (kN) | 2808 | 2808 | 2808 | 2808 | 2808 |
| Pn (kN) | 5244,687 | 7403,517 | 9562,347 | 11721,177 | 13880,007 |
| Mn (kNm) | 5505,88402 | 6250,68037 | 6811,97617 | 7189,77142 | 7384,06612 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 35788,824 | 35788,824 | 35788,824 | 35788,824 | 35788,824 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 110,559887 | 110,559887 | 110,559887 | 110,559887 | 110,559887 |
| Mn (kNm) | 2989,73392 | 2989,73392 | 2989,73392 | 2989,73392 | 2989,73392 |



f
f
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f
f
e
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F
M
c
a
f

| | | | | | |
|-----------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 5397,075 | 7555,905 | 9714,735 | 11873,565 | 14032,395 |
| Cs (kN) | 5311,224 | 5311,224 | 5311,224 | 5311,224 | 5311,224 |
| Ts (kN) | 5616 | 5616 | 5616 | 5616 | 5616 |
| Pn (kN) | 5092,299 | 7251,129 | 9409,959 | 11568,789 | 13727,619 |
| Mn (kNm) | 8346,96226 | 9091,75861 | 9653,05441 | 10030,8497 | 10225,1444 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 41100,048 | 41100,048 | 41100,048 | 41100,048 | 41100,048 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 221,119773 | 221,119773 | 221,119773 | 221,119773 | 221,119773 |
| Mn (kNm) | 5669,01568 | 5669,01568 | 5669,01568 | 5669,01568 | 5669,01568 |



Diagram M vs PN kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 3% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 1200 | | | | |
| h (mm) | 1200 | | | | |
| Ag(mm ²) | 1440000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 1120 | | | | |
| cb (mm) | 678,7878788 | | | | |
| fs' (Mpa) | 529,28571 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 43200 | | | | |
| As = As' (mm) | 21600 | | | | |
| Cc (kN) | 14654 | | | | |
| Cs (kN) | 7966,836 | | | | |
| Ts (kN) | 8424 | | | | |
| PnB (kN) | 14197 | | | | |
| y (mm) | 600 | | | | |
| Mnb (kNm) | 13088,13924 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 700 | 830 | 960 | 1090 | 1222 |
| fs' Mpa | 531,428571 | 542,168675 | 550 | 555,963303 | 560,720131 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 360 | 209,638554 | 100 | 16,5137615 | -50,081833 |
| fs pakai (Mpa) | 360 | 209,638554 | 100 | 16,5137615 | -50,081833 |
| a (mm) | 595 | 705,5 | 816 | 926,5 | 1038,7 |
| Cc (kN) | 15111,81 | 17918,289 | 20724,768 | 23531,247 | 26380,9026 |
| Cs (kN) | 7966,836 | 7966,836 | 7966,836 | 7966,836 | 7966,836 |
| Ts (kN) | 7776 | 4528,19277 | 2160 | 356,697248 | -1081,7676 |
| Pn (kN) | 15302,646 | 21356,9322 | 26531,604 | 31141,3858 | 35429,5062 |
| Mn (kNm) | 12757,5972 | 10927,7119 | 9245,11018 | 7546,13532 | 5707,85537 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 250 | 350 | 450 | 550 | 650 |
| a (mm) | 212,5 | 297,5 | 382,5 | 467,5 | 552,5 |
| fs' (Mpa) | 408 | 462,857143 | 493,333333 | 512,727273 | 526,153846 |

Diagram M vs PN kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 4% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 1200 | | | | |
| h (mm) | 1200 | | | | |
| Ag(mm ²) | 1440000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 1120 | | | | |
| cb (mm) | 678,7878788 | | | | |
| fs' (Mpa) | 529,28571 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 57600 | | | | |
| As = As' (mm) | 28800 | | | | |
| Cc (kN) | 14654 | | | | |
| Cs (kN) | 10622,448 | | | | |
| Ts (kN) | 11232 | | | | |
| PnB (kN) | 14044 | | | | |
| y (mm) | 600 | | | | |
| Mnb (kNm) | 15929,21748 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 700 | 830 | 960 | 1090 | 1222 |
| fs' Mpa | 531,428571 | 542,168675 | 550 | 555,963303 | 560,720131 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 360 | 209,638554 | 100 | 16,5137615 | -50,081833 |
| fs pakai (Mpa) | 360 | 209,638554 | 100 | 16,5137615 | -50,081833 |
| a (mm) | 595 | 705,5 | 816 | 926,5 | 1038,7 |
| Cc (kN) | 15111,81 | 17918,289 | 20724,768 | 23531,247 | 26380,9026 |
| Cs (kN) | 10622,448 | 10622,448 | 10622,448 | 10622,448 | 10622,448 |
| Ts (kN) | 10368 | 6037,59036 | 2880 | 475,59633 | -1442,3568 |
| Pn (kN) | 15366,258 | 22503,1466 | 28467,216 | 33678,0987 | 38445,7074 |
| Mn (kNm) | 15486,3555 | 13093,5169 | 11000,4284 | 8988,88108 | 6901,26722 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 250 | 350 | 450 | 550 | 650 |
| a (mm) | 212,5 | 297,5 | 382,5 | 467,5 | 552,5 |
| fs' (Mpa) | 408 | 462,857143 | 493,333333 | 512,727273 | 526,153846 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 5397,075 | 7555,905 | 9714,735 | 11873,565 | 14032,395 |
| Cs (kN) | 10622,448 | 10622,448 | 10622,448 | 10622,448 | 10622,448 |
| Ts (kN) | 11232 | 11232 | 11232 | 11232 | 11232 |
| Pn (kN) | 4787,523 | 6946,353 | 9105,183 | 11264,013 | 13422,843 |
| Mn (kNm) | 14029,1187 | 14773,9151 | 15335,2109 | 15713,0061 | 15907,3008 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 51722 | 51722 | 51722,496 | 51722,496 | 51722,496 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 442,239546 | 442,239546 | 442,239546 | 442,239546 | 442,239546 |
| Mn (kNm) | 10096,2227 | 10096,2227 | 10096,2227 | 10096,2227 | 10096,2227 |



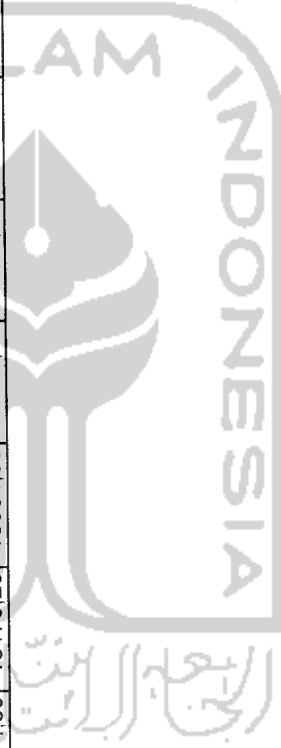
Diagram Mn vs Pn kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 5% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 1200 | | | | |
| h (mm) | 1200 | | | | |
| Ag(mm ²) | 1440000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 1120 | | | | |
| cb (mm) | 678,7878788 | | | | |
| fs' (Mpa) | 529,28571 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 72000 | | | | |
| As = As' (mm) | 36000 | | | | |
| Cc (kN) | 14654 | | | | |
| Cs (kN) | 13278,06 | | | | |
| Ts (kN) | 14040 | | | | |
| PnB (kN) | 13892 | | | | |
| y (mm) | 600 | | | | |
| Mnb (kNm) | 18770,29572 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 700 | 830 | 960 | 1090 | 1222 |
| fs' Mpa | 531,428571 | 542,168675 | 550 | 555,963303 | 560,720131 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | -360 | 209,638554 | 100 | 16,5137615 | -50,081833 |
| fs pakai (Mpa) | 360 | 209,638554 | 100 | 16,5137615 | -50,081833 |
| a (mm) | 595 | 705,5 | 816 | 926,5 | 1038,7 |
| Cc (kN) | 15111,81 | 17918,289 | 20724,768 | 23531,247 | 26380,9026 |
| Cs (kN) | 13278,06 | 13278,06 | 13278,06 | 13278,06 | 13278,06 |
| Ts (kN) | 12960 | 7546,98795 | 3600 | 594,495413 | -1802,946 |
| Pn (kN) | 15429,87 | 23649,361 | 30402,828 | 36214,8116 | 41461,9086 |
| Mn (kNm) | 18215,1137 | 15259,3219 | 12755,7467 | 10431,6268 | 8094,67908 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 250 | 350 | 450 | 550 | 650 |
| a (mm) | 212,5 | 297,5 | 382,5 | 467,5 | 552,5 |
| fs' (Mpa) | 408 | 462,857143 | 493,333333 | 512,727273 | 526,153846 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| Cc (kN) | 5397,075 | 7555,905 | 9714,735 | 11873,565 | 14032,395 |
| Cs (kN) | 13278,06 | 13278,06 | 13278,06 | 13278,06 | 13278,06 |
| Ts (kN) | 14040 | 14040 | 14040 | 14040 | 14040 |
| Pn (kN) | 4635,135 | 6793,965 | 8952,795 | 11111,625 | 13270,455 |
| Mn (kNm) | 16870,197 | 17614,9933 | 18176,2891 | 18554,0844 | 18748,3791 |
| Saat Mn = 0 | | | | | |
| Pn _o (kN) | 57033,72 | 57033,72 | 57033,72 | 57033,72 | 57033,72 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 552,799433 | 552,799433 | 552,799433 | 552,799433 | 552,799433 |
| Mn (kNm) | 11844,148 | 11844,148 | 11844,148 | 11844,148 | 11844,148 |



| | | | | | | | | | | | | | |
|--------------------|----------|---------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Ast = 1% Ag | Pn (kN) | 0 | 5244,7 | 7403,517 | 9562,347 | 11721,18 | 13880,01 | 15175,42 | 19064,5 | 22660,38 | 26067,96 | 29397,1 | 35788,82 |
| | Mn (kNm) | 2989,73 | 5505,9 | 6250,68 | 6811,976 | 7189,771 | 7384,066 | 7300,081 | 6596,102 | 5734,474 | 4660,644 | 3321,032 | 0 |
| Ast = 2% Ag | Pn (kN) | 0 | 5092,3 | 7251,129 | 9409,959 | 11568,79 | 13727,62 | 15239,03 | 20210,72 | 24595,99 | 28604,67 | 32413,3 | 41100,06 |
| | Mn (kNm) | 5669,02 | 8347 | 9091,759 | 9653,054 | 10030,85 | 10225,14 | 10028,84 | 8761,907 | 7489,792 | 6103,39 | 4514,444 | 0 |
| Ast = 3% Ag | Pn (kN) | 0 | 4939,9 | 7098,741 | 9257,571 | 11416,4 | 13575,23 | 15302,65 | 21356,93 | 26531,6 | 31141,39 | 35429,51 | 46411,27 |
| | Mn (kNm) | 8037,85 | 11188 | 11932,84 | 12494,13 | 12871,93 | 13066,22 | 12757,6 | 10927,71 | 9245,11 | 7546,135 | 5707,855 | 0 |
| Ast = 4% Ag | Pn (kN) | 0 | 4787,5 | 6946,353 | 9105,183 | 11264,01 | 13422,84 | 15366,26 | 22503,15 | 28467,22 | 33678,1 | 38445,71 | 51722,5 |
| | Mn (kNm) | 10096,2 | 14029 | 14773,92 | 15335,21 | 15713,01 | 15907,3 | 15486,36 | 13093,52 | 11000,43 | 8988,881 | 6901,267 | 0 |
| Ast = 5% Ag | Pn (kN) | 0 | 4635,1 | 6793,965 | 8952,795 | 11111,63 | 13270,46 | 15429,87 | 23649,36 | 30402,83 | 36214,81 | 41461,91 | 57033,72 |
| | Mn (kNm) | 11844,1 | 16870 | 17614,99 | 18176,29 | 18554,08 | 18748,38 | 18215,11 | 15259,32 | 12755,75 | 10431,63 | 8094,679 | 0 |



**DIAGRAM INTERAKSI KOLOM
1200X1200**

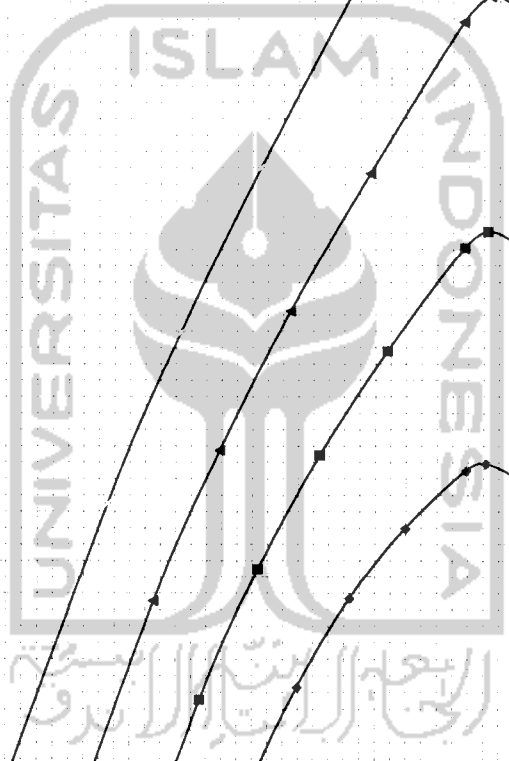
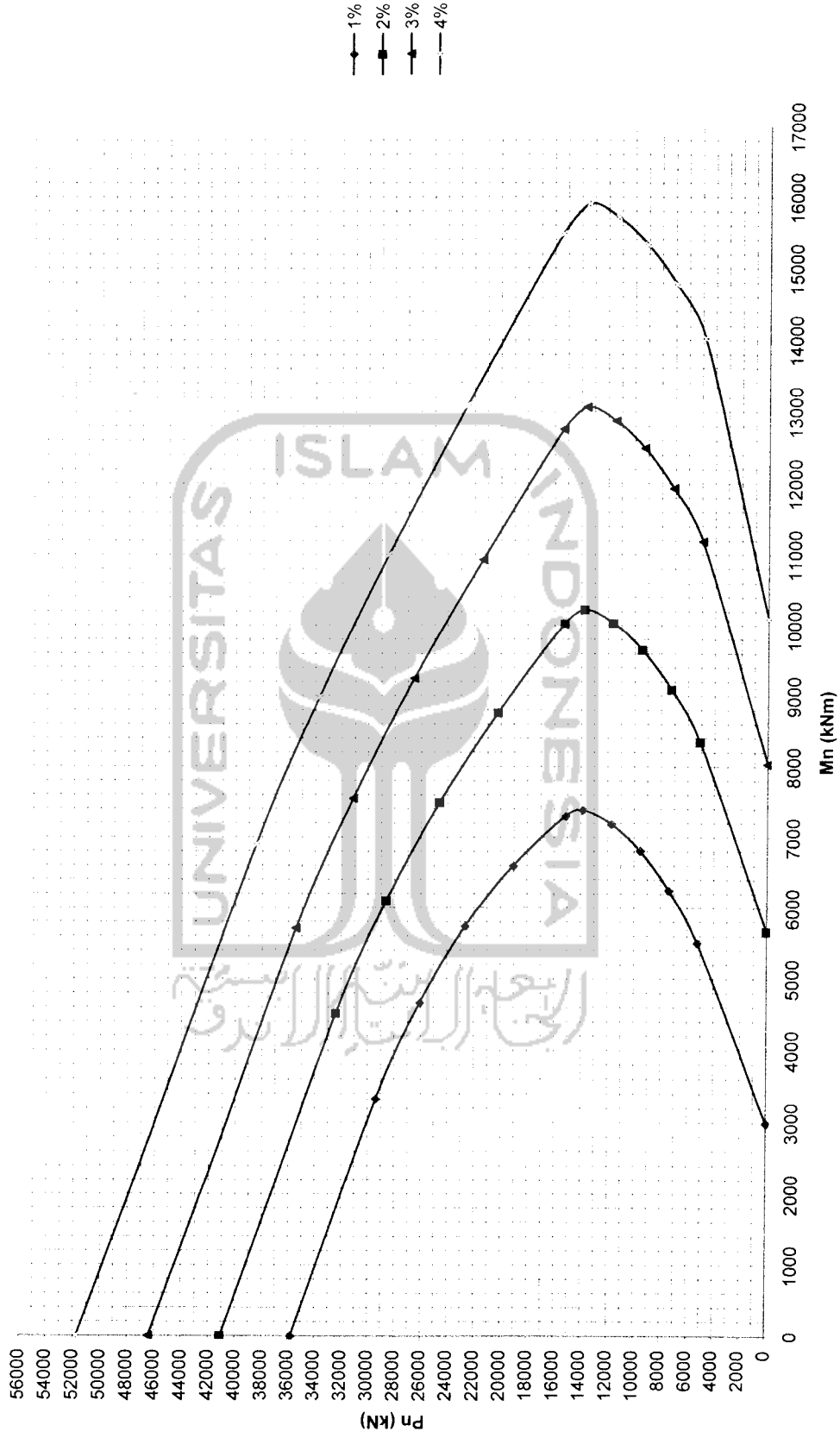


Diagram Mn vs Pn kolom

| | | 1% | | | | |
|------------------------------|------------|-------------|------------|------------|------------|--|
| f'c (Mpa) | | 24,9 | | | | |
| fy (Mpa) | | 390 | | | | |
| b (mm) | | 1400 | | | | |
| h (mm) | | 1400 | | | | |
| Ag(mm ²) | | 1960000 | | | | |
| d' (mm) | | 80 | | | | |
| d (mm) | | 1320 | | | | |
| cb (mm) | | 800 | | | | |
| fs' (Mpa) | | 540,00000 | | | | |
| fs' pakai (Mpa) | | 390 | | | | |
| Ast (mm ²) | | 19600 | | | | |
| As = As' (mm) | | 9800 | | | | |
| Cc (kN) | | 20149 | | | | |
| Cs (kN) | | 3614,583 | | | | |
| Ts (kN) | | 3822 | | | | |
| PnB (kN) | | 19942 | | | | |
| y (mm) | | 700 | | | | |
| Mnb (kNm) | | 11864,35026 | | | | |
| Patah Desak (c>cb) | | | | | | |
| c ambil (mm) | 850 | 1000 | 1150 | 1300 | 1450 | |
| fs' Mpa | 543,529412 | 552 | 558,26087 | 563,076923 | 566,896552 | |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 | |
| fs (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 | |
| fs pakai (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 | |
| a (mm) | 722,5 | 850 | 977,5 | 1105 | 1232,5 | |
| Cc (kN) | 21408,3975 | 25186,35 | 28964,3025 | 32742,255 | 36520,2075 | |
| Cs (kN) | 3614,583 | 3614,583 | 3614,583 | 3614,583 | 3614,583 | |
| Ts (kN) | 3251,29412 | 1881,6 | 869,217391 | 90,4615385 | -527,17241 | |
| Pn (kN) | 21771,6864 | 26919,333 | 31709,6681 | 36266,3765 | 40661,9629 | |
| Mn (kNm) | 11508,9385 | 10333,8797 | 8898,66515 | 7126,61023 | 4972,76194 | |
| Patah Tarik (c<cb) | | | | | | |
| c ambil (mm) | 250 | 375 | 500 | 625 | 750 | |
| a (mm) | 212,5 | 318,75 | 425 | 531,25 | 637,5 | |
| fs' (Mpa) | 408 | 472 | 504 | 523,2 | 536 | |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 6296,5875 | 9444,88125 | 12593,175 | 15741,4688 | 18889,7625 |
| Cs (kN) | 3614,583 | 3614,583 | 3614,583 | 3614,583 | 3614,583 |
| Ts (kN) | 3822 | 3822 | 3822 | 3822 | 3822 |
| Pn (kN) | 6089,1705 | 9237,46425 | 12385,758 | 15534,0518 | 18682,3455 |
| Mn (kNm) | 8349,28029 | 9716,82039 | 10749,8543 | 11448,3819 | 11812,4034 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 48712,566 | 48712,566 | 48712,566 | 48712,566 | 48712,566 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 128,986534 | 128,986534 | 128,986534 | 128,986534 | 128,986534 |
| Mn (kNm) | 4798,54673 | 4798,54673 | 4798,54673 | 4798,54673 | 4798,54673 |



Diagram Mn vs Pn Kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 2% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 1400 | | | | |
| h (mm) | 1400 | | | | |
| Ag(mm ²) | 1960000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 1320 | | | | |
| cb (mm) | 800 | | | | |
| fs' (Mpa) | 540,00000 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 39200 | | | | |
| As = As' (mm) | 19600 | | | | |
| Cc (kN) | 20149 | | | | |
| Cs (kN) | 7229,166 | | | | |
| Ts (kN) | 7644 | | | | |
| PnB (kN) | 19734 | | | | |
| y (mm) | 700 | | | | |
| Mnb (kNm) | 16475,03172 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 850 | 1000 | 1150 | 1300 | 1450 |
| fs' Mpa | 543,529412 | 552 | 558,26087 | 563,076923 | 566,896552 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 |
| fs pakai (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 |
| a (mm) | 722,5 | 850 | 977,5 | 1105 | 1232,5 |
| Cc (kN) | 21408,3975 | 25186,35 | 28964,3025 | 32742,255 | 36520,2075 |
| Cs (kN) | 7229,166 | 7229,166 | 7229,166 | 7229,166 | 7229,166 |
| Ts (kN) | 6502,58824 | 3763,2 | 1738,43478 | 180,923077 | -1054,3448 |
| Pn (kN) | 22134,9753 | 28652,316 | 34455,0337 | 39790,4979 | 44803,7183 |
| Mn (kNm) | 15765,7823 | 13741,5132 | 11678,6214 | 9423,73784 | 6886,95651 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 250 | 375 | 500 | 625 | 750 |
| a (mm) | 212,5 | 318,75 | 425 | 531,25 | 637,5 |
| fs' (Mpa) | 408 | 472 | 504 | 523,2 | 536 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 6296,5875 | 9444,88125 | 12593,175 | 15741,4688 | 18889,7625 |
| Cs (kN) | 7229,166 | 7229,166 | 7229,166 | 7229,166 | 7229,166 |
| Ts (kN) | 7644 | 7644 | 7644 | 7644 | 7644 |
| Pn (kN) | 5881,7535 | 9030,04725 | 12178,341 | 15326,6348 | 18474,9285 |
| Mn (kNm) | 12959,9617 | 14327,5018 | 15360,5357 | 16059,0634 | 16423,0849 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 55941,732 | 55941,732 | 55941,732 | 55941,732 | 55941,732 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 257,973069 | 257,973069 | 257,973069 | 257,973069 | 257,973069 |
| Mn (kNm) | 9104,10693 | 9104,10693 | 9104,10693 | 9104,10693 | 9104,10693 |



Diagram M vs PN kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 3% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 1400 | | | | |
| h (mm) | 1400 | | | | |
| Ag(mm ²) | 1960000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 1320 | | | | |
| cb (mm) | 800 | | | | |
| fs' (Mpa) | 540,00000 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 58800 | | | | |
| As = As' (mm) | 29400 | | | | |
| Cc (kN) | 20149 | | | | |
| Cs (kN) | 10843,749 | | | | |
| Ts (kN) | 11466 | | | | |
| PnB (kN) | 19527 | | | | |
| y (mm) | 700 | | | | |
| Mnb (kNm) | 21085,71318 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 850 | 1000 | 1150 | 1300 | 1450 |
| fs' Mpa | 543,529412 | 552 | 558,26087 | 563,076923 | 566,896552 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 |
| fs pakai (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 |
| a (mm) | 722,5 | 850 | 977,5 | 1105 | 1232,5 |
| Cc (kN) | 21408,3975 | 25186,35 | 28964,3025 | 32742,255 | 36520,2075 |
| Cs (kN) | 10843,749 | 10843,749 | 10843,749 | 10843,749 | 10843,749 |
| Ts (kN) | 9753,88235 | 5644,8 | 2607,65217 | 271,384615 | -1581,5172 |
| Pn (kN) | 22498,2641 | 30385,299 | 37200,3993 | 43314,6194 | 48945,4737 |
| Mn (kNm) | 20022,6261 | 17149,1466 | 14458,5776 | 11720,8655 | 8801,15107 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 250 | 375 | 500 | 625 | 750 |
| a (mm) | 212,5 | 318,75 | 425 | 531,25 | 637,5 |
| fs' (Mpa) | 408 | 472 | 504 | 523,2 | 536 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 6296,5875 | 9444,88125 | 12593,175 | 15741,4688 | 18889,7625 |
| Cs (kN) | 10843,749 | 10843,749 | 10843,749 | 10843,749 | 10843,749 |
| Ts (kN) | 11466 | 11466 | 11466 | 11466 | 11466 |
| Pn (kN) | 5674,3365 | 8822,63025 | 11970,924 | 15119,2178 | 18267,5115 |
| Mn (kNm) | 17570,6432 | 18938,1833 | 19971,2172 | 20669,7449 | 21033,7663 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 63170,898 | 63170,898 | 63170,898 | 63170,898 | 63170,898 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 386,959603 | 386,959603 | 386,959603 | 386,959603 | 386,959603 |
| Mn (kNm) | 12916,6806 | 12916,6806 | 12916,6806 | 12916,6806 | 12916,6806 |



Diagram M vs PN kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|------------|
| | 4% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 1400 | | | | |
| h (mm) | 1400 | | | | |
| Ag(mm ²) | 1960000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 1320 | | | | |
| cb (mm) | 800 | | | | |
| fs' (Mpa) | 540,00000 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 78400 | | | | |
| As = As' (mm) | 39200 | | | | |
| Cc (kN) | 20149 | | | | |
| Cs (kN) | 14458,332 | | | | |
| Ts (kN) | 15288 | | | | |
| PnB (kN) | 19319 | | | | |
| y (mm) | 700 | | | | |
| Mnb (kNm) | 25696,39464 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 850 | 1000 | 1150 | 1300 | 1450 |
| fs' Mpa | 543,529412 | 552 | 558,26087 | 563,076923 | 566,896552 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 |
| fs pakai (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 |
| a (mm) | 722,5 | 850 | 977,5 | 1105 | 1232,5 |
| Cc (kN) | 21408,3975 | 25186,35 | 28964,3025 | 32742,255 | 36520,2075 |
| Cs (kN) | 14458,332 | 14458,332 | 14458,332 | 14458,332 | 14458,332 |
| Ts (kN) | 13005,1765 | 7526,4 | 3476,86957 | 361,846154 | -2108,6897 |
| Pn (kN) | 22001,553 | 32118,282 | 39945,7649 | 46838,7408 | 53087,2292 |
| Mn (kNm) | 24279,4699 | 20556,7801 | 17238,5339 | 14017,9931 | 10715,3456 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 250 | 375 | 500 | 625 | 750 |
| a (mm) | 212,5 | 318,75 | 425 | 531,25 | 637,5 |
| fs' (Mpa) | 408 | 472 | 504 | 523,2 | 536 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 6296,5875 | 9444,88125 | 12593,175 | 15741,4688 | 18889,7625 |
| Cs (kN) | 14458,332 | 14458,332 | 14458,332 | 14458,332 | 14458,332 |
| Ts (kN) | 15288 | 15288 | 15288 | 15288 | 15288 |
| Pn (kN) | 5466,9195 | 8615,21325 | 11763,507 | 14911,8008 | 18060,0945 |
| Mn (kNm) | 22181,3247 | 23548,8648 | 24581,8987 | 25280,4263 | 25644,4478 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 70400 | 70400 | 70400,064 | 70400,064 | 70400,064 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 515,946137 | 515,946137 | 515,946137 | 515,946137 | 515,946137 |
| Mn (kNm) | 16236,2677 | 16236,2677 | 16236,2677 | 16236,2677 | 16236,2677 |



Diagram Mn vs Pn kolom

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| | 5% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 1400 | | | | |
| h (mm) | 1400 | | | | |
| Ag(mm ²) | 1960000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 1320 | | | | |
| cb (mm) | 800 | | | | |
| fs' (Mpa) | 540,00000 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 98000 | | | | |
| As = As' (mm) | 49000 | | | | |
| Cc (kN) | 20149 | | | | |
| Cs (kN) | 18072,915 | | | | |
| Ts (kN) | 19110 | | | | |
| PnB (kN) | 19112 | | | | |
| y (mm) | 700 | | | | |
| Mnb (kNm) | 30307,0761 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 850 | 1000 | 1150 | 1300 | 1450 |
| fs' Mpa | 543,529412 | 552 | 558,26087 | 563,076923 | 566,896552 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 |
| fs pakai (Mpa) | 331,764706 | 192 | 88,6956522 | 9,23076923 | -53,793103 |
| a (mm) | 722,5 | 850 | 977,5 | 1105 | 1232,5 |
| Cc (kN) | 21408,3975 | 25186,35 | 28964,3025 | 32742,255 | 36520,2075 |
| Cs (kN) | 18072,915 | 18072,915 | 18072,915 | 18072,915 | 18072,915 |
| Ts (kN) | 16256,4706 | 9408 | 4346,08696 | 452,307692 | -2635,8621 |
| Pn (kN) | 23224,8419 | 33851,265 | 42691,1305 | 50362,8623 | 57228,9846 |
| Mn (kNm) | 28536,3137 | 23964,4136 | 20018,4901 | 16315,1207 | 12629,5402 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 250 | 375 | 500 | 625 | 750 |
| a (mm) | 212,5 | 318,75 | 425 | 531,25 | 637,5 |
| fs' (Mpa) | 408 | 472 | 504 | 523,2 | 536 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| Cc (kN) | 6296,5875 | 9444,88125 | 12593,175 | 15741,4688 | 18889,7625 |
| Cs (kN) | 18072,915 | 18072,915 | 18072,915 | 18072,915 | 18072,915 |
| Ts (kN) | 19110 | 19110 | 19110 | 19110 | 19110 |
| Pn (kN) | 5259,5025 | 8407,79625 | 11556,09 | 14704,3838 | 17852,6775 |
| Mn (kNm) | 26792,0061 | 28159,5462 | 29192,5801 | 29891,1078 | 30255,1293 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 77629,23 | 77629,23 | 77629,23 | 77629,23 | 77629,23 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 644,932672 | 644,932672 | 644,932672 | 644,932672 | 644,932672 |
| Mn (kNm) | 19062,8683 | 19062,8683 | 19062,8683 | 19062,8683 | 19062,8683 |



| | | | | | | | | | | | | | |
|--------------------|----------|---------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Ast = 1% Ag | Pn (kN) | 0 | 6089,2 | 9237,464 | 12385,76 | 15534,05 | 18682,35 | 21771,69 | 26919,33 | 31709,67 | 36266,38 | 40661,96 | 48712,57 |
| | Mn (kNm) | 4798,55 | 8349,3 | 9716,82 | 10749,85 | 11448,38 | 11812,4 | 11508,94 | 10333,88 | 8898,665 | 7126,61 | 4972,762 | 0 |
| Ast = 2% Ag | Pn (kN) | 0 | 5881,8 | 9030,047 | 12178,34 | 15326,63 | 18474,93 | 22134,98 | 28652,32 | 34455,03 | 39790,5 | 44803,72 | 55941,73 |
| | Mn (kNm) | 9104,11 | 12960 | 14327,5 | 15360,54 | 16059,06 | 16423,08 | 15765,78 | 13741,51 | 11678,62 | 9423,738 | 6886,957 | 0 |
| Ast = 3% Ag | Pn (kN) | 0 | 5674,3 | 8822,63 | 11970,92 | 15119,22 | 18267,51 | 22498,26 | 30385,3 | 37200,4 | 43314,62 | 48945,47 | 63170,9 |
| | Mn (kNm) | 12916,7 | 17571 | 18938,18 | 19971,22 | 20669,74 | 21033,77 | 20022,63 | 17149,15 | 14458,58 | 11720,87 | 8801,151 | 0 |
| Ast = 4% Ag | Pn (kN) | 0 | 5466,9 | 8615,213 | 11763,51 | 14911,8 | 18060,09 | 22861,55 | 32118,28 | 39945,76 | 46838,74 | 53087,23 | 70400,06 |
| | Mn (kNm) | 16236,3 | 22181 | 23548,86 | 24581,9 | 25280,43 | 25644,45 | 24279,47 | 20556,78 | 17238,53 | 14017,99 | 10715,35 | 0 |
| Ast = 5% Ag | Pn (kN) | 0 | 5259,5 | 8407,796 | 11556,09 | 14704,38 | 17852,68 | 23224,84 | 33851,27 | 42691,13 | 50362,86 | 57228,98 | 77629,23 |
| | Mn (kNm) | 19062,9 | 26792 | 28159,55 | 29192,58 | 29891,11 | 30255,13 | 28536,31 | 23964,41 | 20018,49 | 16315,12 | 12629,54 | 0 |



**Mn Vs Pn
1400 x 1400**

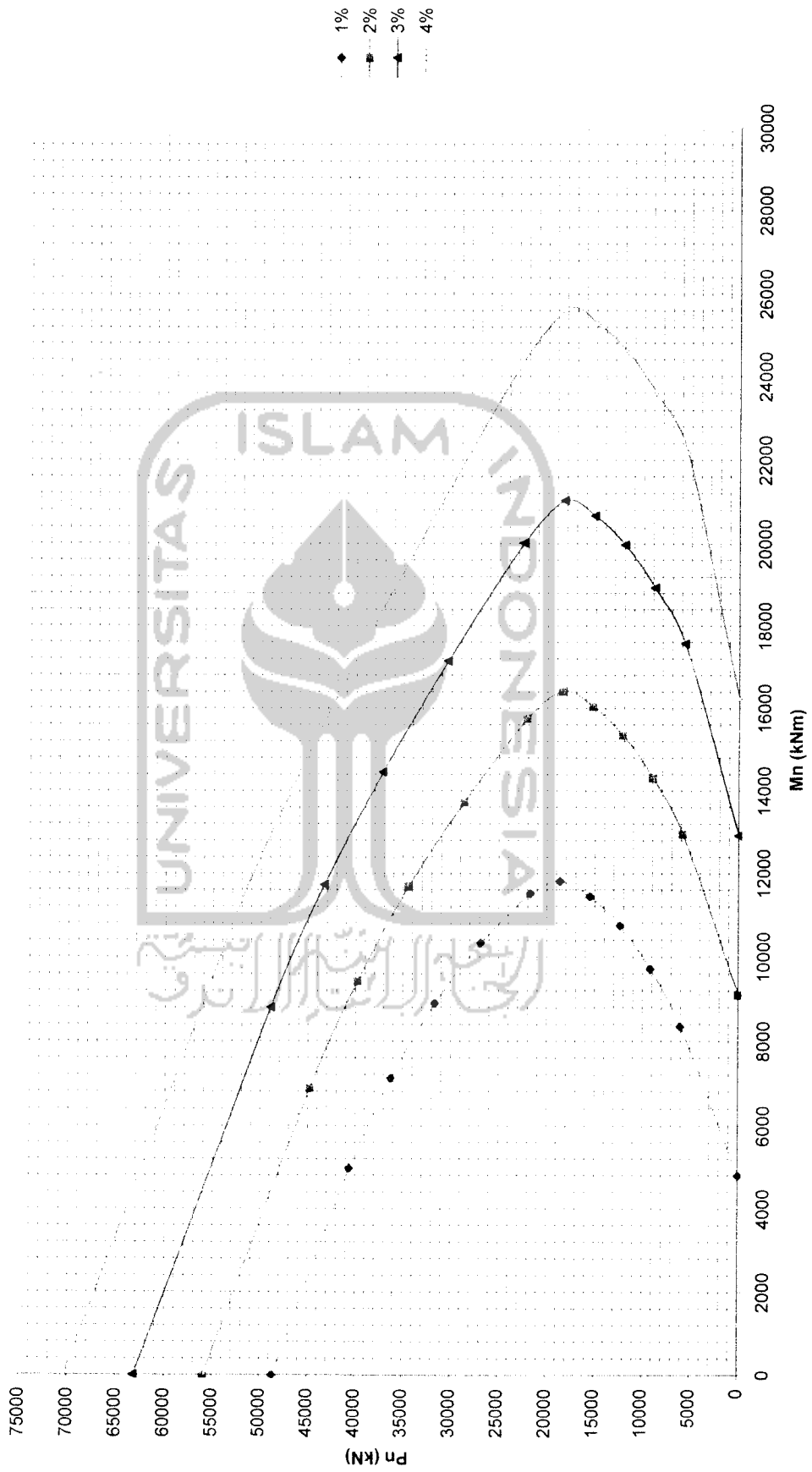


Diagram Mn vs Pn kolom

| | | | | | |
|------------------------------|-------------|------------|------------|------------|-----------|
| | 1% | | | | |
| f'c (Mpa) | 24,9 | | | | |
| fy (Mpa) | 390 | | | | |
| b (mm) | 1600 | | | | |
| h (mm) | 1000 | | | | |
| Ag(mm ²) | 1600000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 920 | | | | |
| cb (mm) | 557,5757576 | | | | |
| fs' (Mpa) | 513,91304 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| Ast (mm ²) | 16000 | | | | |
| As = As' (mm) | 8000 | | | | |
| Cc (kN) | 16049 | | | | |
| Cs (kN) | 2950,68 | | | | |
| Ts (kN) | 3120 | | | | |
| PnB (kN) | 15880 | | | | |
| y (mm) | 500 | | | | |
| Mnb (kNm) | 6771,186144 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 600 | 700 | 800 | 900 | 1000 |
| fs' Mpa | 520 | 531,428571 | 540 | 546,666667 | 552 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 320 | 188,571429 | 90 | 13,3333333 | -48 |
| fs pakai (Mpa) | 320 | 188,571429 | 90 | 13,3333333 | -48 |
| a (mm) | 510 | 595 | 680 | 765 | 850 |
| Cc (kN) | 17270,64 | 20149,08 | 23027,52 | 25905,96 | 28784,4 |
| Cs (kN) | 2950,68 | 2950,68 | 2950,68 | 2950,68 | 2950,68 |
| Ts (kN) | 2560 | 1508,57143 | 720 | 106,666667 | -384 |
| Pn (kN) | 17661,32 | 21591,1886 | 25258,2 | 28749,9733 | 32119,08 |
| Mn (kNm) | 6545,7924 | 5953,0743 | 5226,0888 | 4328,0359 | 3236,8356 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 200 | 275 | 350 | 425 | 500 |
| a (mm) | 170 | 233,75 | 297,5 | 361,25 | 425 |
| fs' (Mpa) | 360 | 425,454545 | 462,857143 | 487,058824 | 504 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 5756,88 | 7915,71 | 10074,54 | 12233,37 | 14392,2 |
| Cs (kN) | 2710,68 | 2950,68 | 2950,68 | 2950,68 | 2950,68 |
| Ts (kN) | 3120 | 3120 | 3120 | 3120 | 3120 |
| Pn (kN) | 5347,56 | 7746,39 | 9905,22 | 12064,05 | 14222,88 |
| Mn (kNm) | 4837,9908 | 5582,39199 | 6088,36778 | 6456,71814 | 6687,4431 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 39765,36 | 39765,36 | 39765,36 | 39765,36 | 39765,36 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 92,1332388 | 92,1332388 | 92,1332388 | 92,1332388 | 92,1332388 |
| Mn (kNm) | 2726,67215 | 2726,67215 | 2726,67215 | 2726,67215 | 2726,67215 |



Diagram Mn vs Pn Kolom

| | | | | | |
|------------------------------------|-------------|------------|------------|------------|-----------|
| | 2% | | | | |
| f _c (Mpa) | 24,9 | | | | |
| f _y (Mpa) | 390 | | | | |
| b (mm) | 1600 | | | | |
| h (mm) | 1000 | | | | |
| A _g (mm ²) | 1600000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 920 | | | | |
| cb (mm) | 557,5757576 | | | | |
| fs' (Mpa) | 513,91304 | | | | |
| fs' pakai (Mpa) | 390 | | | | |
| A _{st} (mm ²) | 32000 | | | | |
| As = As' (mm) | 16000 | | | | |
| C _c (kN) | 16049 | | | | |
| C _s (kN) | 5901,36 | | | | |
| T _s (kN) | 6240 | | | | |
| P _{nB} (kN) | 15711 | | | | |
| y (mm) | 500 | | | | |
| M _{nb} (kNm) | 9320,871744 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 600 | 700 | 800 | 900 | 1000 |
| fs' Mpa | 520 | 531,428571 | 540 | 546,666667 | 552 |
| fs' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| fs (Mpa) | 320 | 188,571429 | 90 | 13,3333333 | -48 |
| fs pakai (Mpa) | 320 | 188,571429 | 90 | 13,3333333 | -48 |
| a (mm) | 510 | 595 | 680 | 765 | 850 |
| C _c (kN) | 17270,64 | 20149,08 | 23027,52 | 25905,96 | 28784,4 |
| C _s (kN) | 5901,36 | 5901,36 | 5901,36 | 5901,36 | 5901,36 |
| T _s (kN) | 5120 | 3017,14286 | 1440 | 213,333333 | -768 |
| P _n (kN) | 18052 | 23033,2971 | 27488,88 | 31593,9867 | 35453,76 |
| M _n (kNm) | 8860,278 | 7825,9599 | 6767,7744 | 5612,1215 | 4314,8412 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 200 | 275 | 350 | 425 | 500 |
| a (mm) | 170 | 233,75 | 297,5 | 361,25 | 425 |
| fs' (Mpa) | 360 | 425,454545 | 462,857143 | 487,058824 | 504 |

| | | | | | |
|-----------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 5756,88 | 7915,71 | 10074,54 | 12233,37 | 14392,2 |
| Cs (kN) | 5421,36 | 5901,36 | 5901,36 | 5901,36 | 5901,36 |
| Ts (kN) | 6240 | 6240 | 6240 | 6240 | 6240 |
| Pn (kN) | 4938,24 | 7577,07 | 9735,9 | 11894,73 | 14053,56 |
| Mn (kNm) | 7286,8764 | 8132,07759 | 8638,05338 | 9006,40374 | 9237,1287 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 45666,72 | 45666,72 | 45666,72 | 45666,72 | 45666,72 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 184,266478 | 184,266478 | 184,266478 | 184,266478 | 184,266478 |
| Mn (kNm) | 5165,88859 | 5165,88859 | 5165,88859 | 5165,88859 | 5165,88859 |



Diagram M vs PN kolom

| | | | | | |
|--|-------------|------------|------------|------------|-----------|
| | 3% | | | | |
| f _c (Mpa) | 24,9 | | | | |
| f _y (Mpa) | 390 | | | | |
| b (mm) | 1600 | | | | |
| h (mm) | 1000 | | | | |
| A _g (mm ²) | 1600000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 920 | | | | |
| cb (mm) | 557,5757576 | | | | |
| f _s ' (Mpa) | 513,91304 | | | | |
| f _s ' pakai (Mpa) | 390 | | | | |
| A _{st} (mm ²) | 48000 | | | | |
| A _s = A _s ' (mm) | 24000 | | | | |
| C _c (kN) | 16049 | | | | |
| C _s (kN) | 8852,04 | | | | |
| T _s (kN) | 9360 | | | | |
| P _{nB} (kN) | 15542 | | | | |
| y (mm) | 500 | | | | |
| M _{nb} (kNm) | 11870,55734 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 600 | 700 | 800 | 900 | 1000 |
| f _s ' Mpa | 520 | 531,428571 | 540 | 546,666667 | 552 |
| f _s ' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| f _s (Mpa) | 320 | 188,571429 | 90 | 13,3333333 | -48 |
| f _s pakai (Mpa) | 320 | 188,571429 | 90 | 13,3333333 | -48 |
| a (mm) | 510 | 595 | 680 | 765 | 850 |
| C _c (kN) | 17270,64 | 20149,08 | 23027,52 | 25905,96 | 28784,4 |
| C _s (kN) | 8852,04 | 8852,04 | 8852,04 | 8852,04 | 8852,04 |
| T _s (kN) | 7680 | 4525,71429 | 2160 | 320 | -1152 |
| P _n (kN) | 18442,68 | 24475,4057 | 29719,56 | 34438 | 38788,44 |
| M _n (kNm) | 11174,7636 | 9698,8455 | 8309,46 | 6896,2071 | 5392,8468 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 200 | 275 | 350 | 425 | 500 |
| a (mm) | 170 | 233,75 | 297,5 | 361,25 | 425 |
| f _s ' (Mpa) | 360 | 425,454545 | 462,857143 | 487,058824 | 504 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 5756,88 | 7915,71 | 10074,54 | 12233,37 | 14392,2 |
| Cs (kN) | 8132,04 | 8852,04 | 8852,04 | 8852,04 | 8852,04 |
| Ts (kN) | 9360 | 9360 | 9360 | 9360 | 9360 |
| Pn (kN) | 4528,92 | 7407,75 | 9566,58 | 11725,41 | 13884,24 |
| Mn (kNm) | 9735,762 | 10681,7632 | 11187,739 | 11556,0893 | 11786,8143 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 51568,08 | 51568,08 | 51568,08 | 51568,08 | 51568,08 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 276,399717 | 276,399717 | 276,399717 | 276,399717 | 276,399717 |
| Mn (kNm) | 7317,64933 | 7317,64933 | 7317,64933 | 7317,64933 | 7317,64933 |



Diagram M vs PN kolom

| | 4% | | | | |
|--|-------------|------------|------------|-------------|-----------|
| f_c (Mpa) | 24,9 | | | | |
| f_y (Mpa) | 390 | | | | |
| b (mm) | 1600 | | | | |
| h (mm) | 1000 | | | | |
| A_g (mm ²) | 1600000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 920 | | | | |
| c_b (mm) | 557,5757576 | | | | |
| f_s' (Mpa) | 513,91304 | | | | |
| f_s' pakai (Mpa) | 390 | | | | |
| A_{st} (mm ²) | 64000 | | | | |
| $A_s = A_s'$ (mm) | 32000 | | | | |
| C_c (kN) | 16049 | | | | |
| C_s (kN) | 11802,72 | | | | |
| T_s (kN) | 12480 | | | | |
| $P_n B$ (kN) | 15372 | | | | |
| y (mm) | 500 | | | | |
| M_{nb} (kNm) | 14420,24294 | | | | |
| Patah Desak ($c > c_b$) | | | | | |
| c ambil (mm) | 600 | 700 | 800 | 900 | 1000 |
| f_s' Mpa | 520 | 531,428571 | 540 | 546,666667 | 552 |
| f_s' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| f_s (Mpa) | 320 | 188,571429 | 90 | 13,33333333 | -48 |
| f_s pakai (Mpa) | 320 | 188,571429 | 90 | 13,33333333 | -48 |
| a (mm) | 510 | 595 | 680 | 765 | 850 |
| C_c (kN) | 17270,64 | 20149,08 | 23027,52 | 25905,96 | 28784,4 |
| C_s (kN) | 11802,72 | 11802,72 | 11802,72 | 11802,72 | 11802,72 |
| T_s (kN) | 10240 | 6034,28571 | 2880 | 426,666667 | -1536 |
| P_n (kN) | 18833,36 | 25917,5143 | 31950,24 | 37282,0133 | 42123,12 |
| M_n (kNm) | 13489,2492 | 11571,7311 | 9851,1456 | 8180,2927 | 6470,8524 |
| Patah Tarik ($c < c_b$) | | | | | |
| c ambil (mm) | 200 | 275 | 350 | 425 | 500 |
| a (mm) | 170 | 233,75 | 297,5 | 361,25 | 425 |
| f_s' (Mpa) | 360 | 425,454545 | 462,857143 | 487,058824 | 504 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| fs' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| fs = fy (Mpa) | 390 | 390 | 390 | 390 | 390 |
| Cc (kN) | 5756,88 | 7915,71 | 10074,54 | 12233,37 | 14392,2 |
| Cs (kN) | 10842,72 | 11802,72 | 11802,72 | 11802,72 | 11802,72 |
| Ts (kN) | 12480 | 12480 | 12480 | 12480 | 12480 |
| Pn (kN) | 4119,6 | 7238,43 | 9397,26 | 11556,09 | 13714,92 |
| Mn (kNm) | 12184,6476 | 13231,4488 | 13737,4246 | 14105,7749 | 14336,4999 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 57469 | 57469 | 57469,44 | 57469,44 | 57469,44 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 368,532955 | 368,532955 | 368,532955 | 368,532955 | 368,532955 |
| Mn (kNm) | 9181,95436 | 9181,95436 | 9181,95436 | 9181,95436 | 9181,95436 |



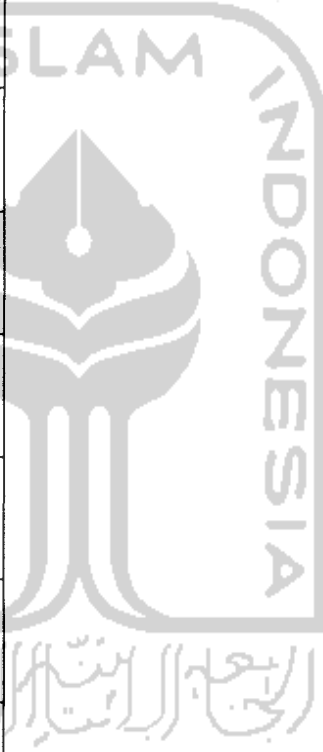
Diagram Mn vs Pn kolom

| | | | | | |
|--|-------------|------------|------------|------------|----------|
| | 5% | | | | |
| f _c (Mpa) | 24,9 | | | | |
| f _y (Mpa) | 390 | | | | |
| b (mm) | 1600 | | | | |
| h (mm) | 1000 | | | | |
| A _g (mm ²) | 1600000 | | | | |
| d' (mm) | 80 | | | | |
| d (mm) | 920 | | | | |
| cb (mm) | 557,5757576 | | | | |
| f _s ' (Mpa) | 513,91304 | | | | |
| f _s ' pakai (Mpa) | 390 | | | | |
| A _{st} (mm ²) | 80000 | | | | |
| A _s = A _s ' (mm) | 40000 | | | | |
| C _c (kN) | 16049 | | | | |
| C _s (kN) | 14753,4 | | | | |
| T _s (kN) | 15600 | | | | |
| P _{nB} (kN) | 15203 | | | | |
| y (mm) | 500 | | | | |
| M _{nb} (kNm) | 16969,92854 | | | | |
| Patah Desak (c>cb) | | | | | |
| c ambil (mm) | 600 | 700 | 800 | 900 | 1000 |
| f _s ' Mpa | 520 | 531,428571 | 540 | 546,666667 | 552 |
| f _s ' pakai (Mpa) | 390 | 390 | 390 | 390 | 390 |
| f _s (Mpa) | 320 | 188,571429 | 90 | 13,3333333 | -48 |
| f _s pakai (Mpa) | 320 | 188,571429 | 90 | 13,3333333 | -48 |
| a (mm) | 510 | 595 | 680 | 765 | 850 |
| C _c (kN) | 17270,64 | 20149,08 | 23027,52 | 25905,96 | 28784,4 |
| C _s (kN) | 14753,4 | 14753,4 | 14753,4 | 14753,4 | 14753,4 |
| T _s (kN) | 12800 | 7542,85714 | 3600 | 533,333333 | -1920 |
| P _n (kN) | 19224,04 | 27359,6229 | 34180,92 | 40126,0267 | 45457,8 |
| M _n (kNm) | 15803,7348 | 13444,6167 | 11392,8312 | 9464,3783 | 7548,858 |
| Patah Tarik (c<cb) | | | | | |
| c ambil (mm) | 200 | 275 | 350 | 425 | 500 |
| a (mm) | 170 | 233,75 | 297,5 | 361,25 | 425 |
| f _s ' (Mpa) | 360 | 425,454545 | 462,857143 | 487,058824 | 504 |
| f _s ' pakai (Mpa) | 360 | 390 | 390 | 390 | 390 |
| f _s = f _y (Mpa) | 390 | 390 | 390 | 390 | 390 |

| | | | | | |
|------------------------------|------------|------------|------------|------------|------------|
| Cc (kN) | 5756,88 | 7915,71 | 10074,54 | 12233,37 | 14392,2 |
| Cs (kN) | 13553,4 | 14753,4 | 14753,4 | 14753,4 | 14753,4 |
| Ts (kN) | 15600 | 15600 | 15600 | 15600 | 15600 |
| Pn (kN) | 3710,28 | 7069,11 | 9227,94 | 11386,77 | 13545,6 |
| Mn (kNm) | 14633,5332 | 15781,1344 | 16287,1102 | 16655,4605 | 16886,1855 |
| Saat Mn = 0 | | | | | |
| Pn ₀ (kN) | 63370,8 | 63370,8 | 63370,8 | 63370,8 | 63370,8 |
| Lentur Murni (Pn = 0) | | | | | |
| a (mm) | 460,666194 | 460,666194 | 460,666194 | 460,666194 | 460,666194 |
| Mn (kNm) | 10758,8037 | 10758,8037 | 10758,8037 | 10758,8037 | 10758,8037 |



| | | | | | | | | | | | | | |
|--------------------|----------|---------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Ast = 1% Ag | Pn (kN) | 0 | 5347,6 | 7746,39 | 9905,22 | 12064,05 | 14222,88 | 17661,32 | 21591,19 | 25258,2 | 28749,97 | 32119,08 | 39765,36 |
| | Mn (kNm) | 2726,67 | 4838 | 5582,392 | 6088,368 | 6456,718 | 6687,443 | 6545,792 | 5953,074 | 5226,089 | 4328,036 | 3236,836 | 0 |
| Ast = 2% Ag | Pn (kN) | 0 | 4938,2 | 7577,07 | 9735,9 | 11894,73 | 14053,56 | 18052 | 23033,3 | 27488,88 | 31593,99 | 35453,76 | 45666,72 |
| | Mn (kNm) | 5165,89 | 7286,9 | 8132,078 | 8638,053 | 9006,404 | 9237,129 | 8860,278 | 7825,96 | 6767,774 | 5612,122 | 4314,841 | 0 |
| Ast = 3% Ag | Pn (kN) | 0 | 4528,9 | 7407,75 | 9566,58 | 11725,41 | 13884,24 | 18442,68 | 24475,41 | 29719,56 | 34438 | 38788,44 | 51568,08 |
| | Mn (kNm) | 7317,65 | 9735,8 | 10681,76 | 11187,74 | 11556,09 | 11786,81 | 11174,76 | 9698,846 | 8309,46 | 6896,207 | 5392,847 | 0 |
| Ast = 4% Ag | Pn (kN) | 0 | 4119,6 | 7238,43 | 9397,26 | 11556,09 | 13714,92 | 18833,36 | 25917,51 | 31950,24 | 37282,01 | 42123,12 | 57469,44 |
| | Mn (kNm) | 9181,95 | 12185 | 13231,45 | 13737,42 | 14105,77 | 14336,5 | 13489,25 | 11571,73 | 9851,146 | 8180,293 | 6470,852 | 0 |
| Ast = 5% Ag | Pn (kN) | 0 | 3710,3 | 7069,11 | 9227,94 | 11386,77 | 13545,6 | 19224,04 | 27359,62 | 34180,92 | 40126,03 | 45457,8 | 63370,8 |
| | Mn (kNm) | 10758,8 | 14634 | 15781,13 | 16287,11 | 16655,46 | 16886,19 | 15803,73 | 13444,62 | 11392,83 | 9464,378 | 7548,858 | 0 |





| Hitungan Tulangan Balok | | |
|---------------------------------|------------------|-------------------|
| FRAME 124 DAN 435 | | |
| | Tulangan Tumpuan | Tulangan Lapangan |
| Mu (kNm) | 1833,620 | 1020,399 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 2292,0250 | 1275,4988 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 620,5123 | 345,3115 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 941,513 | 702,355 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1016,513 | 777,355 |
| ambil h (mm) | 1000 | 1000 |
| Desain Tulangan Rangkap | | |
| Tulangan Desak | | |
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1407,0918 | 390,5656 |
| As' (mm ²) | 4171,0148 | 1157,7459 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 8,50143 | 2,35974 |
| Jml Pakai | 9 | 5 |
| Tul Pakai | 9D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 6886,3264 | 3873,0575 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 14,0358 | 7,8941 |
| Jml Pakai | 15 | 9 |
| Tul Pakai | 15D25 | 9D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 7359 | 4416 |
| As' (mm ²) | 4416 | 2453 |
| C ₂ (mm) | -103,9273 | -74,3946 |
| C ₂ (mm) | 121,4591 | 94,2640 |
| a (mm) | 103,2402 | 80,1244 |
| fs' (Mpa) | 303,6039 | 218,0937 |
| fs' pakai (Mpa) | 303,6039 | 218,0937 |
| Mn (kNm) | 2495,5027 | 1513,2789 |
| 0,8 Mn (KNm) | 1996,4021 | 1210,6231 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -220781,25 | -250218,75 |
| c | -158962500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| Hitungan Tulangan Balok | | |
|---------------------------------|------------------|-------------------|
| FRAME 136 DAN 434 | | |
| | Tulangan Tumpuan | Tulangan Lapangan |
| Mu (kNm) | 1346,443 | 1374,337 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 1683,0538 | 1717,9213 |
| Fc (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 455,6475 | 465,0871 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 806,799 | 815,114 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 881,799 | 890,114 |
| ambil h (mm) | 1000 | 1000 |
| Desain Tulangan Rangkap | | |
| Tulangan Desak | | |
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 798,1206 | 832,9881 |
| As' (mm ²) | 2365,8532 | 2469,2102 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 4,82212 | 5,03279 |
| Jml Pakai | 5 | 6 |
| Tul Pakai | 5D25 | 6D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 5081,1648 | 5184,5219 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 10,3565 | 10,5672 |
| Jml Pakai | 11 | 11 |
| Tul Pakai | 11D25 | 11D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5397 | 5397 |
| As' (mm ²) | 2453 | 2944 |
| C ₂ (mm) | -62,3021 | -79,2732 |
| C ₂ (mm) | 112,5600 | 106,1553 |
| a (mm) | 95,6760 | 90,2320 |
| fs' (Mpa) | 280,1706 | 260,8743 |
| fs' pakai (Mpa) | 280,1706 | 260,8743 |
| Mn (kNm) | 1837,8753 | 1840,5332 |
| 0,8 Mn (kNm) | 1470,3002 | 1472,4265 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -632906,25 | -338531,25 |
| c | -88312500 | -105975000 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 10,55289639 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 134 DAN 451

| | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 1684,690 | 367,166 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2105,8625 | 458,9575 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 490 | 490 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0202 | 0,0202 |
| ρ_{max} | 0,0152 | 0,0152 |
| ρ_{pakai} | 0,0076 | 0,0076 |
| m | 23,1514 | 23,1514 |
| R ₁ | 3,3878 | 3,3878 |
| b d' | 621,6030 | 135,4739 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 942,340 | 439,925 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1017,340 | 514,925 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,3551 | 1,3551 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 811,6306 | 811,6306 |
| M ₂ (kNm) | 1294,2319 | -352,6731 |
| As' (mm ²) | 3053,5140 | -832,0706 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 6,22372 | -1,69594 |
| Jml Pakai | 7 | 5 |
| Tul Pakai | 7D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0030 | 0,0030 |
| As baru (mm ²) | 5016,4082 | 1130,8237 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 10,2245 | 2,3049 |
| Jml Pakai | 11 | 8 |
| Tul Pakai | 11D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5397 | 3925 |
| As' (mm ²) | 3434 | 2453 |
| C ₂ (mm) | -78,5794 | -67,7168 |
| C ₂ (mm) | 124,9413 | 103,5596 |
| a (mm) | 106,2001 | 88,0257 |
| fs' (Mpa) | 311,8648 | 252,3742 |
| fs' pakai (Mpa) | 311,8648 | 252,3742 |
| Mn (kNm) | 2298,3219 | 1684,4608 |
| 0,8 Mn (KNm) | 1838,6575 | 1347,5687 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -583843,75 | -451375 |
| c | -123637500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 13 | 12 |
| A1 Tulangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 10,55289639 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 135 DAN 433 | | |
|---------------------------------|------------------|-------------------|
| | Tulangan Tumpuan | Tulangan Lapangan |
| Mu (kNm) | 1541,329 | 760,756 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1926,6613 | 950,9450 |
| f_c (Mpa) | 24,90 | 24,00 |
| f_y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0269 |
| ρ_{max} | 0,0210 | 0,0202 |
| ρ_{pakai} | 0,0105 | 0,0101 |
| m | 18,4266 | 19,1176 |
| R_1 | 3,6938 | 3,5603 |
| $b \cdot d'$ | 521,5986 | 267,1004 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 863,215 | 617,715 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 938,215 | 692,715 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| v | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4241 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 884,9332 | 852,9476 |
| M_2 (kNm) | 1041,7281 | 97,9974 |
| As' (mm ²) | 3087,9741 | 290,4917 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 6,29396 | 0,59208 |
| Jml Pakai | 7 | 5 |
| Tul Pakai | 7D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0040 |
| As_{baru} (mm ²) | 5803,2858 | 2907,6595 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 11,8284 | 5,9264 |
| Jml Pakai | 12 | 8 |
| Tul Pakai | 12D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5888 | 3925 |
| As' (mm ²) | 3434 | 2453 |
| C_2 (mm) | -90,1748 | -82,9070 |
| C_2 (mm) | 108,8754 | 87,7574 |
| a (mm) | 92,5441 | 74,5938 |
| fs' (Mpa) | 269,3468 | 189,7784 |
| fs' pakai (Mpa) | 269,3468 | 189,7784 |
| Mn (kNm) | 2004,9703 | 1348,2821 |
| 0,8 Mn (KNm) | 1603,9763 | 1078,6257 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12138 |
| b | -235500 | -58875 |
| c | -123637500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 148 DAN 449 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1386,914 | 91,053 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 1733,6425 | 113,8163 |
| f_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R_1 | 3,6938 | 3,6938 |
| b d | 469,3432 | 30,8131 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 818,835 | 209,806 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 893,835 | 284,806 |
| ambil h (mm) | 1000 | 1000 |
| Detail Tulangan | | |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 884,9332 | 884,9332 |
| M_2 (kNm) | 848,7093 | -771,1169 |
| A_s (mm ²) | 2515,8124 | -2285,8068 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 5,12777 | -4,65897 |
| Jml Pakai | 6 | 5 |
| Tul Pakai | 6D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| A_s baru (mm ²) | 5231,1241 | 429,5048 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 10,6622 | 0,8754 |
| Jml Pakai | 11 | 8 |
| Tul Pakai | 11D25 | 8D25 |
| Kontrol Momen Mg- | | |
| A_s (mm ²) | 5397 | 3925 |
| A_s' (mm ²) | 2944 | 2453 |
| C_2 (mm) | -79,2732 | -81,4371 |
| C_2 (mm) | 106,1553 | 86,1122 |
| a (mm) | 90,2320 | 73,1954 |
| f_s' (Mpa) | 260,8743 | 181,9409 |
| f_s' pakai (Mpa) | 260,8743 | 181,9409 |
| Mn (kNm) | 1840,5332 | 1349,4768 |
| 0,8 Mn (KNm) | 1472,4265 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -338531,25 | -58875 |
| c | -105975000 | -88312500 |
| Tulangan Susut | | |
| A_s | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

| FRAME 149 DAN 450 | | |
|---------------------------------|----------------|----------------|
| | Tulangan Desak | Tulangan Tarik |
| Mu (kNm) | 1848,607 | 166,299 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2310,7588 | 207,8738 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 625,5840 | 56,2770 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 945,353 | 283,541 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1020,353 | 358,541 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1425,8256 | -677,0594 |
| As' (mm ²) | 4226,5468 | -2006,9940 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 8,61462 | 4,09069 |
| Jml Pakai | 9 | 5 |
| Tul Pakai | 9D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 6941,8585 | 708,3176 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 14,1490 | 1,4437 |
| Jml Pakai | 15 | 8 |
| Tul Pakai | 15D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 7359 | 3925 |
| As' (mm ²) | 4416 | 2453 |
| C ₂ (mm) | -103,9273 | -81,4371 |
| C ₂ (mm) | 121,4591 | 86,1122 |
| a (mm) | 103,2402 | 73,1954 |
| fs' (Mpa) | 303,6039 | 181,9409 |
| fs' pakai (Mpa) | 303,6039 | 181,9409 |
| Mn (kNm) | 2495,5027 | 1349,4768 |
| 0,8 Mn (KNm) | 1996,4021 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -220781,25 | -58875 |
| c | -158962500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 146 DAN 454 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1636,075 | 161,264 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2045,0938 | 201,5800 |
| f _c (Mpa) | 24,90 | 24,90 |
| f _y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 553,6614 | 54,5731 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 889,351 | 279,216 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 964,351 | 354,216 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1160,1606 | -683,3532 |
| As' (mm ²) | 3439,0413 | -2025,6504 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 7,00951 | -4,12871 |
| Jml Pakai | 7 | 5 |
| Tul Pakai | 7D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 6154,3529 | 689,6612 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 12,5439 | 1,4057 |
| Jml Pakai | 13 | 8 |
| Tul Pakai | 13D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 6378 | 3925 |
| As' (mm ²) | 3434 | 2453 |
| C ₂ (mm) | -83,5764 | -81,4371 |
| C ₂ (mm) | 117,4712 | 86,1122 |
| a (mm) | 99,8505 | 73,1954 |
| f _s ' (Mpa) | 293,5420 | 181,9409 |
| f _s ' pakai (Mpa) | 293,5420 | 181,9409 |
| Mn (kNm) | 2166,5644 | 1349,4768 |
| 0,8 Mn (KNm) | 1733,2515 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -426843,75 | -58875 |
| c | -123637500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

FRAME 147 DAN 455

| | | |
|---------------------------------|--------------|-------------|
| Mu (kNm) | 1840,470 | 45,164 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2300,5875 | 56,4550 |
| f _c (Mpa) | 24,90 | 24,90 |
| f _y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 622,8304 | 15,2839 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 943,270 | 147,764 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1018,270 | 222,764 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1415,6543 | -828,4782 |
| As' (mm ²) | 4196,3964 | -2455,8416 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 8,55316 | -5,00554 |
| Jml Pakai | 9 | 5 |
| Tul Pakai | 9D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 6911,7080 | 259,4700 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 14,0876 | 0,5289 |
| Jml Pakai | 15 | 8 |
| Tul Pakai | 15D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 7359 | 3925 |
| As' (mm ²) | 4416 | 2453 |
| C ₂ (mm) | -103,9273 | -81,4371 |
| C ₂ (mm) | 121,4591 | 86,1122 |
| a (mm) | 103,2402 | 73,1954 |
| f _s ' (Mpa) | 303,6039 | 181,9409 |
| f _s ' pakai (Mpa) | 303,6039 | 181,9409 |
| Mn (kNm) | 2495,5027 | 1349,4768 |
| 0,8 Mn (KNm) | 1996,4021 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -220781,25 | -58875 |
| c | -158962500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 318 DAN 459 | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 953,927 | 133,476 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1192,4088 | 166,8450 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b σ^* | 322,8168 | 45,1694 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 679,093 | 254,023 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 754,093 | 329,023 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 307,4756 | -718,0882 |
| As' (mm ²) | 911,4438 | -2128,6147 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 1,85772 | -4,33858 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 3626,7555 | 586,6969 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 7,3921 | 1,1958 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3925 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -81,4371 | -81,4371 |
| C ₂ (mm) | 86,1122 | 86,1122 |
| a (mm) | 73,1954 | 73,1954 |
| fs' (Mpa) | 181,9409 | 181,9409 |
| fs' pakai (Mpa) | 181,9409 | 181,9409 |
| Mn (kNm) | 1349,4768 | 1349,4768 |
| 0,8 Mn (kNm) | 1079,5815 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -58875 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tulangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 319 DAN 460 | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 1335,302 | 430,237 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1669,1275 | 537,7963 |
| f_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R_1 | 3,6938 | 3,6938 |
| $b \cdot d'$ | 451,8773 | 145,5958 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 803,454 | 456,064 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 878,454 | 531,064 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 884,9332 | 884,9332 |
| M_2 (kNm) | 784,1943 | -347,1369 |
| As' (mm ²) | 2324,5719 | -1029,0112 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 4,73798 | -2,09735 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 5039,8835 | 1686,3004 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 10,2724 | 3,4370 |
| Jml Pakai | 11 | 8 |
| Tul Pakai | 11D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5397 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C_2 (mm) | -62,3021 | -81,4371 |
| C_2 (mm) | 112,5600 | 86,1122 |
| a (mm) | 95,6760 | 73,1954 |
| f_s' (Mpa) | 280,1706 | 181,9409 |
| f_s' pakai (Mpa) | 280,1706 | 181,9409 |
| Mn (kNm) | 1837,8753 | 1349,4768 |
| 0,8 Mn (kNm) | 1470,3002 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -632906,25 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tulangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 313 DAN 470 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1330,867 | 229,555 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1663,5838 | 286,9438 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 450,3765 | 77,6833 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 802,119 | 333,131 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 877,119 | 408,131 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 778,6506 | -597,9894 |
| As' (mm ²) | 2308,1387 | -1772,6083 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 4,70449 | -3,61296 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 5023,4503 | 942,7033 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 10,2389 | 1,9214 |
| Jml Pakai | 11 | 8 |
| Tul Pakai | 11D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5397 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -62,3021 | -81,4371 |
| C ₂ (mm) | 112,5600 | 86,1122 |
| a (mm) | 95,6760 | 73,1954 |
| fs' (Mpa) | 280,1706 | 181,9409 |
| fs' pakai (Mpa) | 280,1706 | 181,9409 |
| Mn (kNm) | 1837,8753 | 1349,4768 |
| 0,8 Mn (KNm) | 1470,3002 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -632906,25 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

| FRAME 314 DAN 471 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1093,228 | 208,148 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1366,5350 | 260,1850 |
| f_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R_1 | 3,6938 | 3,6938 |
| $b d'$ | 369,9575 | 70,4390 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 726,987 | 317,218 |
| d' (mm) | 60 | 60 |
| Z (mm) | 75 | 75 |
| h | 801,987 | 392,218 |
| ambil h (mm) | 1000 | 1000 |
| Desain Tulangan Desak | | |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 884,9332 | 884,9332 |
| M_2 (kNm) | 481,6018 | -624,7482 |
| As (mm ²) | 1427,6029 | -1851,9288 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 2,90976 | -3,77463 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As_{baru} (mm ²) | 4142,9145 | 863,3828 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 8,4442 | 1,7598 |
| Jml Pakai | 9 | 8 |
| Tul Pakai | 9D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4416 | 3925 |
| As (mm ²) | 2453 | 2453 |
| C_2 (mm) | -74,3946 | -81,4371 |
| C_2 (mm) | 94,2640 | 86,1122 |
| a (mm) | 80,1244 | 73,1954 |
| f_s' (Mpa) | 218,0937 | 181,9409 |
| f_s' pakai (Mpa) | 218,0937 | 181,9409 |
| Mn (kNm) | 1513,2789 | 1349,4768 |
| 0,8 Mn (KNm) | 1210,6231 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| t | -250218,75 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 304 DAN 474

| | | |
|----------------|-----------|----------|
| Mu (kNm) | 1344,276 | 120,224 |
| Φ | 0,8 | 0,8 |
| Mn (kNm) | 1680,3450 | 150,2800 |
| Pc (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 454,9142 | 40,6848 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 806,150 | 241,083 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 881,150 | 316,083 |
| ambil h (mm) | 1000 | 1000 |

Tulangan Desak

| | | |
|-----------------------|-------------|-------------|
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 795,4118 | -734,6532 |
| As (mm ²) | 2357,8237 | -2177,7180 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 4,80576 | -4,43866 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |

Tulangan Tarik

| | | |
|----------------------------|--------------|-------------|
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 5073,1353 | 537,5936 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 10,3401 | 1,0957 |
| Jml Pakai | 11 | 8 |
| Tul Pakai | 11D25 | 8D25 |

Kontrol Momen Mg-

| | | |
|------------------------|-------------|-------------|
| As (mm ²) | 5397 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -62,3021 | -81,4371 |
| C ₂ (mm) | 112,5600 | 86,1122 |
| a (mm) | 95,6760 | 73,1954 |
| fs' (Mpa) | 280,1706 | 181,9409 |
| fs' pakai (Mpa) | 280,1706 | 181,9409 |
| Mn (kNm) | 1837,8753 | 1349,4768 |
| 0,8 Mn (kNm) | 1470,3002 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -632906,25 | -58875 |
| c | -88312500 | -88312500 |

Tulangan Susut

| | | |
|---------------------------------|-------------|-------------|
| As | 1400 | 1400 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 10,55289639 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 305 DAN 475

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1446,625 | 192,187 |
| Ψ | 0,8 | 0,8 |
| Mn (kNm) | 1808,2813 | 240,2338 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 489,5499 | 65,0377 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 836,276 | 304,813 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 911,276 | 379,813 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 923,3481 | -644,6994 |
| As' (mm ²) | 2737,0626 | -1911,0699 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 5,57873 | -3,89517 |
| Jml Pakai | 6 | 5 |
| Tul Pakai | 6D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 5452,3743 | 804,2418 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 11,1131 | 1,6392 |
| Jml Pakai | 12 | 8 |
| Tul Pakai | 12D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5888 | 3925 |
| As' (mm ²) | 2944 | 2453 |
| C ₂ (mm) | -73,0781 | -81,4371 |
| C ₂ (mm) | 115,1545 | 86,1122 |
| a (mm) | 97,8813 | 73,1954 |
| fs' (Mpa) | 287,3765 | 181,9409 |
| fs' pakai (Mpa) | 287,3765 | 181,9409 |
| Mn (kNm) | 2002,1860 | 1349,4768 |
| 0,8 Mn (KNm) | 1601,7488 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -529875 | -58875 |
| c | -105975000 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 247 DAN 407

| | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 801,441 | 694,519 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 1001,8013 | 868,1488 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 490 | 490 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0202 | 0,0202 |
| ρ_{max} | 0,0152 | 0,0152 |
| ρ_{pakai} | 0,0076 | 0,0076 |
| m | 23,1514 | 23,1514 |
| R ₁ | 3,3878 | 3,3878 |
| b d' | 295,7091 | 256,2579 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 649,955 | 605,048 |
| d' (mm) | 60 | 60 |
| Z (mm) | 75 | 75 |
| h | 724,955 | 680,048 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,3551 | 1,3551 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 811,6306 | 811,6306 |
| M ₂ (kNm) | 190,1706 | 56,5181 |
| As' (mm ²) | 448,6744 | 133,3447 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 0,91450 | 0,27179 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0030 | 0,0030 |
| As baru (mm ²) | 2411,5687 | 2096,2389 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 4,9153 | 4,2726 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3925 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -67,7168 | -67,7168 |
| C ₂ (mm) | 103,5596 | 103,5596 |
| a (mm) | 88,0257 | 88,0257 |
| fs' (Mpa) | 252,3742 | 252,3742 |
| fs' pakai (Mpa) | 252,3742 | 252,3742 |
| Mn (kNm) | 1684,4608 | 1684,4608 |
| 0,8 Mn (KNm) | 1347,5687 | 1347,5687 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -451375 | -451375 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm ²) | 13 | 12 |
| A1 Tulangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 10,55289639 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 248 DAN 408

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 996,848 | 618,146 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 1246,0600 | 772,6825 |
| f'c (Mpa) | 24,90 | 24,00 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0269 |
| ρ max | 0,0210 | 0,0202 |
| ρ pakai | 0,0105 | 0,0101 |
| m | 18,4266 | 19,1176 |
| R ₁ | 3,6938 | 3,5603 |
| b d' | 337,3417 | 217,0302 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 694,202 | 556,815 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 769,202 | 631,815 |
| ambil h (mm) | 1000 | 1000 |
| Detail Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4241 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 852,9476 |
| M ₂ (kNm) | 361,1268 | -80,2651 |
| As' (mm ²) | 1070,4812 | -237,9284 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 2,18187 | -0,48495 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0040 |
| As baru (mm ²) | 3785,7928 | 2379,2395 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 7,7163 | 4,8494 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3925 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -81,4371 | -82,9070 |
| C ₂ (mm) | 86,1122 | 87,7574 |
| a (mm) | 73,1954 | 74,5938 |
| fs' (Mpa) | 181,9409 | 189,7784 |
| fs' pakai (Mpa) | 181,9409 | 189,7784 |
| Mn (kNm) | 1349,4768 | 1348,2821 |
| 0,8 Mn (KNm) | 1079,5815 | 1078,6257 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12138 |
| b | -58875 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 292 DAN 418

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1003,294 | 143,612 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1254,1175 | 179,5150 |
| f _c (Mpa) | 24,90 | 24,90 |
| f _y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 339,5230 | 48,5995 |
| ambil b (mm) | 750 | 750 |
| d (mm) | 672,828 | 254,557 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 747,828 | 329,557 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 948,1427 | 948,1427 |
| M ₂ (kNm) | 305,9748 | -768,6277 |
| As' (mm ²) | 906,9952 | -2278,4280 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 1,84865 | -4,64393 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 3816,2576 | 630,8345 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 7,7784 | 1,2858 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3925 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -78,7502 | -78,7502 |
| C ₂ (mm) | 83,1136 | 83,1136 |
| a (mm) | 70,6466 | 70,6466 |
| fs' (Mpa) | 166,8581 | 166,8581 |
| fs' pakai (Mpa) | 166,8581 | 166,8581 |
| Mn (kNm) | 1351,7719 | 1351,7719 |
| 0,8 Mn (KNm) | 1081,4175 | 1081,4175 |
| Kontrol | Aman | Aman |
| a | 13492,6875 | 13492,6875 |
| b | -58875 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1500 | 1500 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 11,30667471 | 11,30667471 |
| Jumlah pakai | 6 | 6 |

FRAME 272 DAN 419

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 894,394 | 359,393 |
| Φ | 0,8 | 0,8 |
| Mn (kNm) | 1117,9925 | 449,2413 |
| f_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R_1 | 3,6938 | 3,6938 |
| $b \cdot d'$ | 302,6704 | 121,6216 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 657,561 | 416,827 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 732,561 | 491,827 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 884,9332 | 884,9332 |
| M_2 (kNm) | 233,0593 | -435,6919 |
| As' (mm ²) | 690,8532 | -1291,5130 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 1,40811 | -2,63238 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As_{baru} (mm ²) | 3406,1648 | 1423,7986 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 6,9425 | 2,9020 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3925 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C_2 (mm) | -81,4371 | -81,4371 |
| C_2 (mm) | 86,1122 | 86,1122 |
| a (mm) | 73,1954 | 73,1954 |
| f_s' (Mpa) | 181,9409 | 181,9409 |
| f_s' pakai (Mpa) | 181,9409 | 181,9409 |
| Mn (kNm) | 1349,4768 | 1349,4768 |
| 0,8 Mn (kNm) | 1079,5815 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -58875 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 290 DAN 395

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1199,433 | 933,507 |
| Φ | 0,8 | 0,8 |
| Mn (kNm) | 1499,2913 | 1166,8838 |
| Pc (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R_1 | 3,6938 | 3,6938 |
| b d' | 405,8981 | 315,9065 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 761,482 | 671,785 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 836,482 | 746,785 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 884,9332 | 884,9332 |
| M_2 (kNm) | 614,3581 | 281,9506 |
| As' (mm ²) | 1821,1296 | 835,7806 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 3,71186 | 1,70350 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As_{baru} (mm ²) | 4536,4412 | 3551,0922 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 9,2462 | 7,2379 |
| Jml Pakai | 10 | 8 |
| Tul Pakai | 10D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4906 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C_2 (mm) | -68,0257 | -81,4371 |
| C_2 (mm) | 103,0894 | 86,1122 |
| a (mm) | 87,6259 | 73,1954 |
| fs' (Mpa) | 250,7884 | 181,9409 |
| fs' pakai (Mpa) | 250,7884 | 181,9409 |
| Mn (kNm) | 1676,1378 | 1349,4768 |
| 0,8 Mn (KNm) | 1340,9102 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -441562,5 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tuaiangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

FRAME 291 DAN 396

| Mu (kNm) | 1209,250 | 875,359 |
|---------------------------------|--------------|-------------|
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1511,5625 | 1094,1988 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d | 409,2203 | 296,2288 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 764,592 | 650,526 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 839,592 | 725,526 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 626,6293 | 209,2656 |
| As' (mm ²) | 1857,5050 | 620,3219 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 3,78600 | 1,26435 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 4572,8167 | 3335,6335 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 9,3204 | 6,7987 |
| Jml Pakai | 10 | 8 |
| Tul Pakai | 10D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4906 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -68,0257 | -81,4371 |
| C ₂ (mm) | 103,0894 | 86,1122 |
| a (mm) | 87,6259 | 73,1954 |
| fs' (Mpa) | 250,7884 | 181,9409 |
| fs' pakai (Mpa) | 250,7884 | 181,9409 |
| Mn (kNm) | 1676,1378 | 1349,4768 |
| 0,8 Mn (KNm) | 1340,9102 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -441562,5 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 299 DAN 382 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 978,660 | 707,350 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1223,3250 | 884,1875 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d | 331,1867 | 239,3731 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 687,840 | 584,775 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 762,840 | 659,775 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 338,3918 | -0,7457 |
| As' (mm ²) | 1003,0883 | -2,2104 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 2,04451 | -0,00451 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 3718,3999 | 2713,1012 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 7,5789 | 5,5299 |
| Jml Pakai | 9 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4416 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -74,3946 | -81,4371 |
| C ₂ (mm) | 94,2640 | 86,1122 |
| a (mm) | 80,1244 | 73,1954 |
| fs' (Mpa) | 218,0937 | 181,9409 |
| fs' pakai (Mpa) | 218,0937 | 181,9409 |
| Mn (kNm) | 1513,2789 | 1349,4768 |
| 0,8 Mn (kNm) | 1210,6231 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -250218,75 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 289 DAN 394 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1111,071 | 841,639 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1388,8388 | 1052,0488 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4268 | 18,4268 |
| R ₁ | 3,6938 | 3,6938 |
| b ^o | 375,9957 | 284,8176 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 732,896 | 637,873 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 807,896 | 712,873 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 503,9056 | 167,1156 |
| As (mm ²) | 1493,7174 | 495,3774 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 3,04452 | 1,00969 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 4209,0291 | 3210,6891 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 8,5789 | 6,5441 |
| Jml Pakai | 9 | 8 |
| Tul Pakai | 9D25 | 8D25 |
| Kontrol Momen Mg | | |
| As (mm ²) | 4416 | 3925 |
| As (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -74,3948 | -81,4371 |
| C ₂ (mm) | 94,2640 | 86,1122 |
| a (mm) | 80,1244 | 73,1954 |
| fs' (Mpa) | 218,0937 | 181,9409 |
| fs' pakai (Mpa) | 218,0937 | 181,9409 |
| Mn (kNm) | 1513,2789 | 1349,4768 |
| 0,8 Mn (KNm) | 1210,6231 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -250218,75 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 297 DAN 380 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 670,926 | 140,786 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 838,6575 | 175,9825 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 227,0469 | 47,6432 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 569,520 | 260,886 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 644,520 | 335,886 |
| ambil h (mm) | 1000 | 1000 |
| Desain Tulangan | | |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | -46,2757 | -708,9507 |
| As' (mm ²) | -137,1741 | -2101,5286 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | -0,27959 | -4,28337 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tank | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 2578,1376 | 613,7830 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 5,2548 | 1,2510 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3925 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -81,4371 | -81,4371 |
| C ₂ (mm) | 86,1122 | 86,1122 |
| a (mm) | 73,1954 | 73,1954 |
| fs' (Mpa) | 181,9409 | 181,9409 |
| fs' pakai (Mpa) | 181,9409 | 181,9409 |
| Mn (kNm) | 1349,4768 | 1349,4768 |
| 0,8 Mn (kNm) | 1079,5815 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -58875 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

| FRAME 298 DAN 381 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 846,111 | 507,270 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1057,6388 | 634,0875 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 286,3310 | 171,6644 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 639,566 | 495,212 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 714,566 | 570,212 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 172,7056 | -250,8457 |
| As' (mm ²) | 511,9478 | -743,5769 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 1,04346 | -1,51557 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| p baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 3227,2594 | 1971,7347 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 6,5779 | 4,0188 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3925 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -81,4371 | -81,4371 |
| C ₂ (mm) | 86,1122 | 86,1122 |
| a (mm) | 73,1954 | 73,1954 |
| fs' (Mpa) | 181,9409 | 181,9409 |
| fs' pakai (Mpa) | 181,9409 | 181,9409 |
| Mn (kNm) | 1349,4768 | 1349,4768 |
| 0,8 Mn (kNm) | 1079,5815 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -58875 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tuulangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |



LAMPIRAN

TABEL PERHITUNGAN

TULANGAN BALOK INDUK TENGAH

FRAME 550 DAN 660

| | | |
|---------------------------------|--------------|--------------|
| Mu (kNm) | 2170,432 | 1185,623 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2713,0400 | 1482,0288 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 734,4923 | 401,2247 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 1024,341 | 757,085 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1099,341 | 832,085 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1828,1068 | 597,0956 |
| As' (mm ²) | 5419,0213 | 1769,9587 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 11,04514 | 3,60756 |
| Jml Pakai | 11 | 5 |
| Tul Pakai | 11D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 8134,3329 | 4485,2704 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 16,5795 | 9,1420 |
| Jml Pakai | 17 | 10 |
| Tul Pakai | 17D25 | 10D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 8341 | 4906 |
| As' (mm ²) | 5397 | 2453 |
| C ₂ (mm) | -123,6265 | -68,0257 |
| C ₂ (mm) | 124,7953 | 103,0894 |
| a (mm) | 106,0760 | 87,6259 |
| fs' (Mpa) | 311,5275 | 250,7884 |
| fs' pakai (Mpa) | 311,5275 | 250,7884 |
| Mn (kNn.i) | 2824,6511 | 1676,1378 |
| 0,8 Mn (KNm) | 2259,7209 | 1340,9102 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -14718,75 | -441562,5 |
| c | -194287500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 554 DAN 659

| | | |
|---------------------------------|--------------|--------------|
| Mu (kNm) | 1654,386 | 1547,378 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 2067,9825 | 1934,2225 |
| f_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R_1 | 3,6938 | 3,6938 |
| $b \cdot d'$ | 559,8580 | 523,6456 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 894,314 | 864,908 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 969,314 | 939,908 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 884,9332 | 884,9332 |
| M_2 (kNm) | 1183,0493 | 1049,2893 |
| A_s (mm ²) | 3506,8900 | 3110,3878 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 7,14780 | 6,33964 |
| Jml Pakai | 8 | 7 |
| Tul Pakai | 8D25 | 7D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| A_s baru (mm ²) | 6222,2016 | 5825,6994 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 12,6822 | 11,8740 |
| Jml Pakai | 13 | 12 |
| Tul Pakai | 13D25 | 12D25 |
| Kontrol Momen Mg- | | |
| A_s (mm ²) | 6378 | 5888 |
| A_s' (mm ²) | 3925 | 3434 |
| C_2 (mm) | -100,7972 | -90,1748 |
| C_2 (mm) | 111,3163 | 108,8754 |
| a (mm) | 94,6188 | 92,5441 |
| f_s' (Mpa) | 276,5971 | 269,3468 |
| f_s' pakai (Mpa) | 276,5971 | 269,3468 |
| Mn (kNm) | 2169,4505 | 2004,9703 |
| 0,8 Mn (KNm) | 1735,5604 | 1603,9763 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -132468,75 | -235500 |
| c | -141300000 | -123637500 |
| Tulangan Susut | | |
| A_s | 1400 | 1400 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 10,55289639 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 552 DAN 669 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1921,715 | 367,985 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2402,1438 | 459,9813 |
| f_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 490 | 490 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0202 | 0,0202 |
| ρ_{max} | 0,0152 | 0,0152 |
| ρ_{pakai} | 0,0076 | 0,0076 |
| m | 23,1514 | 23,1514 |
| R_1 | 3,3878 | 3,3878 |
| $b \cdot d'$ | 709,0585 | 135,7761 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 1006,450 | 440,415 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1081,450 | 515,415 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R_2 | 1,3551 | 1,3551 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 811,6306 | 811,6306 |
| M_2 (kNm) | 1590,5131 | -351,6494 |
| A_s' (mm ²) | 3752,5378 | -829,6552 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 7,64848 | -1,69102 |
| Jml Pakai | 8 | 5 |
| Tul Pakai | 8D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0030 | 0,0030 |
| A_s baru (mm ²) | 5715,4320 | 1133,2391 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 11,6493 | 2,3098 |
| Jml Pakai | 12 | 8 |
| Tul Pakai | 12D25 | 8D25 |
| Kontrol Momen Mg- | | |
| A_s (mm ²) | 5888 | 3925 |
| A_s' (mm ²) | 3925 | 2453 |
| C_2 (mm) | -86,9570 | -67,7168 |
| C_2 (mm) | 129,0334 | 103,5596 |
| a (mm) | 109,6784 | 88,0257 |
| f_s' (Mpa) | 321,0025 | 252,3742 |
| f_s' pakai (Mpa) | 321,0025 | 252,3742 |
| Mn (kNm) | 2503,8029 | 1684,4608 |
| 0,8 Mn (KNm) | 2003,0423 | 1347,5687 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -529875 | -451375 |
| c | -141300000 | -88312500 |
| Tulangan Susut | | |
| A_s | 1400 | 1400 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 10,55289639 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 553 DAN 658 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1824,349 | 806,007 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 2280,4363 | 1007,5088 |
| f _c (Mpa) | 24,90 | 24,00 |
| f _y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0269 |
| ρ_{max} | 0,0210 | 0,0202 |
| ρ_{pakai} | 0,0105 | 0,0101 |
| m | 18,4266 | 19,1176 |
| R ₁ | 3,6938 | 3,5603 |
| b _a | 617,3749 | 282,9880 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 939,129 | 635,821 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1014,129 | 710,821 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4241 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 852,9476 |
| M ₂ (kNm) | 1395,5031 | 154,5611 |
| As' (mm ²) | 4136,6624 | 458,1625 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 8,43141 | 0,93383 |
| Jml Pakai | 9 | 5 |
| Tul Pakai | 9D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0040 |
| As baru (mm ²) | 6851,9741 | 3075,3303 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 13,9658 | 6,2682 |
| Jml Pakai | 14 | 8 |
| Tul Pakai | 14D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 6869 | 3925 |
| As' (mm ²) | 4416 | 2453 |
| C ₂ (mm) | -111,1890 | -82,9070 |
| C ₂ (mm) | 113,5266 | 87,7574 |
| a (mm) | 96,4976 | 74,5938 |
| fs' (Mpa) | 282,8937 | 189,7784 |
| fs' pakai (Mpa) | 282,8937 | 189,7784 |
| Mn (kNm) | 2333,9730 | 1348,2821 |
| 0,8 Mn (KNm) | 1867,1784 | 1078,6257 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12138 |
| b | -29437,5 | -58875 |
| c | -158962500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 558 DAN 667

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1692,111 | 112,836 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2115,1388 | 141,0450 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 572,6244 | 38,1846 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 904,453 | 233,558 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 979,453 | 308,558 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1230,2056 | -743,8882 |
| As' (mm ²) | 3646,6743 | -2205,0931 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 7,43271 | -4,49446 |
| Jml Pakai | 8 | 5 |
| Tul Pakai | 8D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 6361,9859 | 510,2185 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 12,9671 | 1,0399 |
| Jml Pakai | 13 | 8 |
| Tul Pakai | 13D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 6378 | 3925 |
| As' (mm ²) | 3925 | 2453 |
| C ₂ (mm) | -100,7972 | -81,4371 |
| C ₂ (mm) | 111,3163 | 86,1122 |
| a (mm) | 94,6188 | 73,1954 |
| fs' (Mpa) | 276,5971 | 181,9409 |
| fs' pakai (Mpa) | 276,5971 | 181,9409 |
| Mn (kNm) | 2169,4505 | 1349,4768 |
| 0,8 Mn (KNm) | 1735,5604 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -132468,75 | -58875 |
| c | -141300000 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

FRAME 559 DAN 668

| | | |
|----------------|-----------|----------|
| Mu (kNm) | 2057,595 | 172,891 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2571,9938 | 216,1138 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 696,3073 | 58,5078 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 997,359 | 289,106 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1072,359 | 364,106 |
| ambil h (mm) | 1000 | 1000 |

Tulangan Desak

| | | |
|------------------------|--------------|-------------|
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1687,0606 | -668,8194 |
| As' (mm ²) | 5000,9206 | -1982,5683 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 10,19296 | -4,04090 |
| Jml Pakai | 10 | 5 |
| Tul Pakai | 10D25 | 5D25 |

Tulangan Tarik

| | | |
|----------------------------|--------------|-------------|
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 7716,2323 | 732,7433 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 15,7274 | 1,4935 |
| Jml Pakai | 16 | 8 |
| Tul Pakai | 16D25 | 8D25 |

Kontrol Momen Mg-

| | | |
|------------------------|-------------|-------------|
| As (mm ²) | 7850 | 3925 |
| As' (mm ²) | 4906 | 2453 |
| C ₂ (mm) | -113,8462 | -81,4371 |
| C ₂ (mm) | 123,1965 | 86,1122 |
| a (mm) | 104,7170 | 73,1954 |
| fs' (Mpa) | 307,7839 | 181,9409 |
| fs' pakai (Mpa) | 307,7839 | 181,9409 |
| Mn (kNm) | 2660,0528 | 1349,4768 |
| 0,8 Mn (kNm) | 2128,0422 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -117750 | -58875 |
| c | -176625000 | -88312500 |

Tulangan Susut

| | | |
|--------------------------------|-------------|-------------|
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tulangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 556 DAN 671

| | | |
|---------------------------------|--------------|-------------|
| Mu (kNm) | 1915,511 | 141,518 |
| Φ | 0,8 | 0,8 |
| Mn (kNm) | 2394,3888 | 176,8975 |
| Pc (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 648,2249 | 47,8909 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 962,307 | 261,564 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1037,307 | 336,564 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1509,4556 | -708,0357 |
| As' (mm ²) | 4474,4496 | -2098,8163 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 9,11990 | -4,27784 |
| Jml Pakai | 10 | 5 |
| Tul Pakai | 10D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 7189,7612 | 616,4953 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 14,6543 | 1,2566 |
| Jml Pakai | 15 | 8 |
| Tul Pakai | 15D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 7359 | 3925 |
| As' (mm ²) | 4906 | 2453 |
| C ₂ (mm) | -121,3871 | -81,4371 |
| C ₂ (mm) | 115,5432 | 86,1122 |
| a (mm) | 98,2117 | 73,1954 |
| fs' (Mpa) | 288,4282 | 181,9409 |
| fs' pakai (Mpa) | 288,4282 | 181,9409 |
| Mn (kNm) | 2498,5367 | 1349,4768 |
| 0,8 Mn (kNm) | 1998,8294 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | 73593,75 | -58875 |
| c | -176625000 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

FRAME 557 DAN 672

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 2150,296 | 61,494 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2687,8700 | 76,8675 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 727,6781 | 20,8101 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 1019,578 | 172,420 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 1094,578 | 247,420 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1802,9368 | -808,0657 |
| As' (mm ²) | 5344,4103 | -2395,3333 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 10,89307 | -4,88221 |
| Jml Pakai | 11 | 5 |
| Tul Pakai | 11D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 8059,7220 | 319,9784 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 16,4275 | 0,6522 |
| Jml Pakai | 17 | 8 |
| Tul Pakai | 17D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 8341 | 3925 |
| As' (mm ²) | 5397 | 2453 |
| C ₂ (mm) | -123,6265 | -81,4371 |
| C ₂ (mm) | 124,7953 | 86,1122 |
| a (mm) | 106,0760 | 73,1954 |
| fs' (Mpa) | 311,5275 | 181,9409 |
| fs' pakai (Mpa) | 311,5275 | 181,9409 |
| Mn (kNm) | 2824,6511 | 1349,4768 |
| 0,8 Mn (KNm) | 2259,7209 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -14718,75 | -58875 |
| c | -194287500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 611 DAN 674 | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 1125,446 | 131,673 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1406,8075 | 164,5913 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 380,8603 | 44,5592 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 737,622 | 252,302 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 812,622 | 327,302 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 521,8743 | -720,3419 |
| As' (mm ²) | 1546,9819 | -2135,2955 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 3,15308 | -4,35219 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tank | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 4262,2935 | 580,0162 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 8,6875 | 1,1822 |
| Jml Pakai | 9 | 8 |
| Tul Pakai | 9D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4416 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -74,3946 | -81,4371 |
| C ₂ (mm) | 94,2640 | 86,1122 |
| a (mm) | 80,1244 | 73,1954 |
| fs' (Mpa) | 218,0937 | 181,9409 |
| fs' pakai (Mpa) | 218,0937 | 181,9409 |
| Mn (kNm) | 1513,2789 | 1349,4768 |
| 0,8 Mn (kNm) | 1210,6231 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -250218,75 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tulangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 612 DAN 675 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1535,208 | 490,541 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1919,0100 | 613,1763 |
| f'c (Mpa) | 24,90 | 24,90 |
| f'y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 519,5272 | 166,0032 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 861,500 | 486,978 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 936,500 | 561,978 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1034,0768 | -271,7569 |
| As' (mm ²) | 3065,2937 | -805,5637 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 6,24773 | -1,64191 |
| Jml Pakai | 7 | 5 |
| Tul Pakai | 7D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 5780,6053 | 1909,7479 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 11,7821 | 3,8925 |
| Jml Pakai | 12 | 8 |
| Tul Pakai | 12D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5888 | 3925 |
| As' (mm ²) | 3434 | 2453 |
| C ₂ (mm) | -90,1748 | -81,4371 |
| C ₂ (mm) | 108,8754 | 86,1122 |
| a (mm) | 92,5441 | 73,1954 |
| f's' (Mpa) | 269,3468 | 181,9409 |
| f's' pakai (Mpa) | 269,3468 | 181,9409 |
| Mn (kNm) | 2004,9703 | 1349,4768 |
| 0,8 Mn (kNm) | 1603,9763 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -235500 | -58875 |
| c | -123637500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 608 DAN 680 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1542,101 | 242,867 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1927,6263 | 303,5838 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 521,8598 | 82,1882 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 863,432 | 342,654 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 938,432 | 417,654 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1042,6931 | -581,3494 |
| As' (mm ²) | 3090,8347 | -1723,2827 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 6,29979 | -3,51242 |
| Jml Pakai | 7 | 5 |
| Tul Pakai | 7D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 5806,1463 | 992,0289 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 11,8342 | 2,0220 |
| Jml Pakai | 12 | 8 |
| Tul Pakai | 12D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5888 | 3925 |
| As' (mm ²) | 3434 | 2453 |
| C ₂ (mm) | -90,1748 | -81,4371 |
| C ₂ (mm) | 108,8754 | 86,1122 |
| a (mm) | 92,5441 | 73,1954 |
| fs' (Mpa) | 269,3468 | 181,9409 |
| fs' pakai (Mpa) | 269,3468 | 181,9409 |
| Mn (kNm) | 2004,9703 | 1349,4768 |
| 0,8 Mn (kNm) | 1603,9763 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -235500 | -58875 |
| c | -123637500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

| FRAME 609 DAN 681 | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 1265,045 | 206,098 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1581,3063 | 257,6225 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 428,1018 | 69,7453 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 782,032 | 315,652 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 857,032 | 390,652 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 696,3731 | -627,3107 |
| As' (mm ²) | 2064,2451 | -1859,5247 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 4,20738 | -3,79011 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 4779,5567 | 855,7869 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 9,7418 | 1,7443 |
| Jml Pakai | 10 | 8 |
| Tul Pakai | 10D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4906 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -68,0257 | -81,4371 |
| C ₂ (mm) | 103,0894 | 86,1122 |
| a (mm) | 87,6259 | 73,1954 |
| fs' (Mpa) | 250,7884 | 181,9409 |
| fs' pakai (Mpa) | 250,7884 | 181,9409 |
| Mn (kNm) | 1676,1378 | 1349,4768 |
| 0,8 Mn (kNm) | 1340,9102 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -441562,5 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tulangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 603 DAN 683 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1554,696 | 123,174 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1943,3700 | 153,9675 |
| f_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R_1 | 3,6938 | 3,6938 |
| $b \cdot d'$ | 526,1221 | 41,6831 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 866,950 | 244,023 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 941,950 | 319,023 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 884,9332 | 884,9332 |
| M_2 (kNm) | 1058,4368 | -730,9657 |
| As' (mm ²) | 3137,5036 | -2166,7872 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 6,39491 | -4,41638 |
| Jml Pakai | 7 | 5 |
| Tul Pakai | 7D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As_{baru} (mm ²) | 5852,8152 | 548,5244 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 11,9293 | 1,1180 |
| Jml Pakai | 12 | 8 |
| Tul Pakai | 12D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5888 | 3925 |
| As' (mm ²) | 3434 | 2453 |
| C_2 (mm) | -90,1748 | -81,4371 |
| C_2 (mm) | 108,8754 | 86,1122 |
| a (mm) | 92,5441 | 73,1954 |
| fs' (Mpa) | 269,3468 | 181,9409 |
| fs' pakai (Mpa) | 269,3468 | 181,9409 |
| Mn (kNm) | 2004,9703 | 1349,4768 |
| 0,8 Mn (kNm) | 1603,9763 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -235500 | -58875 |
| c | -123637500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 10,55289639 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 604 DAN 684 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1678,545 | 202,202 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 2098,1813 | 252,7525 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 568,0336 | 68,4268 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 900,820 | 312,654 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 975,820 | 387,654 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 1213,2481 | -632,1807 |
| As' (mm ²) | 3596,4075 | -1873,9608 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 7,33026 | -3,81954 |
| Jml Pakai | 8 | 5 |
| Tul Pakai | 8D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 6311,7191 | 841,3508 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 12,8647 | 1,7149 |
| Jml Pakai | 13 | 8 |
| Tul Pakai | 13D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 6378 | 3925 |
| As' (mm ²) | 3925 | 2453 |
| C ₂ (mm) | -100,7972 | -81,4371 |
| C ₂ (mm) | 111,3163 | 86,1122 |
| a (mm) | 94,6188 | 73,1954 |
| fs' (Mpa) | 276,5971 | 181,9409 |
| fs' pakai (Mpa) | 276,5971 | 181,9409 |
| Mn (kNm) | 2169,4505 | 1349,4768 |
| 0,8 Mn (KNm) | 1735,5604 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -132468,75 | -58875 |
| c | -141300000 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

FRAME 580 DAN 650

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 985,214 | 824,134 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1231,5175 | 1030,1675 |
| f'_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 490 | 490 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0202 | 0,0202 |
| ρ_{max} | 0,0152 | 0,0152 |
| ρ_{pakai} | 0,0076 | 0,0076 |
| m | 23,1514 | 23,1514 |
| R_1 | 3,3878 | 3,3878 |
| $b d'$ | 363,5161 | 304,0821 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 720,631 | 659,093 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 795,631 | 734,093 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| V | 0,4 | 0,4 |
| R_2 | 1,3551 | 1,3551 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 811,6306 | 811,6306 |
| M_2 (kNm) | 419,8869 | 218,5369 |
| A_s (mm ²) | 990,6497 | 515,5996 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 2,01916 | 1,05090 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0030 | 0,0030 |
| A_s baru (mm ²) | 2953,5440 | 2478,4939 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 6,0200 | 5,0517 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg | | |
| A_s (mm ²) | 3925 | 3925 |
| A_s' (mm ²) | 2453 | 2453 |
| C_2 (mm) | -67,7168 | -67,7168 |
| C_2 (mm) | 103,5596 | 103,5596 |
| a (mm) | 88,0257 | 88,0257 |
| f_s' (Mpa) | 252,3742 | 252,3742 |
| f_s' pakai (Mpa) | 252,3742 | 252,3742 |
| Mn (kNm) | 1684,4608 | 1684,4608 |
| 0,8 Mn (KNm) | 1347,5687 | 1347,5687 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -451375 | -451375 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| A_s | 1400 | 1400 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 10,55289639 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 581 DAN 651 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1332,388 | 647,609 |
| Φ | 0,8 | 0,8 |
| Mn (kNm) | 1665,4850 | 809,5113 |
| f'c (Mpa) | 24,90 | 24,00 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0269 |
| ρ max | 0,0210 | 0,0202 |
| ρ pakai | 0,0105 | 0,0101 |
| m | 18,4266 | 19,1176 |
| R ₁ | 3,6938 | 3,5603 |
| b d' | 450,8912 | 227,3746 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 802,577 | 569,931 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 877,577 | 644,931 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4241 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 852,9476 |
| M ₂ (kNm) | 780,5518 | -43,4364 |
| As' (mm ²) | 2313,7745 | -128,7576 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 4,71597 | -0,26244 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0040 |
| As baru (mm ²) | 5029,0861 | 2488,4102 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 10,2504 | 5,0719 |
| Jml Pakai | 11 | 8 |
| Tul Pakai | 11D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5397 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -62,3021 | -82,9070 |
| C ₂ (mm) | 112,5600 | 87,7574 |
| a (mm) | 95,6760 | 74,5938 |
| fs' (Mpa) | 280,1706 | 189,7784 |
| fs' pakai (Mpa) | 280,1706 | 189,7784 |
| Mn (kNm) | 1837,8753 | 1348,2821 |
| 0,8 Mn (KNm) | 1470,3002 | 1078,6257 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12138 |
| b | -632906,25 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 595 DAN 656 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1160,419 | 118,995 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 1450,5238 | 148,7438 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| ρ d' | 392,6954 | 40,2689 |
| ambil b (mm) | 750 | 750 |
| d (mm) | 723,598 | 231,715 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 798,598 | 306,715 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 948,1427 | 948,1427 |
| M ₂ (kNm) | 502,3811 | -799,3989 |
| As' (mm ²) | 1489,1984 | -2369,6426 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 3,03531 | -4,82984 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 4398,4608 | 539,6198 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 8,9650 | 1,0999 |
| Jml Pakai | 9 | 8 |
| Tul Pakai | 9D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4416 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -72,1597 | -78,7502 |
| C ₂ (mm) | 90,7045 | 83,1136 |
| a (mm) | 77,0988 | 70,6466 |
| fs' (Mpa) | 203,1068 | 166,8581 |
| fs' pakai (Mpa) | 203,1068 | 166,8581 |
| Mn (kNm) | 1515,8633 | 1351,7719 |
| 0,8 Mn (KNm) | 1212,6907 | 1081,4175 |
| Kontrol | Aman | Aman |
| a | 13492,6875 | 13492,6875 |
| b | -250218,75 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1500 | 1500 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 11,30667471 | 11,30667471 |
| Jumlah pakai | 6 | 6 |

| FRAME 584 DAN 657 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1046,066 | 356,365 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1307,5825 | 445,4563 |
| f _c (Mpa) | 24,90 | 24,90 |
| f _y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| ϕd | 353,9974 | 120,5969 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 711,133 | 415,068 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 786,133 | 490,068 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 422,6493 | -439,4769 |
| As' (mm ²) | 1252,8511 | -1302,7328 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 2,55358 | -2,65525 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 3968,1628 | 1412,5788 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 8,0880 | 2,8791 |
| Jml Pakai | 9 | 8 |
| Tul Pakai | 9D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4416 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -74,3946 | -81,4371 |
| C ₂ (mm) | 94,2640 | 86,1122 |
| a (mm) | 80,1244 | 73,1954 |
| fs' (Mpa) | 218,0937 | 181,9409 |
| fs' pakai (Mpa) | 218,0937 | 181,9409 |
| Mn (kNm) | 1513,2789 | 1349,4768 |
| 0,8 Mn (kNm) | 1210,6231 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -250218,75 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 593 DAN 646 | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 1347,090 | 1035,126 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1683,8625 | 1293,9075 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 455,8665 | 350,2953 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 806,993 | 707,405 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 881,993 | 782,405 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 798,9293 | 408,9743 |
| As' (mm ²) | 2368,2506 | 1212,3146 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 4,82701 | 2,47096 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 5083,5622 | 3927,6262 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 10,3614 | 8,0054 |
| Jml Pakai | 11 | 9 |
| Tul Pakai | 11D25 | 9D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5397 | 4416 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -62,3021 | -74,3946 |
| C ₂ (mm) | 112,5600 | 94,2640 |
| a (mm) | 95,6760 | 80,1244 |
| fs' (Mpa) | 280,1706 | 218,0937 |
| fs' pakai (Mpa) | 280,1706 | 218,0937 |
| Mn (kNm) | 1837,8753 | 1513,2789 |
| 0,8 Mn (KNm) | 1470,3002 | 1210,6231 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -632906,25 | -250218,75 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tulangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

| FRAME 594 DAN 647 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1367,691 | 1106,505 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 1709,6138 | 1383,1313 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 462,8380 | 374,4505 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 813,140 | 731,389 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 888,140 | 806,389 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 824,6806 | 498,1981 |
| As' (mm ²) | 2444,5845 | 1476,7988 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 4,98259 | 3,01004 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 5159,8961 | 4192,1104 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 10,5170 | 8,5444 |
| Jml Pakai | 11 | 9 |
| Tul Pakai | 11D25 | 9D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 5397 | 4416 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -62,3021 | -74,3946 |
| C ₂ (mm) | 112,5600 | 94,2640 |
| a (mm) | 95,6760 | 80,1244 |
| fs' (Mpa) | 280,1706 | 218,0937 |
| fs' pakai (Mpa) | 280,1706 | 218,0937 |
| Mn (kNm) | 1837,8753 | 1513,2789 |
| 0,8 Mn (KNm) | 1470,3002 | 1210,6231 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -632906,25 | -250218,75 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 600 DAN 640 | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 1104,961 | 847,222 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1381,2013 | 1059,0275 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b' ^a | 373,9280 | 286,7070 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 730,878 | 639,985 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 805,878 | 714,985 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 496,2681 | 174,0943 |
| As' (mm ²) | 1471,0777 | 516,0644 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 2,99838 | 1,05185 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tank | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 4186,3894 | 3231,3760 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 8,5328 | 6,5862 |
| Jml Pakai | 9 | 8 |
| Tul Pakai | 9D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4416 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -74,3946 | -81,4371 |
| C ₂ (mm) | 94,2640 | 86,1122 |
| a (mm) | 80,1244 | 73,1954 |
| fs' (Mpa) | 218,0937 | 181,9409 |
| fs' pakai (Mpa) | 218,0937 | 181,9409 |
| Mn (kNm) | 1513,2789 | 1349,4768 |
| 0,8 Mn (KNm) | 1210,6231 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -250218,75 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tulangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 592 DAN 645 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1235,062 | 946,377 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1543,8275 | 1182,9713 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 417,9553 | 320,2619 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 772,709 | 676,400 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 847,709 | 751,400 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 658,8943 | 298,0381 |
| As' (mm ²) | 1953,1476 | 883,4684 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 3,98094 | 1,80070 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 4668,4592 | 3598,7801 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 9,5153 | 7,3351 |
| Jml Pakai | 10 | 8 |
| Tul Pakai | 10D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4906 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -68,0257 | -81,4371 |
| C ₂ (mm) | 103,0894 | 86,1122 |
| a (mm) | 87,6259 | 73,1954 |
| fs' (Mpa) | 250,7884 | 181,9409 |
| fs' pakai (Mpa) | 250,7884 | 181,9409 |
| Mn (kNm) | 1676,1378 | 1349,4768 |
| 0,8 Mn (kNm) | 1340,9102 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -441562,5 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

| FRAME 598 DAN 638 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1032,289 | 203,025 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1290,3613 | 253,7813 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b ^a | 349,3352 | 68,7053 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 706,435 | 313,290 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 781,435 | 388,290 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M ₁ (kNm) | 884,9332 | 884,9332 |
| M ₂ (kNm) | 405,4281 | -631,1519 |
| As' (mm ²) | 1201,8025 | -1870,9113 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 2,44953 | -3,81332 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 3917,1141 | 844,4003 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 7,9839 | 1,7211 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3925 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C ₂ (mm) | -81,4371 | -81,4371 |
| C ₂ (mm) | 86,1122 | 86,1122 |
| a (mm) | 73,1954 | 73,1954 |
| fs' (Mpa) | 181,9409 | 181,9409 |
| fs' pakai (Mpa) | 181,9409 | 181,9409 |
| Mn (kNm) | 1349,4768 | 1349,4768 |
| 0,8 Mn (KNm) | 1079,5815 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -58875 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 10,55289639 | 10,55289639 |
| Jumlah pakai | 6 | 6 |

| FRAME 599 DAN 639 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 1011,681 | 710,794 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 1264,6013 | 888,4925 |
| f'_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R_1 | 3,6938 | 3,6938 |
| $b \cdot d'$ | 342,3613 | 240,5386 |
| ambil b (mm) | 700 | 700 |
| d (mm) | 699,348 | 586,197 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 774,348 | 661,197 |
| ambil h (mm) | 1000 | 1000 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4775 |
| d (mm) | 925 | 925 |
| M_1 (kNm) | 884,9332 | 884,9332 |
| M_2 (kNm) | 379,6681 | 3,5593 |
| As (mm ²) | 1125,4426 | 10,5508 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml Tulangan | 2,29390 | 0,02150 |
| Jml Pakai | 5 | 5 |
| Tul Pakai | 5D25 | 5D25 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 3840,7543 | 2725,8625 |
| Pakai tulangan D | 25 | 25 |
| A (mm ²) | 491 | 491 |
| Jml tulangan | 7,8283 | 5,5559 |
| Jml Pakai | 8 | 8 |
| Tul Pakai | 8D25 | 8D25 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3925 | 3925 |
| As' (mm ²) | 2453 | 2453 |
| C_2 (mm) | -81,4371 | -81,4371 |
| C_2 (mm) | 86,1122 | 86,1122 |
| a (mm) | 73,1954 | 73,1954 |
| f_s' (Mpa) | 181,9409 | 181,9409 |
| f_s' pakai (Mpa) | 181,9409 | 181,9409 |
| Mn (kNm) | 1349,4768 | 1349,4768 |
| 0,8 Mn (KNm) | 1079,5815 | 1079,5815 |
| Kontrol | Aman | Aman |
| a | 12593,175 | 12593,175 |
| b | -58875 | -58875 |
| c | -88312500 | -88312500 |
| Tulangan Susut | | |
| As | 1400 | 1400 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 12,38499646 | 12,38499646 |
| Jumlah pakai | 6 | 6 |

LAMPIRAN
TABEL PERHITUNGAN
TULANGAN BALOK LINTANG



BALOK LINTANG STRUKTUR ATAS

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 663,998 | 394,718 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 829,9975 | 493,3973 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 224,7024 | 133,5758 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 749,504 | 577,875 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 824,504 | 652,875 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | 519,3521 | 182,7518 |
| As' (mm ²) | 2002,5142 | 704,6532 |
| Pakai tulangan D | 22 | 22 |
| A (mm ²) | 380 | 380 |
| Jml Tulangan | 5,27061 | 1,85464 |
| Jml Pakai | 6 | 4 |
| Tul Pakai | 6D22 | 4D22 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 3218,6384 | 1920,7774 |
| Pakai tulangan D | 22 | 22 |
| A (mm ²) | 380 | 380 |
| Jml tulangan | 8,4714 | 5,0555 |
| Jml Pakai | 9 | 6 |
| Tul Pakai | 9D22 | 6D22 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 3419 | 2280 |
| As' (mm ²) | 2280 | 1520 |
| C ₂ (mm) | -109,1936 | -88,7930 |
| C ₂ (mm) | 104,4418 | 85,6252 |
| a (mm) | 88,7755 | 72,7814 |
| fs' (Mpa) | 255,3104 | 179,5628 |
| fs' pakai (Mpa) | 255,3104 | 179,5628 |
| Mn (kNm) | 898,5707 | 605,7719 |
| 0,8 Mn (KNm) | 718,8566 | 484,6175 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 34194,6 | 22796,4 |
| c | -82067040 | -54711360 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| BALOK LINTANG STRUKTUR ATAS | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 883,727 | 546,214 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 1104,6588 | 682,7676 |
| Fc (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 299,0606 | 184,8434 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 864,668 | 679,786 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 939,668 | 754,786 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| v | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | 794,0133 | 372,1222 |
| As (mm ²) | 3061,5512 | 1434,8263 |
| Pakai tulangan D | 22 | 22 |
| A (mm ²) | 380 | 380 |
| Jml Tulangan | 8,05799 | 3,77645 |
| Jml Pakai | 8 | 4 |
| Tul Pakai | 8D22 | 4D22 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 4277,6754 | 2650,9504 |
| Pakai tulangan D | 22 | 22 |
| A (mm ²) | 380 | 380 |
| Jml tulangan | 11,2588 | 6,9773 |
| Jml Pakai | 12 | 7 |
| Tul Pakai | 12D22 | 7D22 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 4559 | 2660 |
| As' (mm ²) | 3040 | 1520 |
| C ₂ (mm) | -126,5205 | -78,9172 |
| C ₂ (mm) | 120,1848 | 96,3405 |
| a (mm) | 102,1570 | 81,8894 |
| fs' (Mpa) | 300,4612 | 226,3254 |
| fs' pakai (Mpa) | 300,4612 | 226,3254 |
| Mn (kNm) | 1190,1651 | 702,9726 |
| 0,8 Mn (KNm) | 952,1321 | 562,3781 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 45592,8 | -125380,2 |
| c | -109422720 | -54711360 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 4,824181208 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

BALOK LINTANG STRUKTUR BAWAH

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 216,8254387 | 105,1677257 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 271,0318 | 131,4597 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| $\rho_{\sigma'}$ | 73,3755 | 35,5896 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 428,298 | 298,285 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 503,298 | 373,285 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| v | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -39,6136 | -179,1858 |
| As' (mm ²) | -152,7420 | -690,9033 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -0,53899 | -2,43804 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D22 | 4D22 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 1063,3821 | 525,2208 |
| Pakai tulangan D | 22 | 22 |
| A (mm ²) | 380 | 380 |
| Jml tulangan | 2,7988 | 1,3824 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D22 | 6D22 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 2280 | 2280 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -62,1738 | -62,1738 |
| C ₂ (mm) | 91,2084 | 91,2084 |
| a (mm) | 77,5271 | 77,5271 |
| fs' (Mpa) | 205,2994 | 205,2994 |
| fs' pakai (Mpa) | 205,2994 | 205,2994 |
| Mn (kNm) | 605,1631 | 605,1631 |
| 0,8 Mn (KNm) | 484,1304 | 484,1304 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | -208935,6 | -208935,6 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |



FRAME 1448 DAN 1457

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 121,107 | 93,723 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 151,3838 | 117,1538 |
| f _c (Mpa) | 24,90 | 24,90 |
| f _y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 40,9836 | 31,7166 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 320,092 | 281,588 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 395,092 | 356,588 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -159,2617 | -193,4917 |
| As' (mm ²) | -614,0801 | -746,0639 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -2,16695 | -2,63269 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 602,0440 | 470,0602 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 2,1245 | 1,6587 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| f _s ' (Mpa) | 114,3823 | 114,3823 |
| f _s ' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (kNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 4,824181208 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

FRAME 1447 DAN 1456

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 156,379 | 43,898 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 195,4738 | 54,8725 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 52,9200 | 14,8554 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 363,731 | 192,714 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 438,731 | 267,714 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -115,1717 | -255,7729 |
| As' (mm ²) | -444,0782 | -986,2076 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -1,56705 | -3,48010 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 772,0459 | 229,9166 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 2,7244 | 0,8113 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (KNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

FRAME 1443 DAN 1459

| | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 87,156 | 9,854 |
| Φ | 0,8 | 0,8 |
| Mn (kNm) | 108,9450 | 12,3175 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 490 | 490 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0202 | 0,0202 |
| ρ_{max} | 0,0152 | 0,0152 |
| ρ_{pakai} | 0,0076 | 0,0076 |
| m | 23,1514 | 23,1514 |
| R ₁ | 3,3878 | 3,3878 |
| b d' | 32,1581 | 3,6358 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 283,541 | 95,339 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 358,541 | 170,339 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| V | 0,4 | 0,4 |
| R ₂ | 1,3551 | 1,3551 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 284,9134 | 284,9134 |
| M ₂ (kNm) | -175,9684 | -272,5959 |
| As' (mm ²) | -540,0289 | -836,5687 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -1,90564 | -2,95206 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0030 | 0,0030 |
| As baru (mm ²) | 339,1052 | 42,5654 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 1,1966 | 0,1502 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -65,4188 | -65,4188 |
| C ₂ (mm) | 86,6842 | 86,6842 |
| a (mm) | 73,6815 | 73,6815 |
| fs' (Mpa) | 184,6992 | 184,6992 |
| fs' pakai (Mpa) | 184,6992 | 184,6992 |
| Mn (kNm) | 568,4925 | 568,4925 |
| 0,8 Mn (KNm) | 454,7940 | 454,7940 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | -153027,9 | -153027,9 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 4,824181208 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1449 DAN 1458 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 87,071 | 93,723 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 108,8388 | 117,1538 |
| f'c (Mpa) | 24,90 | 24,00 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0269 |
| ρ_{max} | 0,0210 | 0,0202 |
| ρ_{pakai} | 0,0105 | 0,0101 |
| m | 18,4266 | 19,1176 |
| R ₁ | 3,6938 | 3,5603 |
| b d | 29,4656 | 32,9060 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 271,411 | 286,819 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 346,411 | 361,819 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| v | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4241 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 299,4173 |
| M ₂ (kNm) | -201,8067 | -182,2635 |
| As' (mm ²) | -778,1249 | -702,7705 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -2,74582 | -2,47991 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0040 |
| As baru (mm ²) | 437,9993 | 469,3973 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 1,5456 | 1,6564 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -77,9390 |
| C ₂ (mm) | 74,1324 | 75,4876 |
| a (mm) | 63,0125 | 64,1644 |
| fs' (Mpa) | 114,3823 | 123,1003 |
| fs' pakai (Mpa) | 114,3823 | 123,1003 |
| Mn (kNm) | 456,1758 | 455,5926 |
| 0,8 Mn (KNm) | 364,9406 | 364,4741 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 6936 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1445 DAN 1461 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 104,948 | 19,652 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 131,1850 | 24,5650 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d | 35,5153 | 6,6504 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 297,973 | 128,942 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 372,973 | 203,942 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -179,4604 | -286,0804 |
| As (mm ²) | -691,9623 | -1103,0670 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -2,44177 | -3,89247 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 524,1618 | 113,0571 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 1,8496 | 0,3990 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (kNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 4,824181208 | 4,824181208 |
| Jumlah pakai | 6 | 6 |



| FRAME 1444 DAN 1460 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 102,709 | 8,913 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 128,3863 | 11,1413 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d | 34,7576 | 3,0162 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 294,778 | 86,837 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 369,778 | 161,837 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -182,2592 | -299,5042 |
| As' (mm ²) | -702,7537 | -1154,8262 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -2,47986 | -4,07511 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 513,3704 | 61,2979 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 1,8116 | 0,2163 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (KNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (r.m) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1442 DAN 1465 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 94,176 | 123,097 |
| Φ | 0,8 | 0,8 |
| Mn (kNm) | 117,7200 | 153,8713 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 31,8699 | 41,6570 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 282,267 | 322,711 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 357,267 | 397,711 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| v | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -192,9254 | -156,7742 |
| As' (mm ²) | -743,8806 | -604,4889 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -2,62498 | -2,13310 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 472,2435 | 611,6353 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 1,6664 | 2,1583 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (kNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 4,824181208 | 4,824181208 |
| Jumlah pakai | 6 | 6 |

| FRAME 1446 DAN 1464 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 88,873 | 54,166 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 111,0913 | 67,7075 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 30,0754 | 18,3302 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 274,205 | 214,069 |
| d' (mm) | 60 | 60 |
| Z (mm) | 75 | 75 |
| h | 349,205 | 289,069 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| V | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -199,5542 | -242,9379 |
| As' (mm ²) | -769,4397 | -936,7185 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -2,71517 | -3,30546 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 446,6844 | 279,4057 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 1,5762 | 0,9860 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (KNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1441 DAN 1463 | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 195,318 | 177,027 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 244,1475 | 221,2838 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 66,0972 | 59,9074 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 406,501 | 386,999 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 481,501 | 461,999 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -66,4979 | -89,3617 |
| As' (mm ²) | -256,4023 | -344,5602 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -0,90478 | -1,21587 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 959,7218 | 871,5639 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 3,3866 | 3,0755 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (kNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tulangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1440 DAN 1482 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 188,352 | 221,049 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 235,4400 | 276,3113 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b σ^* | 63,7399 | 74,8048 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 399,186 | 432,449 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 474,186 | 507,449 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -75,2054 | -34,3342 |
| As* (mm ²) | -289,9766 | -132,3855 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -1,02326 | -0,46716 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 926,1475 | 1083,7386 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 3,2682 | 3,8243 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As* (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (kNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1451 DAN 1479 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 142,005 | 34,003 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 177,5063 | 42,5038 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 48,0557 | 11,5069 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 346,611 | 169,609 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 421,611 | 244,609 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -133,1392 | -268,1417 |
| As' (mm ²) | -513,3572 | -1033,8989 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -1,81152 | -3,64839 |
| Jml Pakai | 3 | 3 |
| Tul Pakai | 3D19 | 3D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 702,7669 | 182,2252 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 2,4799 | 0,6430 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 850 | 850 |
| C ₂ (mm) | -55,4440 | -55,4440 |
| C ₂ (mm) | 76,7094 | 76,7094 |
| a (mm) | 65,2030 | 65,2030 |
| fs' (Mpa) | 130,6965 | 130,6965 |
| fs' pakai (Mpa) | 130,6965 | 130,6965 |
| Mn (kNm) | 456,0996 | 456,0996 |
| 0,8 Mn (KNm) | 364,8797 | 364,8797 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | -153027,9 | -153027,9 |
| c | -30605580 | -30605580 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 4,824181208 | 4,824181208 |
| Jumlah pakai | 6 | 6 |

| FRAME 1450 DAN 1478 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 132,859 | 55,883 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 166,0738 | 69,8538 |
| f_c (Mpa) | 24,90 | 24,90 |
| f_y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R_1 | 3,6938 | 3,6938 |
| $b \cdot d'$ | 44,9606 | 18,9113 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 335,263 | 217,435 |
| d' (mm) | 60 | 60 |
| Z (mm) | 75 | 75 |
| h | 410,263 | 292,435 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R_2 | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M_1 (kNm) | 310,6454 | 310,6454 |
| M_2 (kNm) | -144,5717 | -240,7917 |
| A_s (mm ²) | -557,4385 | -928,4430 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -1,96707 | -3,27626 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| A_s baru (mm ²) | 658,6856 | 287,6812 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 2,3243 | 1,0152 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| A_s (mm ²) | 1700 | 1700 |
| A_s (mm ²) | 1134 | 1134 |
| C_2 (mm) | -76,4952 | -76,4952 |
| C_2 (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| f_s (Mpa) | 114,3823 | 114,3823 |
| f_s pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (kNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| A_s | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1455 DAN 1475 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 345,788 | 59,727 |
| Φ | 0,8 | 0,8 |
| Mn (kNm) | 432,2350 | 74,6588 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 490 | 490 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0202 | 0,0202 |
| ρ max | 0,0152 | 0,0152 |
| ρ pakai | 0,0076 | 0,0076 |
| m | 23,1514 | 23,1514 |
| R ₁ | 3,3878 | 3,3878 |
| b d | 127,5860 | 22,0376 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 564,770 | 234,721 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 639,770 | 309,721 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,3551 | 1,3551 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 284,9134 | 284,9134 |
| M ₂ (kNm) | 147,3216 | -210,2547 |
| As (mm ²) | 452,1147 | -645,2499 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | 1,59541 | -2,27694 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ baru | 0,0030 | 0,0030 |
| As baru (mm ²) | 1331,2488 | 233,8842 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 4,6977 | 0,8253 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -65,4188 | -65,4188 |
| C ₂ (mm) | 86,6842 | 86,6842 |
| a (mm) | 73,6815 | 73,6815 |
| fs' (Mpa) | 184,6992 | 184,6992 |
| fs' pakai (Mpa) | 184,6992 | 184,6992 |
| Mn (kNm) | 568,4925 | 568,4925 |
| 0,8 Mn (KNm) | 454,7940 | 454,7940 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | -153027,9 | -153027,9 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 13 | 12 |
| A1 Tualangan (mm ²) | 133 | 113 |
| Jumlah Tulangan | 4,824181208 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1436 DAN 1472 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 327,807 | 118,356 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 409,7588 | 147,9450 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 110,9326 | 40,0527 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 526,623 | 316,436 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 601,623 | 391,436 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | 99,1133 | -162,7004 |
| As' (mm ²) | 382,1605 | -627,3392 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | 1,34856 | -2,21373 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 1598,2846 | 588,7849 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 5,6400 | 2,0777 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (KNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1439 DAN 1470 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 46,894 | 65,692 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 58,6174 | 82,1150 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 15,8693 | 22,2307 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 199,181 | 235,747 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 274,181 | 310,747 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| v | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -252,0281 | -228,5304 |
| As' (mm ²) | -971,7681 | -881,1661 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -3,42914 | -3,10943 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 244,3560 | 334,9580 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 0,8623 | 1,1820 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (KNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 4,824181208 | 4,824181208 |
| Jumlah pakai | 6 | 6 |

| FRAME 1438 DAN 1469 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 61,230 | 54,489 |
| φ | 0,8 | 0,8 |
| Mn (kNm) | 76,5375 | 68,1113 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 20,7207 | 18,4395 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 227,600 | 214,706 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 302,600 | 289,706 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -234,1079 | -242,5342 |
| As' (mm ²) | -902,6718 | -935,1617 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -3,18532 | -3,29997 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 313,4523 | 280,9624 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 1,1061 | 0,9915 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (KNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| Hitungan Tulangan Balok | | |
|---------------------------------|------------------|-------------------|
| FRAME 1434 DAN 1466 | | |
| | Tulangan Tumpuan | Tulangan Lapangan |
| Mu (kNm) | 250,876 | 240,704 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 313,5950 | 300,8800 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| $b \cdot d'$ | 84,8985 | 81,4562 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 460,702 | 451,266 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 535,702 | 526,266 |
| ambil h (mm) | 800 | 800 |
| Desain Tulangan Rangkap | | |
| Tulangan Desak | | |
| Y | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | 2,9496 | -9,7654 |
| As' (mm ²) | 11,3729 | -37,6535 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | 0,04013 | -0,13287 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tarik | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 1227,4970 | 1178,4706 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 4,3316 | 4,1585 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| fs' (Mpa) | 114,3823 | 114,3823 |
| fs' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (kNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| Hitungan Tulangan Balok | | |
|---------------------------------|------------------|-------------------|
| FRAME 1433 DAN 1471 | | |
| | Tulangan Tumpuan | Tulangan Lapangan |
| Mu (kNm) | 96,908 | 114,077 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 121,1350 | 142,5963 |
| f _c (Mpa) | 24,90 | 24,90 |
| f _y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b' _d | 32,7945 | 38,6046 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 286,332 | 310,663 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 361,332 | 385,663 |
| ambil h (mm) | 800 | 800 |
| Desain Tulangan Rangkap | | |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | -189,5104 | -168,0492 |
| As (mm ²) | -730,7131 | -647,9629 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | -2,57852 | -2,28651 |
| Jml Pakai | 4 | 4 |
| Tul Pakai | 4D19 | 4D19 |
| Tulangan Tank | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 485,4111 | 568,1612 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 1,7129 | 2,0049 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 1134 | 1134 |
| C ₂ (mm) | -76,4952 | -76,4952 |
| C ₂ (mm) | 74,1324 | 74,1324 |
| a (mm) | 63,0125 | 63,0125 |
| f _s ' (Mpa) | 114,3823 | 114,3823 |
| f _s ' pakai (Mpa) | 114,3823 | 114,3823 |
| Mn (kNm) | 456,1758 | 456,1758 |
| 0,8 Mn (kNm) | 364,9406 | 364,9406 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | 17003,1 | 17003,1 |
| c | -40807440 | -40807440 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tualangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1435 DAN 1467 | | |
|--------------------------------|-------------|-------------|
| Mu (kNm) | 253,710 | 297,335 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 317,1375 | 371,6688 |
| f _c (Mpa) | 24,90 | 24,90 |
| f _y (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ_b | 0,0280 | 0,0280 |
| ρ_{max} | 0,0210 | 0,0210 |
| ρ_{pakai} | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R ₁ | 3,6938 | 3,6938 |
| b d' | 85,8576 | 100,6206 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 463,297 | 501,549 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 538,297 | 576,549 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| γ | 0,4 | 0,4 |
| R ₂ | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | 6,4921 | 61,0233 |
| As' (mm ²) | 25,0321 | 235,2933 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | 0,08833 | 0,83030 |
| Jml Pakai | 3 | 3 |
| 3D19 | 3D19 | 3D19 |
| Tulangan Tank | | |
| ρ_{baru} | 0,0042 | 0,0042 |
| As baru (mm ²) | 1241,1562 | 1451,4174 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 4,3798 | 5,1217 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 850 | 850 |
| C ₂ (mm) | -55,4440 | -55,4440 |
| C ₂ (mm) | 76,7094 | 76,7094 |
| a (mm) | 65,2030 | 65,2030 |
| f _s ' (Mpa) | 130,6965 | 130,6965 |
| f _s ' pakai (Mpa) | 130,6965 | 130,6965 |
| Mn (kNm) | 456,0996 | 456,0996 |
| 0,8 Mn (kNm) | 364,8797 | 364,8797 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | -153027,9 | -153027,9 |
| c | -30605580 | -30605580 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai P (mm) | 12 | 12 |
| A1 Tulangan (mm ²) | 113 | 113 |
| Jumlah Tulangan | 5,661712668 | 5,661712668 |
| Jumlah pakai | 6 | 6 |

| FRAME 1432 DAN 1488 | | |
|---------------------------------|-------------|-------------|
| Mu (kNm) | 344,907 | 251,028 |
| ϕ | 0,8 | 0,8 |
| Mn (kNm) | 431,1338 | 313,7850 |
| f'c (Mpa) | 24,90 | 24,90 |
| fy (mpa) | 390 | 390 |
| β_1 | 0,85 | 0,85 |
| ρ b | 0,0280 | 0,0280 |
| ρ max | 0,0210 | 0,0210 |
| ρ pakai | 0,0105 | 0,0105 |
| m | 18,4266 | 18,4266 |
| R _s | 3,6938 | 3,6938 |
| b _d | 116,7194 | 84,9500 |
| ambil b (mm) | 400 | 400 |
| d (mm) | 540,184 | 460,842 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| h | 615,184 | 535,842 |
| ambil h (mm) | 800 | 800 |
| Tulangan Desak | | |
| v | 0,4 | 0,4 |
| R _z | 1,4775 | 1,4775 |
| d (mm) | 725 | 725 |
| M ₁ (kNm) | 310,6454 | 310,6454 |
| M ₂ (kNm) | 120,4883 | 3,1396 |
| As (mm ²) | 464,5780 | 12,1055 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml Tulangan | 1,63939 | 0,04272 |
| Jml Pakai | 3 | 3 |
| Tul Pakai | 3D19 | 3D19 |
| Tulangan Tarik | | |
| ρ baru | 0,0042 | 0,0042 |
| As baru (mm ²) | 1680,7022 | 1228,2296 |
| Pakai tulangan D | 19 | 19 |
| A (mm ²) | 283 | 283 |
| Jml tulangan | 5,9308 | 4,3341 |
| Jml Pakai | 6 | 6 |
| Tul Pakai | 6D19 | 6D19 |
| Kontrol Momen Mg- | | |
| As (mm ²) | 1700 | 1700 |
| As' (mm ²) | 850 | 850 |
| C ₂ (mm) | -55,4440 | -55,4440 |
| C ₂ (mm) | 76,7094 | 76,7094 |
| a (mm) | 65,2030 | 65,2030 |
| fs' (Mpa) | 130,6965 | 130,6965 |
| fs' pakai (Mpa) | 130,6965 | 130,6965 |
| Mn (kNm) | 456,0996 | 456,0996 |
| 0,8 Mn (kNm) | 364,8797 | 364,8797 |
| Kontrol | Aman | Aman |
| a | 7196,1 | 7196,1 |
| b | -153027,9 | -153027,9 |
| c | -30605580 | -30605580 |
| Tulangan Susut | | |
| As | 640 | 640 |
| Pakai D (mm) | 13 | 13 |
| A1 Tualangan (mm ²) | 133 | 133 |
| Jumlah Tulangan | 4,824181208 | 4,824181208 |
| Jumlah pakai | 6 | 6 |



MOMEN KAPASITAS

Frame 124 dan 435

| | Mpr | Mpr⁺ |
|-----------------------------------|----------------------------|----------------------------|
| f _c (Mpa) | 24,9 | 24,9 |
| f _y (Mpa) | 390 | 390 |
| b (mm) | 700 | 700 |
| h (mm) | 1000 | 1000 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| d (mm) | 925 | 940 |
| TARIK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 15 | 5 |
| A ₁ (mm ²) | 491 | 491 |
| As ada (mm ²) | 7359 | 2453 |
| DESAK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 9 | 9 |
| A ₁ (mm ²) | 491 | 491 |
| As' ada (mm ²) | 4416 | 4416 |
| C _c | 12593,175 | 12593,175 |
| C _s | 2649375 $\frac{c - 60}{c}$ | 2649375 $\frac{c - 75}{c}$ |
| T _s | 3587695,313 | 1195898,438 |
| c ₁ | -81,1123 | -195,9440 |
| C ₂ | 155,6226 | 80,5262 |
| C pakai (mm) | 155,6226 | 80,5262 |
| a (mm) | 132,2792 | 68,4473 |
| f _s ' (Mpa) | 368,6711 | 41,1759 |
| f _s ' pakai (Mpa) | 368,6711 | 41,1759 |
| momen kapasitas (Mpr) (kNm) | 3091,3242 | 1078,5299 |
| 0,8*Mn (kNm) | 2473,0594 | 862,8239 |
| | | |
| a | 12593,175 | 12593,175 |
| b | -938320 | 1453477 |
| c | -158962500 | -198703125 |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|-------------|--------------------|-------------|--------------------|
| Frame 136 dan 434 | | | | |
| | Mpr' | | Mpr* | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 11 | | 6 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5397 | | 2944 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 11 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 5397 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 3238125 | $\frac{c - 75}{c}$ |
| T _s | 2630976,563 | | 1435078,125 | |
| c ₁ | -49,5335 | | -227,8249 | |
| C ₂ | 141,5755 | | 84,6484 | |
| C pakai (mm) | 141,5755 | | 84,6484 | |
| a (mm) | 120,3392 | | 71,9511 | |
| f _s ' (Mpa) | 345,7187 | | 68,3889 | |
| f _s ' pakai (Mpa) | 345,7187 | | 68,3889 | |
| momen kapasitas (Mpr) (kNm) | 2275,4924 | | 1288,4786 | |
| 0,8*Mn (kNm) | 1820,3939 | | 1030,7829 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -1159102 | | 1803047 | |
| c | -88312500 | | -242859375 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 135 dan 433 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 12 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5888 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 7 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 3434 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 2060625 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| Ts | 2870156,25 | | 1195898,438 | |
| c ₁ | -72,0260 | | -173,0777 | |
| C ₂ | 136,3093 | | 81,0356 | |
| C pakai (mm) | 136,3093 | | 81,0356 | |
| a (mm) | 115,8629 | | 68,8803 | |
| fs' (Mpa) | 335,8948 | | 44,6886 | |
| fs' pakai (Mpa) | 335,8948 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2486,2359 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1988,9887 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -809531 | | 1159102 | |
| c | -123637500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------------|------------------|------------------------|------------------|
| Frame 134 dan 451 | | | | |
| | Mpr⁻ | | Mpr⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 11 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5397 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 7 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 3434 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 2060625 | $\frac{c-60}{c}$ | 2355000 | $\frac{c-75}{c}$ |
| T _s | 2630976,563 | | 1195898,438 | |
| c ₁ | -78,9944 | | -173,0777 | |
| C ₂ | 124,2850 | | 81,0356 | |
| C pakai (mm) | 124,2850 | | 81,0356 | |
| a (mm) | 105,6422 | | 68,8803 | |
| f _s ' (Mpa) | 310,3431 | | 44,6886 | |
| f _s ' pakai (Mpa) | 310,3431 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2287,0307 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1829,6246 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -570352 | | 1159102 | |
| c | -123637500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 149 dan 450 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 15 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 7359 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 9 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 4416 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 2649375 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 3587695,313 | | 1195898,438 | |
| c ₁ | -81,1123 | | -173,0777 | |
| C ₂ | 155,6226 | | 81,0356 | |
| C pakai (mm) | 155,6226 | | 81,0356 | |
| a (mm) | 132,2792 | | 68,8803 | |
| f _s ' (Mpa) | 368,6711 | | 44,6886 | |
| f _s ' pakai (Mpa) | 368,6711 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 3091,3242 | | 1078,4744 | |
| 0,8*Mn (kNm) | 2473,0594 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -938320 | | 1159102 | |
| c | -158962500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|-------------|--------------------|------------------|--------------------|
| Frame 148 dan 449 | | | | |
| | Mpr | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 11 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5397 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 6 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2944 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1766250 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 2630976,563 | | 1195898,438 | |
| C ₁ | -63,6160 | | -173,0777 | |
| C ₂ | 132,2823 | | 81,0356 | |
| C pakai (mm) | 132,2823 | | 81,0356 | |
| a (mm) | 112,4400 | | 68,8803 | |
| f _s ' (Mpa) | 327,8547 | | 44,6886 | |
| f _s ' pakai (Mpa) | 327,8547 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2282,0917 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1825,6734 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -864727 | | 1159102 | |
| c | -105975000 | | -176625000 | |

| MOMEN KAPASITAS | | | |
|-----------------------------------|------------------|------------------|--------------------------|
| Frame 147 dan 455 | | | |
| | Mpr ⁻ | | Mpr ⁺ |
| f'c (Mpa) | 24,9 | | 24,9 |
| fy (Mpa) | 390 | | 390 |
| b (mm) | 700 | | 700 |
| h (mm) | 1000 | | 1000 |
| d' (mm) | 60 | | 60 |
| z (mm) | 75 | | 75 |
| d (mm) | 925 | | 940 |
| TARIK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 15 | | 5 |
| A ₁ (mm ²) | 491 | | 491 |
| As ada (mm ²) | 7359 | | 2453 |
| DESAK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 9 | | 8 |
| A ₁ (mm ²) | 491 | | 491 |
| As' ada (mm ²) | 4416 | | 3925 |
| Cc | 12593,175 | c | 12593,175 c |
| Cs | 2649375 | $\frac{c-60}{c}$ | 2355000 $\frac{c-75}{c}$ |
| Ts | 3587695,313 | | 1195898,438 |
| c ₁ | -81,1123 | | -173,0777 |
| C ₂ | 155,6226 | | 81,0356 |
| C pakai (mm) | 155,6226 | | 81,0356 |
| a (mm) | 132,2792 | | 68,8803 |
| fs' (Mpa) | 368,6711 | | 44,6886 |
| fs' pakai (Mpa) | 368,6711 | | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 3091,3242 | | 1078,4744 |
| 0,8*Mn (kNm) | 2473,0594 | | 862,7795 |
| | | | |
| a | 12593,175 | | 12593,175 |
| b | -938320 | | 1159102 |
| c | -158962500 | | -176625000 |

| MOMEN KAPASITAS | | | |
|-----------------------------------|------------------|--------------------|--------------------|
| Frame 146 dan 454 | | | |
| | Mpr ⁻ | | Mpr ⁺ |
| f _c (Mpa) | 24,9 | | 24,9 |
| f _y (Mpa) | 390 | | 390 |
| b (mm) | 700 | | 700 |
| h (mm) | 1000 | | 1000 |
| d' (mm) | 60 | | 60 |
| z (mm) | 75 | | 75 |
| d (mm) | 925 | | 940 |
| TARIK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 13 | | 5 |
| A ₁ (mm ²) | 491 | | 491 |
| As ada (mm ²) | 6378 | | 2453 |
| DESAK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 7 | | 8 |
| A ₁ (mm ²) | 491 | | 491 |
| As' ada (mm ²) | 3434 | | 3925 |
| Cc | 12593,175 | c | 12593,175 |
| Cs | 2060625 | $\frac{c - 60}{c}$ | 2355000 |
| | | | $\frac{c - 75}{c}$ |
| Ts | 3109335,938 | | 1195898,438 |
| c ₁ | -65,8401 | | -173,0777 |
| C ₂ | 149,1162 | | 81,0356 |
| C pakai (mm) | 149,1162 | | 81,0356 |
| a (mm) | 126,7488 | | 68,8803 |
| fs' (Mpa) | 358,5775 | | 44,6886 |
| fs' pakai (Mpa) | 358,5775 | | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 2683,2390 | | 1078,4744 |
| 0,8*Mn (kNm) | 2146,5912 | | 862,7795 |
| | | | |
| a | 12593,175 | | 12593,175 |
| b | -1048711 | | 1159102 |
| c | -123637500 | | -176625000 |

| MOMEN KAPASITAS | | | |
|-----------------------------------|------------------|--------------------|--------------------|
| Frame 319 dan 460 | | | |
| | Mpr ⁻ | | Mpr ⁺ |
| f _c (Mpa) | 24,9 | | 24,9 |
| f _y (Mpa) | 390 | | 390 |
| b (mm) | 700 | | 700 |
| h (mm) | 1000 | | 1000 |
| d' (mm) | 60 | | 60 |
| z (mm) | 75 | | 75 |
| d (mm) | 925 | | 940 |
| TARIK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 11 | | 5 |
| A ₁ (mm ²) | 491 | | 491 |
| As ada (mm ²) | 5397 | | 2453 |
| DESAK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 5 | | 8 |
| A ₁ (mm ²) | 491 | | 491 |
| As' ada (mm ²) | 2453 | | 3925 |
| C _c | 12593,175 | c | 12593,175 |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 |
| | | | $\frac{c - 75}{c}$ |
| T _s | 2630976,563 | | 1195898,438 |
| c ₁ | -49,5335 | | -173,0777 |
| C ₂ | 141,5755 | | 81,0356 |
| C pakai (mm) | 141,5755 | | 81,0356 |
| a (mm) | 120,3392 | | 68,8803 |
| f _s ' (Mpa) | 345,7187 | | 44,6886 |
| f _s ' pakai (Mpa) | 345,7187 | | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 2275,4924 | | 1078,4744 |
| 0,8*M _n (kNm) | 1820,3939 | | 862,7795 |
| | | | |
| a | 12593,175 | | 12593,175 |
| b | -1159102 | | 1159102 |
| c | -88312500 | | -176625000 |

MOMEN KAPASITAS

Frame 318 dan 459

| | Mpr⁻ | Mpr⁺ |
|-----------------------------------|------------------------|------------------------|
| f _c (Mpa) | 24,9 | 24,9 |
| f _y (Mpa) | 390 | 390 |
| b (mm) | 700 | 700 |
| h (mm) | 1000 | 1000 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| d (mm) | 925 | 940 |
| TARIK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 8 | 5 |
| A ₁ (mm ²) | 491 | 491 |
| As ada (mm ²) | 3925 | 2453 |
| DESAK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 5 | 8 |
| A ₁ (mm ²) | 491 | 491 |
| As' ada (mm ²) | 2453 | 3925 |
| C _c | 12593,175 | 12593,175 |
| C _s | 1471875 | 2355000 |
| T _s | 1913437,5 | 1195898,438 |
| c ₁ | -68,0257 | -173,0777 |
| C ₂ | 103,0894 | 81,0356 |
| C pakai (mm) | 103,0894 | 81,0356 |
| a (mm) | 87,6259 | 68,8803 |
| f _s ' (Mpa) | 250,7884 | 44,6886 |
| f _s ' pakai (Mpa) | 250,7884 | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | 1078,4744 |
| 0,8*Mn (kNm) | 1340,9102 | 862,7795 |
| | | |
| a | 12593,175 | 12593,175 |
| b | -441563 | 1159102 |
| c | -88312500 | -176625000 |

MOMEN KAPASITAS

Frame 314 dan 471

| | Mpr ⁻ | Mpr ⁺ |
|-----------------------------------|------------------|--------------------------|
| f _c (Mpa) | 24,9 | 24,9 |
| f _y (Mpa) | 390 | 390 |
| b (mm) | 700 | 700 |
| h (mm) | 1000 | 1000 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| d (mm) | 925 | 940 |
| TARIK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 9 | 5 |
| A ₁ (mm ²) | 491 | 491 |
| As ada (mm ²) | 4416 | 2453 |
| DESAK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 5 | 8 |
| A ₁ (mm ²) | 491 | 491 |
| As' ada (mm ²) | 2453 | 3925 |
| C _c | 12593,175 | 12593,175 |
| C _s | 1471875 | $2355000 \frac{c-75}{c}$ |
| T _s | 2152617,2 | 1195898,4 |
| c ₁ | -60,9675 | -173,0777 |
| C ₂ | 115,0240 | 81,0356 |
| C pakai (mm) | 115,0240 | 81,0356 |
| a (mm) | 97,7704 | 68,8803 |
| f _s ' (Mpa) | 287,0218 | 44,6886 |
| f _s ' pakai (Mpa) | 287,0218 | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 1878,1139 | 1078,4744 |
| 0,8*Mn (kNm) | 1502,4911 | 862,7795 |
| | | |
| a | 12593,175 | 12593,175 |
| b | -680742 | 1159102 |
| c | -88312500 | -1,77E+08 |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Frame 313 dan 470 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 11 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5397 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c-60}{c}$ | 2355000 | $\frac{c-75}{c}$ |
| T _s | 2630976,6 | | 1195898,4 | |
| C ₁ | -49,5335 | | -173,0777 | |
| C ₂ | 141,5755 | | 81,0356 | |
| C pakai (mm) | 141,5755 | | 81,0356 | |
| a (mm) | 120,3392 | | 68,8803 | |
| f _s ' (Mpa) | 345,7187 | | 44,6886 | |
| f _s ' pakai (Mpa) | 345,7187 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2275,4924 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1820,3939 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -1159102 | | 1159102 | |
| c | -88312500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 305 dan 475 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 12 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5888 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 6 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2944 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 1766250 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| Ts | 2870156,3 | | 1195898,4 | |
| c ₁ | -57,8381 | | -173,0777 | |
| C ₂ | 145,4971 | | 81,0356 | |
| C pakai (mm) | 145,4971 | | 81,0356 | |
| a (mm) | 123,6726 | | 68,8803 | |
| fs' (Mpa) | 352,5725 | | 44,6886 | |
| fs' pakai (Mpa) | 352,5725 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2479,3206 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1983,4565 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -1103906 | | 1159102 | |
| c | -1,06E+08 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Frame 304 dan 474 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 11 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5397 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c-60}{c}$ | 2355000 | $\frac{c-75}{c}$ |
| T _s | 2630976,6 | | 1195898,4 | |
| c ₁ | -49,5335 | | -173,0777 | |
| C ₂ | 141,5755 | | 81,0356 | |
| C pakai (mm) | 141,5755 | | 81,0356 | |
| a (mm) | 120,3392 | | 68,8803 | |
| fs' (Mpa) | 345,7187 | | 44,6886 | |
| fs' pakai (Mpa) | 345,7187 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2275,4924 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1820,3939 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -1159102 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 248 dan 408 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 1913437,5 | | 1195898,4 | |
| c ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| fs' (Mpa) | 250,7884 | | 44,6886 | |
| fs' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------------|--------------------|------------------------|--------------------|
| Frame 247 dan 407 | | | | |
| | Mpr⁻ | | Mpr⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 1913437,5 | | -1195898,4 | |
| c ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| fs' (Mpa) | 250,7884 | | 44,6886 | |
| fs' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 272 dan 419 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| Ts | 1913437,5 | | 1195898,4 | |
| c ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| fs' (Mpa) | 250,7884 | | 44,6886 | |
| fs' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 292 dan 418 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 1913437,5 | | 1195898,4 | |
| c ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| f _s ' (Mpa) | 250,7884 | | 44,6886 | |
| f _s ' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Frame 291 dan 396 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 10 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 4906 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c-60}{c}$ | 2355000 | $\frac{c-75}{c}$ |
| T _s | 2391796,9 | | 1195898,4 | |
| c ₁ | -54,8361 | | -173,0777 | |
| C ₂ | 127,8853 | | 81,0356 | |
| C pakai (mm) | 127,8853 | | 81,0356 | |
| a (mm) | 108,7025 | | 68,8803 | |
| f _s ' (Mpa) | 318,4978 | | 44,6886 | |
| f _s ' pakai (Mpa) | 318,4978 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2078,0015 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1662,4012 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -919922 | | 1159102 | |
| c | -88312500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 290 dan 395 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 10 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 4906 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 2391796,9 | | 1195898,4 | |
| c ₁ | -54,8361 | | -173,0777 | |
| C ₂ | 127,8853 | | 81,0356 | |
| C pakai (mm) | 127,8853 | | 81,0356 | |
| a (mm) | 108,7025 | | 68,8803 | |
| f _s ' (Mpa) | 318,4978 | | 44,6886 | |
| f _s ' pakai (Mpa) | 318,4978 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2078,0015 | | 1078,4744 | |
| 0,8*M _n (kNm) | 1662,4012 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -919922 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | |
|-----------------------------------|-----------|--------------------|--------------------|
| Frame 289 dan 394 | | | |
| | Mpr' | | Mpr ⁺ |
| f _c (Mpa) | 24,9 | | 24,9 |
| f _y (Mpa) | 390 | | 390 |
| b (mm) | 700 | | 700 |
| h (mm) | 1000 | | 1000 |
| d' (mm) | 60 | | 60 |
| z (mm) | 75 | | 75 |
| d (mm) | 925 | | 940 |
| TARIK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 9 | | 5 |
| A ₁ (mm ²) | 491 | | 491 |
| As ada (mm ²) | 4416 | | 2453 |
| DESAK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 5 | | 8 |
| A ₁ (mm ²) | 491 | | 491 |
| As' ada (mm ²) | 2453 | | 3925 |
| C _c | 12593,175 | c | 12593,175 |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 |
| | | | $\frac{c - 75}{c}$ |
| T _s | 2152617,2 | | 1195898,4 |
| c ₁ | -60,9675 | | -173,0777 |
| C ₂ | 115,0240 | | 81,0356 |
| C pakai (mm) | 115,0240 | | 81,0356 |
| a (mm) | 97,7704 | | 68,8803 |
| f _s ' (Mpa) | 287,0218 | | 44,6886 |
| f _s ' pakai (Mpa) | 287,0218 | | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 1878,1139 | | 1078,4744 |
| 0,8*Mn (kNm) | 1502,4911 | | 862,7795 |
| | | | |
| a | 12593,175 | | 12593,175 |
| b | -680742 | | 1159102 |
| c | -88312500 | | -1,77E+08 |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 299 dan 382 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| Ts | 1913437,5 | | 1195898,4 | |
| c ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| fs' (Mpa) | 250,7884 | | 44,6886 | |
| fs' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Frame 298 dan 381 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c-60}{e}$ | 2355000 | $\frac{c-75}{c}$ |
| T _s | 1913437,5 | | 1195898,4 | |
| c ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| f _s ' (Mpa) | 250,7884 | | 44,6886 | |
| f _s ' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*M _n (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Frame 297 dan 380 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c-60}{c}$ | 2355000 | $\frac{c-75}{c}$ |
| T _s | 1913437,5 | | 1195898,4 | |
| c ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| f _s ' (Mpa) | 250,7884 | | 44,6886 | |
| f _s ' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |



ISLAM
LAMPIRAN
TABEL PERHITUNGAN
MOMEN KAPASITAS
BALOK INDUK TENGAH

MOMEN KAPASITAS

Frame 550 dan 660

| | Mpr⁻ | Mpr⁺ |
|-----------------------------------|--------------------------|--------------------------|
| f'c (Mpa) | 24,9 | 24,9 |
| fy (Mpa) | 390 | 390 |
| b (mm) | 700 | 700 |
| h (mm) | 1000 | 1000 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| d (mm) | 925 | 940 |
| TARIK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 17 | 5 |
| A ₁ (mm ²) | 491 | 491 |
| As ada (mm ²) | 8341 | 2453 |
| DESAK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 11 | 10 |
| A ₁ (mm ²) | 491 | 491 |
| As' ada (mm ²) | 5397 | 4906 |
| Cc | 12593,175 | 12593,175 |
| Cs | 3238125 $\frac{c-60}{c}$ | 2943750 $\frac{c-75}{c}$ |
| Ts | 4066054,688 | 1195898,438 |
| c ₁ | -95,6136 | -218,8884 |
| C ₂ | 161,3579 | 80,0948 |
| C pakai (mm) | 161,3579 | 80,0948 |
| a (mm) | 137,1542 | 68,0806 |
| fs' (Mpa) | 376,8934 | 38,1657 |
| fs' pakai (Mpa) | 376,8934 | 38,1657 |
| momen kapasitas (Mpr) (kNm) | 3499,7086 | 1078,5748 |
| 0,8*Mn (kNm) | 2799,7669 | 862,8599 |
| | | |
| a | 12593,175 | 12593,175 |
| b | -827930 | 1747852 |
| c | -194287500 | -220781250 |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 554 dan 659 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 13 | | 7 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 6378 | | 3434 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 12 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 3925 | | 5888 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 2355000 | $\frac{c - 60}{c}$ | 3532500 | $\frac{c - 75}{c}$ |
| T _s | 3109335,938 | | 1674257,813 | |
| c ₁ | -80,1288 | | -236,5115 | |
| C ₂ | 140,0291 | | 88,9520 | |
| C pakai (mm) | 140,0291 | | 88,9520 | |
| a (mm) | 119,0248 | | 75,6092 | |
| f _s ' (Mpa) | 342,9107 | | 94,1094 | |
| f _s ' pakai (Mpa) | 342,9107 | | 94,1094 | |
| momen kapasitas (Mpr) (kNm) | 2690,4354 | | 1498,2099 | |
| 0,8*M _n (kNm) | 2152,3484 | | 1198,5679 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -754336 | | 1858242 | |
| c | -141300000 | | -264937500 | |

MOMEN KAPASITAS

Frame 553 dan 658

| | Mpr⁻ | Mpr⁺ |
|-----------------------------------|--------------------------|--------------------------|
| f _c (Mpa) | 24,9 | 24,9 |
| f _y (Mpa) | 390 | 390 |
| b (mm) | 700 | 700 |
| h (mm) | 1000 | 1000 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| d (mm) | 925 | 940 |
| TARIK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 14 | 5 |
| A ₁ (mm ²) | 491 | 491 |
| As ada (mm ²) | 6869 | 2453 |
| DESAK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 9 | 8 |
| A ₁ (mm ²) | 491 | 491 |
| As' ada (mm ²) | 4416 | 3925 |
| C _c | 12593,175 c | 12593,175 c |
| C _s | 2649375 $\frac{c-60}{c}$ | 2355000 $\frac{c-75}{c}$ |
| T _s | 3348515,625 | 1195898,438 |
| c ₁ | -87,9714 | -173,0777 |
| C ₂ | 143,4888 | 81,0356 |
| C pakai (mm) | 143,4888 | 81,0356 |
| a (mm) | 121,9655 | 68,8803 |
| fs' (Mpa) | 349,1093 | 44,6886 |
| fs' pakai (Mpa) | 349,1093 | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 2894,6902 | 1078,4744 |
| 0,8*Mn (kNm) | 2315,7522 | 862,7795 |
| | | |
| a | 12593,175 | 12593,175 |
| b | -699141 | 1159102 |
| c | -158962500 | -176625000 |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------------|--------------------|------------------------|--------------------|
| Frame 652 dan 669 | | | | |
| | Mpr⁻ | | Mpr⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 12 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5888 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 3925 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 2355000 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| Ts | 2870156,25 | | 1195898,438 | |
| c ₁ | -87,4291 | | -173,0777 | |
| C ₂ | 128,3367 | | 81,0356 | |
| C pakai (mm) | 128,3367 | | 81,0356 | |
| a (mm) | 109,0862 | | 68,8803 | |
| fs' (Mpa) | 319,4879 | | 44,6886 | |
| fs' pakai (Mpa) | 319,4879 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2491,5044 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1993,2035 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -515156 | | 1159102 | |
| c | -141300000 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Frame 559 dan 668 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 16 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 7850 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 10 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 4906 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 2943750 | $\frac{c-60}{c}$ | 2355000 | $\frac{c-75}{c}$ |
| T _s | 3826875 | | 1195898,438 | |
| C ₁ | -88,4471 | | -173,0777 | |
| C ₂ | 158,5744 | | 81,0356 | |
| C pakai (mm) | 158,5744 | | 81,0356 | |
| a (mm) | 134,7883 | | 68,8803 | |
| f _s ' (Mpa) | 372,9772 | | 44,6886 | |
| f _s ' pakai (Mpa) | 372,9772 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 3295,4811 | | 1078,4744 | |
| 0,8*M _n (kNm) | 2636,3849 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -883125 | | 1159102 | |
| c | -176625000 | | -176625000 | |

| MOMEN KAPASITAS | | | |
|-----------------------------------|-------------|--------------------|--------------------|
| Frame 557 dan 672 | | | |
| | Mpr' | | Mpr ⁺ |
| f _c (Mpa) | 24,9 | | 24,9 |
| f _y (Mpa) | 390 | | 390 |
| b (mm) | 700 | | 700 |
| h (mm) | 1000 | | 1000 |
| d' (mm) | 60 | | 60 |
| z (mm) | 75 | | 75 |
| d (mm) | 925 | | 940 |
| TARIK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 17 | | 5 |
| A ₁ (mm ²) | 491 | | 491 |
| As ada (mm ²) | 8341 | | 2453 |
| DESAK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 11 | | 8 |
| A ₁ (mm ²) | 491 | | 491 |
| As' ada (mm ²) | 5397 | | 3925 |
| C _c | 12593,175 | c | 12593,175 |
| C _s | 3238125 | $\frac{c - 60}{c}$ | 2355000 |
| | | | $\frac{c - 75}{c}$ |
| T _s | 4066054,688 | | 1195898,438 |
| c ₁ | -95,6136 | | -173,0777 |
| C ₂ | 161,3579 | | 81,0356 |
| C pakai (mm) | 161,3579 | | 81,0356 |
| a (mm) | 137,1542 | | 68,8803 |
| f _s ' (Mpa) | 376,8934 | | 44,6886 |
| f _s ' pakai (Mpa) | 376,8934 | | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 3499,7086 | | 1078,4744 |
| 0,8*M _n (kNm) | 2799,7669 | | 862,7795 |
| | | | |
| | | | |
| a | 12593,175 | | 12593,175 |
| b | -827930 | | 1159102 |
| c | -194287500 | | -176625000 |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------------|--------------------|------------------------|--------------------|
| Frame 556 dan 671 | | | | |
| | Mpr⁻ | | Mpr⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 15 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 7359 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 10 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 4906 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 2943750 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 3587695,313 | | 1195898,438 | |
| C ₁ | -95,5903 | | -173,0777 | |
| C ₂ | 146,7247 | | 81,0356 | |
| C pakai (mm) | 146,7247 | | 81,0356 | |
| a (mm) | 124,7160 | | 68,8803 | |
| f _s ' (Mpa) | 354,6426 | | 44,6886 | |
| f _s ' pakai (Mpa) | 354,6426 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 3098,9995 | | 1078,4744 | |
| 0,8*Mn (kNm) | 2479,1996 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -643945 | | 1159102 | |
| c | -176625000 | | -176625000 | |

MOMEN KAPASITAS

Frame 612 dan 675

| | Mpr ⁻ | Mpr ⁺ |
|-----------------------------------|------------------|------------------|
| f _c (Mpa) | 24,9 | 24,9 |
| f _y (Mpa) | 390 | 390 |
| b (mm) | 700 | 700 |
| h (mm) | 1000 | 1000 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| d (mm) | 925 | 940 |
| TARIK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 12 | 5 |
| A ₁ (mm ²) | 491 | 491 |
| As ada (mm ²) | 5888 | 2453 |
| DESAK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 7 | 8 |
| A ₁ (mm ²) | 491 | 491 |
| As' ada (mm ²) | 3434 | 3925 |
| C _c | 12593,175 | 12593,175 |
| C _s | 2060625 | 2355000 |
| T _s | 2870156,25 | 1195898,438 |
| c ₁ | -72,0260 | -173,0777 |
| C ₂ | 136,3093 | 81,0356 |
| C pakai (mm) | 136,3093 | 81,0356 |
| a (mm) | 115,8629 | 68,8803 |
| f _s ' (Mpa) | 335,8948 | 44,6886 |
| f _s ' pakai (Mpa) | 335,8948 | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 2486,2359 | 1078,4744 |
| 0,8*Mn (kNm) | 1988,9887 | 862,7795 |
| | | |
| a | 12593,175 | 12593,175 |
| b | -809531 | 1159102 |
| c | -123637500 | -176625000 |

MOMEN KAPASITAS

Frame 611 dan 674

| | Mpr⁻ | Mpr⁺ |
|-----------------------------------|--------------------------|--------------------------|
| f _c (Mpa) | 24,9 | 24,9 |
| f _y (Mpa) | 390 | 390 |
| b (mm) | 700 | 700 |
| h (mm) | 1000 | 1000 |
| d' (mm) | 60 | 60 |
| z (mm) | 75 | 75 |
| d (mm) | 925 | 940 |
| TARIK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 9 | 5 |
| A ₁ (mm ²) | 491 | 491 |
| As ada (mm ²) | 4416 | 2453 |
| DESAK | | |
| pakai tulangan D (mm) | 25 | 25 |
| jumlah tulangan | 5 | 8 |
| A ₁ (mm ²) | 491 | 491 |
| As' ada (mm ²) | 2453 | 3925 |
| C _c | 12593,175 _c | 12593,175 _c |
| C _s | 1471875 $\frac{c-60}{c}$ | 2355000 $\frac{c-75}{c}$ |
| T _s | 2152617,188 | 1195898,438 |
| C ₁ | -60,9675 | -173,0777 |
| C ₂ | 115,0240 | 81,0356 |
| C pakai (mm) | 115,0240 | 81,0356 |
| a (mm) | 97,7704 | 68,8803 |
| f _s ' (Mpa) | 287,0218 | 44,6886 |
| f _s ' pakai (Mpa) | 287,0218 | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 1878,1139 | 1078,4744 |
| 0,8*Mn (kNm) | 1502,4911 | 862,7795 |
| | | |
| a | 12593,175 | 12593,175 |
| b | -680742 | 1159102 |
| c | -88312500 | -176625000 |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 609 dan 681 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 10 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 4906 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 2391796,9 | | 1195898,4 | |
| c ₁ | -54,8361 | | -173,0777 | |
| C ₂ | 127,8853 | | 81,0356 | |
| C pakai (mm) | 127,8853 | | 81,0356 | |
| a (mm) | 108,7025 | | 68,8803 | |
| f _s ' (Mpa) | 318,4978 | | 44,6886 | |
| f _s ' pakai (Mpa) | 318,4978 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2078,0015 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1662,4012 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -919922 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 608 dan 680 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 12 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5888 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 7 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 3434 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 2060625 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| Ts | 2870156,3 | | 1195898,4 | |
| c ₁ | -72,0260 | | -173,0777 | |
| C ₂ | 136,3093 | | 81,0356 | |
| C pakai (mm) | 136,3093 | | 81,0356 | |
| a (mm) | 115,8629 | | 68,8803 | |
| fs' (Mpa) | 335,8948 | | 44,6886 | |
| fs' pakai (Mpa) | 335,8948 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2486,2359 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1988,9887 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -809531 | | 1159102 | |
| c | -1,24E+08 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 604 dan 684 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 13 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 6378 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 3925 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 2355000 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| Ts | 3109335,9 | | 1195898,4 | |
| c ₁ | -80,1288 | | -173,0777 | |
| C ₂ | 140,0291 | | 81,0356 | |
| C pakai (mm) | 140,0291 | | 81,0356 | |
| a (mm) | 119,0248 | | 68,8803 | |
| fs' (Mpa) | 342,9107 | | 44,6886 | |
| fs' pakai (Mpa) | 342,9107 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2690,4354 | | 1078,4744 | |
| 0,8*Mn (kNm) | 2152,3484 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -754336 | | 1159102 | |
| c | -1,41E+08 | | -176625000 | |

| MOMEN KAPASITAS | | | |
|-----------------------------------|------------------|--------------------|--------------------|
| Frame 603 dan 683 | | | |
| | Mpr ⁻ | | Mpr ⁺ |
| f _c (Mpa) | 24,9 | | 24,9 |
| f _y (Mpa) | 390 | | 390 |
| b (mm) | 700 | | 700 |
| h (mm) | 1000 | | 1000 |
| d' (mm) | 60 | | 60 |
| z (mm) | 75 | | 75 |
| d (mm) | 925 | | 940 |
| TARIK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 12 | | 5 |
| A ₁ (mm ²) | 491 | | 491 |
| As ada (mm ²) | 5888 | | 2453 |
| DESAK | | | |
| pakai tulangan D (mm) | 25 | | 25 |
| jumlah tulangan | 7 | | 8 |
| A ₁ (mm ²) | 491 | | 491 |
| As' ada (mm ²) | 3434 | | 3925 |
| C _c | 12593,175 | c | 12593,175 |
| C _s | 2060625 | $\frac{c - 60}{c}$ | 2355000 |
| | | | $\frac{c - 75}{c}$ |
| T _s | 2870156,3 | | 1195898,4 |
| c ₁ | -72,0260 | | -173,0777 |
| C ₂ | 136,3093 | | 81,0356 |
| C pakai (mm) | 136,3093 | | 81,0356 |
| a (mm) | 115,8629 | | 68,8803 |
| f _s ' (Mpa) | 335,8948 | | 44,6886 |
| f _s ' pakai (Mpa) | 335,8948 | | 44,6886 |
| momen kapasitas (Mpr) (kNm) | 2486,2359 | | 1078,4744 |
| 0,8*Mn (kNm) | 1988,9887 | | 862,7795 |
| | | | |
| a | 12593,175 | | 12593,175 |
| b | -809531 | | 1159102 |
| c | -123637500 | | -1,77E+08 |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Frame 581 dan 651 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 11 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5397 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 1471875 | $\frac{c-60}{c}$ | 2355000 | $\frac{c-75}{c}$ |
| Ts | 2630976,6 | | 1195898,4 | |
| c ₁ | -49,5335 | | -173,0777 | |
| C ₂ | 141,5755 | | 81,0356 | |
| C pakai (mm) | 141,5755 | | 81,0356 | |
| a (mm) | 120,3392 | | 68,8803 | |
| fs' (Mpa) | 345,7187 | | 44,6886 | |
| fs' pakai (Mpa) | 345,7187 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2275,4924 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1820,3939 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -1159102 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 580 dan 650 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 1913437,5 | | 1195898,4 | |
| c ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| fs' (Mpa) | 250,7884 | | 44,6886 | |
| fs' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Frame 584 dan 657 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 9 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 4416 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 1471875 | $\frac{c-60}{c}$ | 2355000 | $\frac{c-75}{c}$ |
| Ts | 2152617,2 | | 1195898,4 | |
| c ₁ | -60,9675 | | -173,0777 | |
| C ₂ | 115,0240 | | 81,0356 | |
| C pakai (mm) | 115,0240 | | 81,0356 | |
| a (mm) | 97,7704 | | 68,8803 | |
| fs' (Mpa) | 287,0218 | | 44,6886 | |
| fs' pakai (Mpa) | 287,0218 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1878,1139 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1502,4911 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -680742 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 595 dan 656 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 9 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 4416 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 2152617,2 | | 1195898,4 | |
| c ₁ | -60,9675 | | -173,0777 | |
| C ₂ | 115,0240 | | 81,0356 | |
| C pakai (mm) | 115,0240 | | 81,0356 | |
| a (mm) | 97,7704 | | 68,8803 | |
| fs' (Mpa) | 287,0218 | | 44,6886 | |
| fs' pakai (Mpa) | 287,0218 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1878,1139 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1502,4911 | | 862,7795 | |
| | | | | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -680742 | | 1159102 | |
| c | -88312500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|------------------|------------------|------------------|
| Frame 594 dan 647 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 11 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5397 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 9 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 4416 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c-60}{c}$ | 2649375 | $\frac{c-75}{c}$ |
| T _s | 2630976,6 | | 1195898,4 | |
| c ₁ | -49,5335 | | -195,9440 | |
| C ₂ | 141,5755 | | 80,5262 | |
| C pakai (mm) | 141,5755 | | 80,5262 | |
| a (mm) | 120,3392 | | 68,4473 | |
| f _s ' (Mpa) | 345,7187 | | 41,1759 | |
| f _s ' pakai (Mpa) | 345,7187 | | 41,1759 | |
| momen kapasitas (Mpr) (kNm) | 2275,4924 | | 1078,5299 | |
| 0,8*M _n (kNm) | 1820,3939 | | 862,8239 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -1159102 | | 1453477 | |
| c | -88312500 | | -198703125 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 593 dan 646 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 11 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 5397 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 9 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 4416 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2649375 | $\frac{c - 75}{c}$ |
| T _s | 2630976,6 | | 1195898,4 | |
| c ₁ | -49,5335 | | -195,9440 | |
| C ₂ | 141,5755 | | 80,5262 | |
| C pakai (mm) | 141,5755 | | 80,5262 | |
| a (mm) | 120,3392 | | 68,4473 | |
| f _s ' (Mpa) | 345,7187 | | 41,1759 | |
| f _s ' pakai (Mpa) | 345,7187 | | 41,1759 | |
| momen kapasitas (Mpr) (kNm) | 2275,4924 | | 1078,5299 | |
| 0,8*Mn (kNm) | 1820,3939 | | 862,8239 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -1159102 | | 1453477 | |
| c | -88312500 | | -1,99E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 592 dan 645 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 10 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 4906 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| Ts | 2391796,9 | | 1195898,4 | |
| c ₁ | -54,8361 | | -173,0777 | |
| C ₂ | 127,8853 | | 81,0356 | |
| C pakai (mm) | 127,8853 | | 81,0356 | |
| a (mm) | 108,7025 | | 68,8803 | |
| fs' (Mpa) | 318,4978 | | 44,6886 | |
| fs' pakai (Mpa) | 318,4978 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 2078,0015 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1662,4012 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -919922 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 600 dan 640 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 9 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 4416 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| Cc | 12593,175 | c | 12593,175 | c |
| Cs | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| Ts | 2152617,2 | | 1195898,4 | |
| c ₁ | -60,9675 | | -173,0777 | |
| C ₂ | 115,0240 | | 81,0356 | |
| C pakai (mm) | 115,0240 | | 81,0356 | |
| a (mm) | 97,7704 | | 68,8803 | |
| fs' (Mpa) | 287,0218 | | 44,6886 | |
| fs' pakai (Mpa) | 287,0218 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1878,1139 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1502,4911 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -680742 | | 1159102 | |
| c | -88312500 | | -176625000 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 599 dan 639 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 1913437,5 | | 1195898,4 | |
| C ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| f _s ' (Mpa) | 250,7884 | | 44,6886 | |
| f _s ' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| Frame 598 dan 638 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 700 | | 700 | |
| h (mm) | 1000 | | 1000 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 925 | | 940 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 8 | | 5 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As ada (mm ²) | 3925 | | 2453 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 25 | | 25 | |
| jumlah tulangan | 5 | | 8 | |
| A ₁ (mm ²) | 491 | | 491 | |
| As' ada (mm ²) | 2453 | | 3925 | |
| C _c | 12593,175 | c | 12593,175 | c |
| C _s | 1471875 | $\frac{c - 60}{c}$ | 2355000 | $\frac{c - 75}{c}$ |
| T _s | 1913437,5 | | 1195898,4 | |
| c ₁ | -68,0257 | | -173,0777 | |
| C ₂ | 103,0894 | | 81,0356 | |
| C pakai (mm) | 103,0894 | | 81,0356 | |
| a (mm) | 87,6259 | | 68,8803 | |
| f _s ' (Mpa) | 250,7884 | | 44,6886 | |
| f _s ' pakai (Mpa) | 250,7884 | | 44,6886 | |
| momen kapasitas (Mpr) (kNm) | 1676,1378 | | 1078,4744 | |
| 0,8*Mn (kNm) | 1340,9102 | | 862,7795 | |
| | | | | |
| | | | | |
| a | 12593,175 | | 12593,175 | |
| b | -441563 | | 1159102 | |
| c | -88312500 | | -1,77E+08 | |



LAMPIRAN
TABEL PERHITUNGAN
MOMEN KAPASITAS
BALOK ANAK
BALOK LINTANG

| MOMEN KAPASITAS | | | |
|-----------------------------------|------------|--------------------|----------------------------|
| BALOK ANAK | | | |
| | Mpr | | Mpr ⁺ |
| f _c (Mpa) | 24,9 | | 24,9 |
| f _y (Mpa) | 390 | | 390 |
| b (mm) | 400 | | 400 |
| h (mm) | 800 | | 800 |
| d' (mm) | 60 | | 60 |
| z (mm) | 75 | | 75 |
| d (mm) | 725 | | 740 |
| TARIK | | | |
| pakai tulangan D (mm) | 19 | | 19 |
| jumlah tulangan | 6 | | 4 |
| A ₁ (mm ²) | 283 | | 283 |
| As ada (mm ²) | 1700 | | 1134 |
| DESAK | | | |
| pakai tulangan D (mm) | 19 | | 19 |
| jumlah tulangan | 4 | | 6 |
| A ₁ (mm ²) | 283 | | 283 |
| As' ada (mm ²) | 1134 | | 1700 |
| C _c | 7196,1 | c | 7196,1 c |
| C _s | 680124 | $\frac{c - 60}{c}$ | 1020186 $\frac{c - 75}{c}$ |
| T _s | 828901,125 | | 552600,75 |
| c ₁ | -65,6734 | | -140,6009 |
| C ₂ | 86,3481 | | 75,6233 |
| C pakai (mm) | 86,3481 | | 75,6233 |
| a (mm) | 73,3959 | | 64,2798 |
| fs' (Mpa) | 183,0828 | | 4,9451 |
| fs' pakai (Mpa) | 183,0828 | | 4,9451 |
| momen kapasitas (Mpr) (kNm) | 565,6984 | | 390,9298 |
| 0,8*Mn (kNm) | 452,5588 | | 312,7438 |
| | | | |
| a | 7196,1 | | 7196,1 |
| b | -148777 | | 467585 |
| c | -40807440 | | -76513950 |

| MOMEN KAPASITAS | | | | |
|-----------------------------------|------------------|--------------------|------------------|--------------------|
| BALOK LINTANG STRUKTUR BAWAH | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 400 | | 400 | |
| h (mm) | 800 | | 800 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 725 | | 740 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 22 | | 22 | |
| jumlah tulangan | 6 | | 4 | |
| A ₁ (mm ²) | 380 | | 380 | |
| As ada (mm ²) | 2280 | | 1520 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 22 | | 22 | |
| jumlah tulangan | 4 | | 6 | |
| A ₁ (mm ²) | 380 | | 380 | |
| As' ada (mm ²) | 1520 | | 2280 | |
| Cc | 7196,1 | c | 7196,1 | c |
| Cs | 911856 | $\frac{c - 60}{c}$ | 1367784 | $\frac{c - 75}{c}$ |
| Ts | 1111324,5 | | 740883 | |
| c ₁ | -74,4298 | | -170,6521 | |
| C ₂ | 102,1488 | | 83,5353 | |
| C pakai (mm) | 102,1488 | | 83,5353 | |
| a (mm) | 86,8265 | | 71,0050 | |
| fs' (Mpa) | 247,5730 | | 61,3056 | |
| fs' pakai (Mpa) | 247,5730 | | 61,3056 | |
| momen kapasitas (Mpr) (kNm) | 751,2233 | | 518,5266 | |
| 0,8*Mn (kNm) | 600,9786 | | 414,8213 | |
| | | | | |
| a | 7196,1 | | 7196,1 | |
| b | -199469 | | 626901 | |
| c | -54711360 | | -102583800 | |

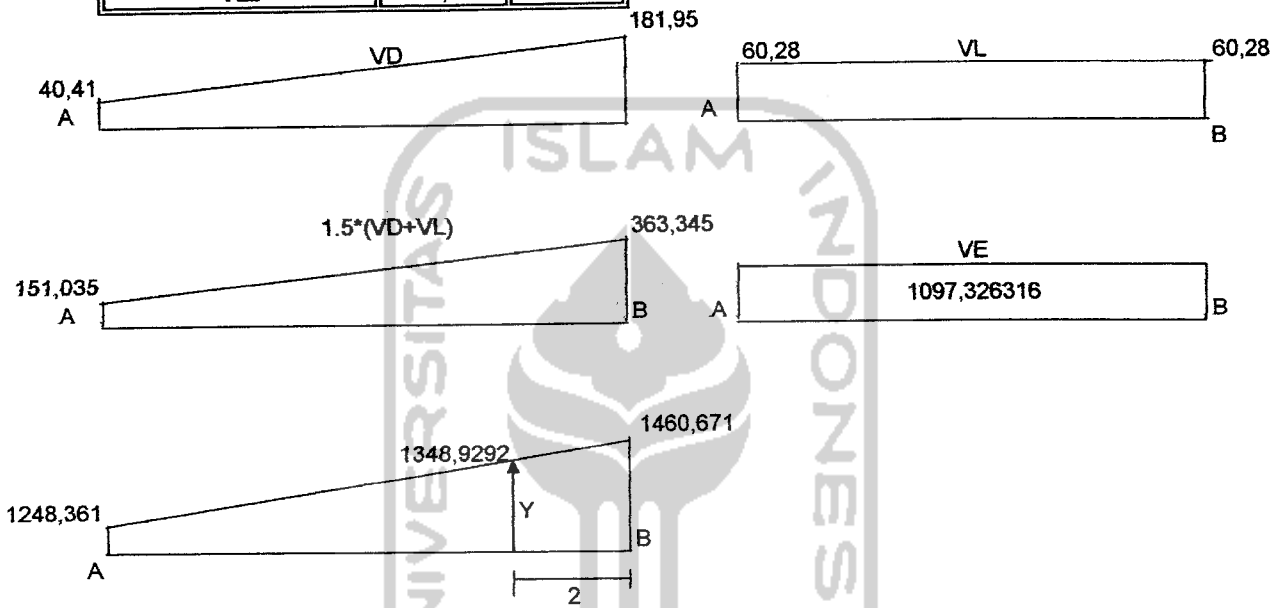
| MOMEN KAPASITAS | | | | |
|-------------------------------------|------------------|--------------------|------------------|--------------------|
| BALOK LINTANG STRUKTUR ATAS JENIS 1 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f'c (Mpa) | 24,9 | | 24,9 | |
| fy (Mpa) | 390 | | 390 | |
| b (mm) | 400 | | 400 | |
| h (mm) | 800 | | 800 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 725 | | 740 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 22 | | 22 | |
| jumlah tulangan | 9 | | 4 | |
| A ₁ (mm ²) | 380 | | 380 | |
| As ada (mm ²) | 3419 | | 1520 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 22 | | 22 | |
| jumlah tulangan | 6 | | 6 | |
| A ₁ (mm ²) | 380 | | 380 | |
| As' ada (mm ²) | 2280 | | 2280 | |
| Cc | 7196,1 | c | 7196,1 | c |
| Cs | 1367784 | $\frac{c - 60}{c}$ | 1367784 | $\frac{c - 75}{c}$ |
| Ts | 1666986,75 | | 740883 | |
| c ₁ | -88,0068 | | -170,6521 | |
| C ₂ | 129,5852 | | 83,5353 | |
| C pakai (mm) | 129,5852 | | 83,5353 | |
| a (mm) | 110,1474 | | 71,0050 | |
| fs' (Mpa) | 322,1906 | | 61,3056 | |
| fs' pakai (Mpa) | 322,1906 | | 61,3056 | |
| momen kapasitas (Mpr) (kNm) | 1113,1400 | | 518,5266 | |
| 0,8*Mn (kNm) | 890,5120 | | 414,8213 | |
| | | | | |
| a | 7196,1 | | 7196,1 | |
| b | -299203 | | 626901 | |
| c | -82067040 | | -102583800 | |

| MOMEN KAPASITAS | | | | |
|-------------------------------------|------------------|--------------------|------------------|--------------------|
| BALOK LINTANG STRUKTUR ATAS JENIS 2 | | | | |
| | Mpr ⁻ | | Mpr ⁺ | |
| f _c (Mpa) | 24,9 | | 24,9 | |
| f _y (Mpa) | 390 | | 390 | |
| b (mm) | 400 | | 400 | |
| h (mm) | 800 | | 800 | |
| d' (mm) | 60 | | 60 | |
| z (mm) | 75 | | 75 | |
| d (mm) | 725 | | 740 | |
| TARIK | | | | |
| pakai tulangan D (mm) | 22 | | 22 | |
| jumlah tulangan | 12 | | 4 | |
| A ₁ (mm ²) | 380 | | 380 | |
| As ada (mm ²) | 4559 | | 1520 | |
| DESAK | | | | |
| pakai tulangan D (mm) | 22 | | 22 | |
| jumlah tulangan | 8 | | 7 | |
| A ₁ (mm ²) | 380 | | 380 | |
| As' ada (mm ²) | 3040 | | 2660 | |
| C _c | 7196,1 | c | 7196,1 | c |
| C _s | 1823712 | $\frac{c - 60}{c}$ | 1595748 | $\frac{c - 75}{c}$ |
| T _s | 2222649 | | 740883 | |
| C ₁ | -98,6700 | | -201,3819 | |
| C ₂ | 154,1080 | | 82,5863 | |
| C pakai (mm) | 154,1080 | | 82,5863 | |
| a (mm) | 130,9918 | | 70,1983 | |
| f _s ' (Mpa) | 366,3975 | | 55,1154 | |
| f _s ' pakai (Mpa) | 366,3975 | | 55,1154 | |
| momen kapasitas (Mpr) (kNm) | 1471,9668 | | 518,5990 | |
| 0,8*M _n (kNm) | 1177,5734 | | 414,8792 | |
| | | | | |
| a | 7196,1 | | 7196,1 | |
| b | -398937 | | 854865 | |
| c | -109422720 | | -119681100 | |

LAMPIRAN
PERHITUNGAN TULANGAN GESER
BALOK INDUK TEPI



| Perhitungan Sengkang frame 124 dan 435 | | |
|--|-----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 3091,32 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 1097,3263 | KN |
| VDa | 40,41 | KN |
| VDb | 181,95 | KN |
| VLa | 60,28 | KN |
| VLb | 60,28 | KN |

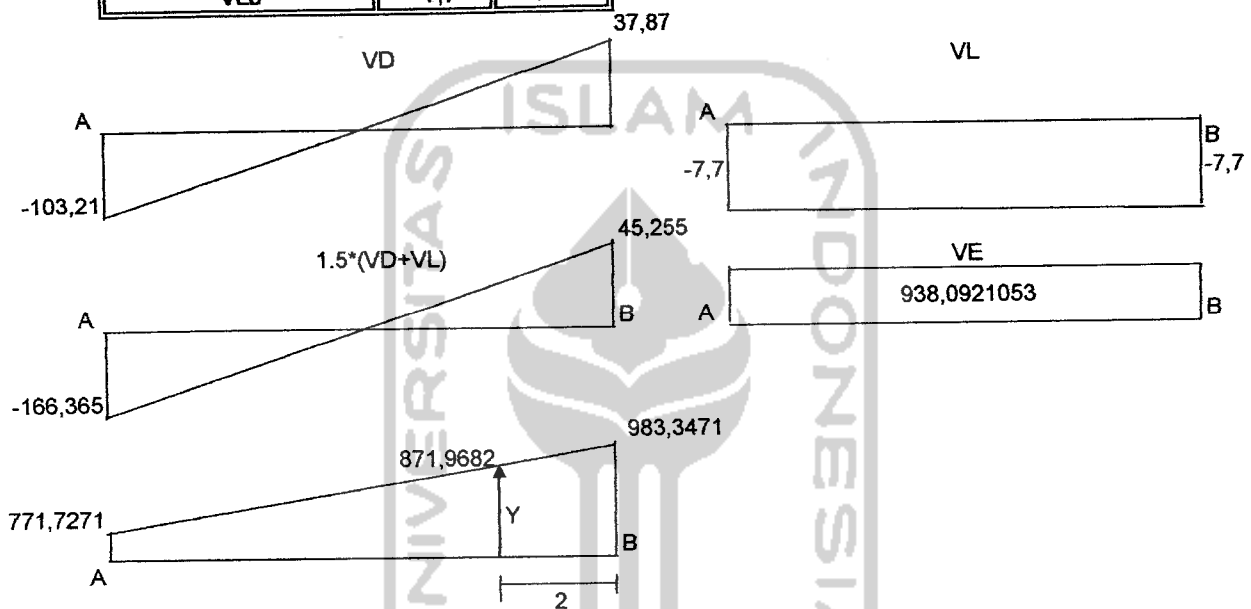


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 2434,452 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 78,63601 | mm |
| S PAKAI 2D13-75 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1709,711 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 111,9696 | mm |
| S PAKAI 2D ₁₃ -100 | | |

| Perhitungan Sengkang frame 136 dan 434 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2486,23 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 938,0921 | KN |
| VDa | -103,21 | KN |
| VDb | 37,87 | KN |
| VLa | -7,7 | KN |
| VLb | -7,7 | KN |

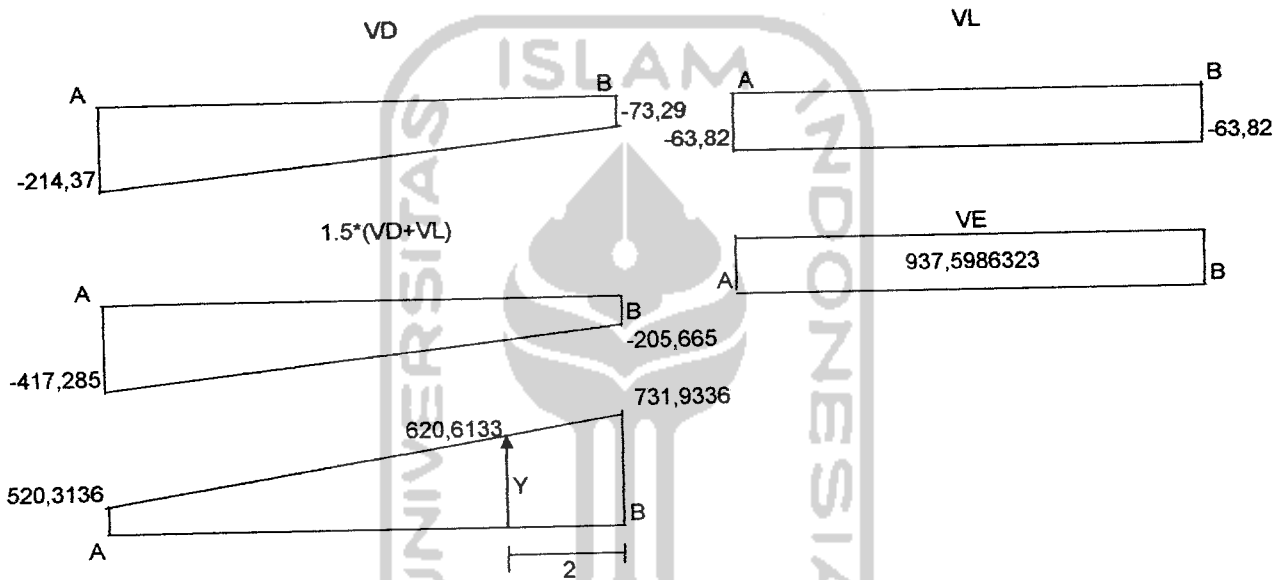


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1638,912 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 116,8065 | mm |
| S PAKAI 2D13-100 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 914,7761 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 209,2704 | mm |
| S PAKAI 2D13-200 | | |

| Perhitungan Sengkang frame 135 dan 433 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5,002 | m |
| L netto | 3,802 | m |
| MG ⁻ | 2486,23 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 937,5986 | KN |
| VDa | -214,37 | KN |
| VDb | -73,29 | KN |
| VLa | -63,82 | KN |
| VLb | -63,82 | KN |

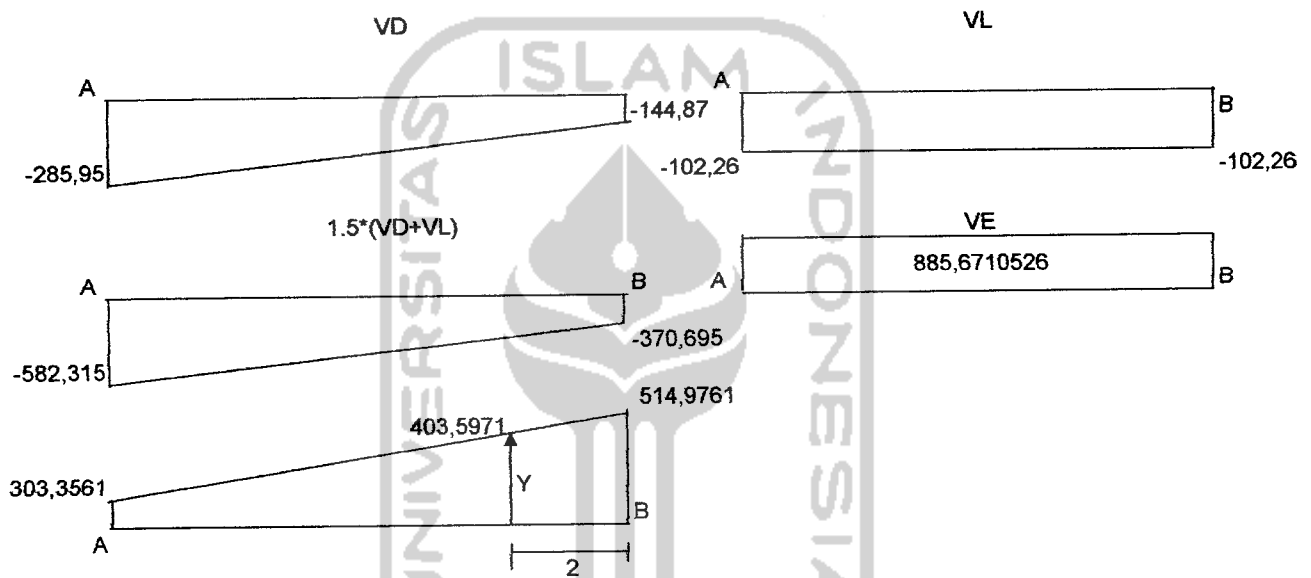


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1219,889 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 156,9287 | mm |
| S PAKAI 2D13-150 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 495,8513 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 386,0746 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Perhitungan Sengkang frame 134 dan 451 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2287,03 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 885,6711 | KN |
| VDa | -285,95 | KN |
| VDb | -144,87 | KN |
| VL _a | -102,26 | KN |
| VL _b | -102,26 | KN |

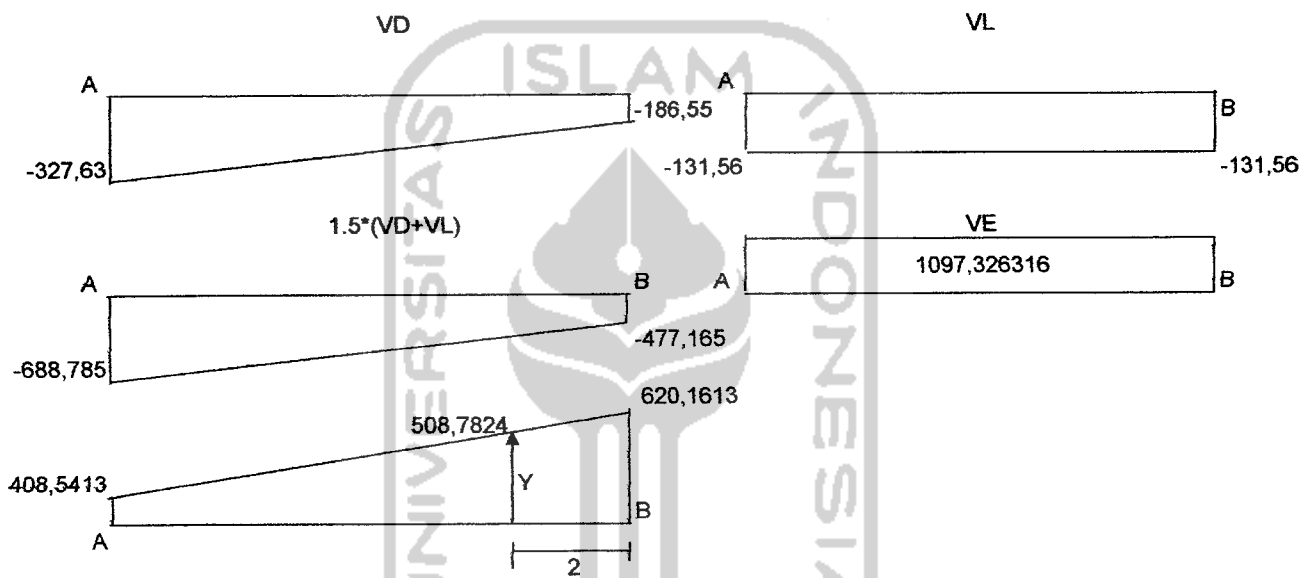


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 858,2934 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 223,0421 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 134,1577 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 713,4724 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 149 dan 450 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 3091,32 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 1097,326 | KN |
| VDa | -327,63 | KN |
| VDb | -186,55 | KN |
| VLa | -131,56 | KN |
| VLb | -131,56 | KN |

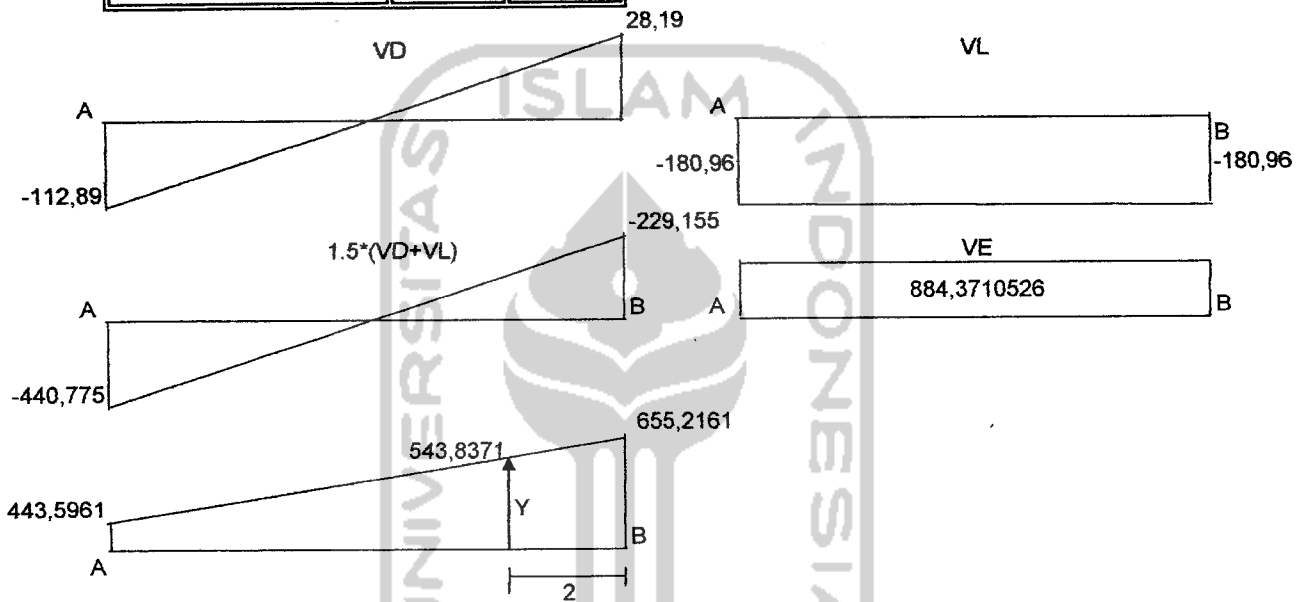


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1033,602 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 185,2121 | mm |
| S PAKAI 2D ₁₃ -180 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 309,4665 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 309,2994 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 148 dan 449 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2282,09 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 884,3711 | KN |
| VDa | -112,89 | KN |
| VDb | 28,19 | KN |
| VL _a | -180,96 | KN |
| VL _b | -180,96 | KN |

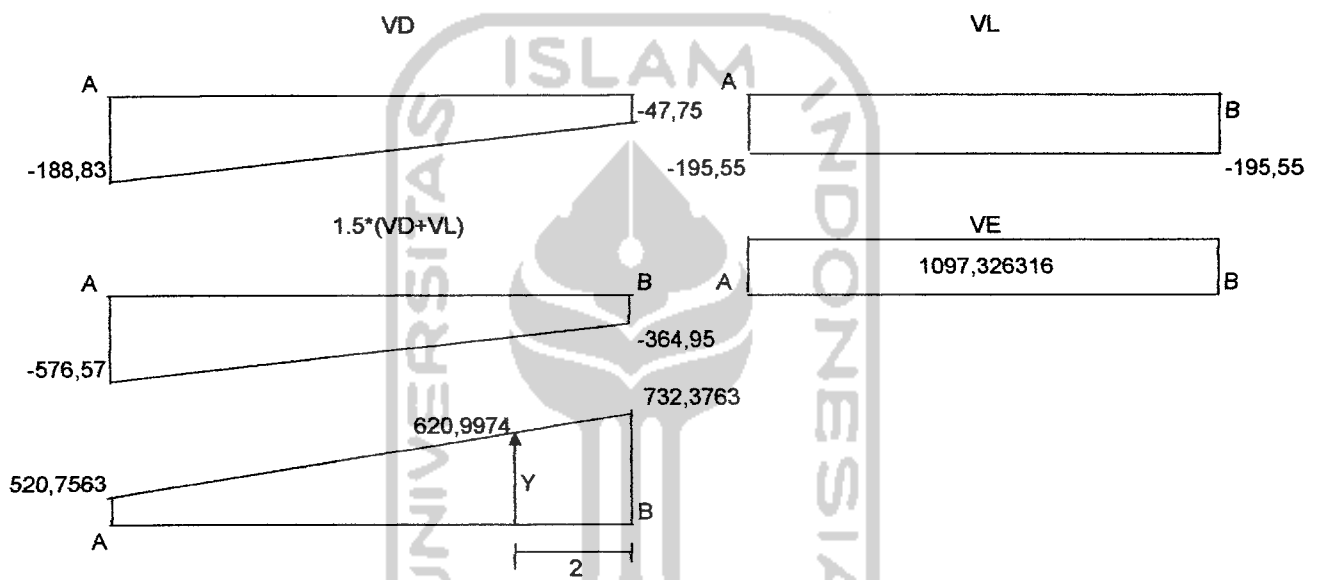


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1092,027 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 175,303 | mm |
| S PAKAI 2D13-170 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 367,891 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 260,1798 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Senggang frame 147 dan 455 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 3091,32 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 1097,326 | KN |
| VDa | -188,83 | KN |
| VDb | -47,75 | KN |
| VL _a | -195,55 | KN |
| VL _b | -195,55 | KN |

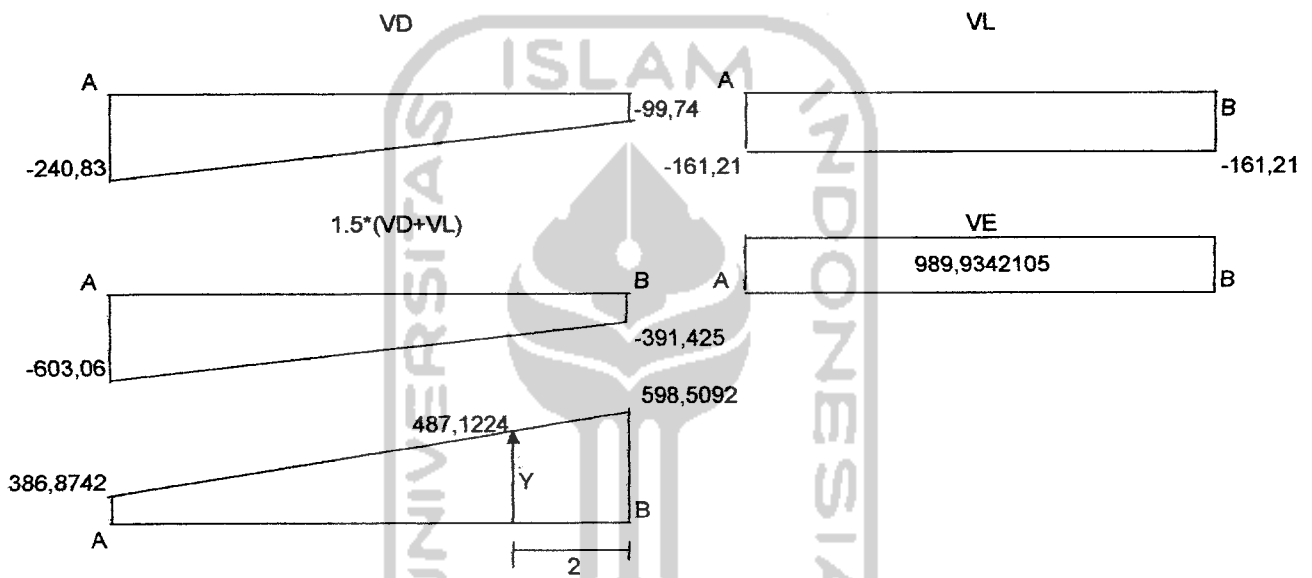


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1220,627 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 156,8338 | mm |
| S PAKAI 2D13-150 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 496,4915 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 192,7884 | mm |
| S PAKAI D ₁₃ -190 | | |

| Perhitungan Sengkang frame 146 dan 454 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2683,23 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 989,9342 | KN |
| VDa | -240,83 | KN |
| VDb | -99,74 | KN |
| VLa | -161,21 | KN |
| VLb | -161,21 | KN |

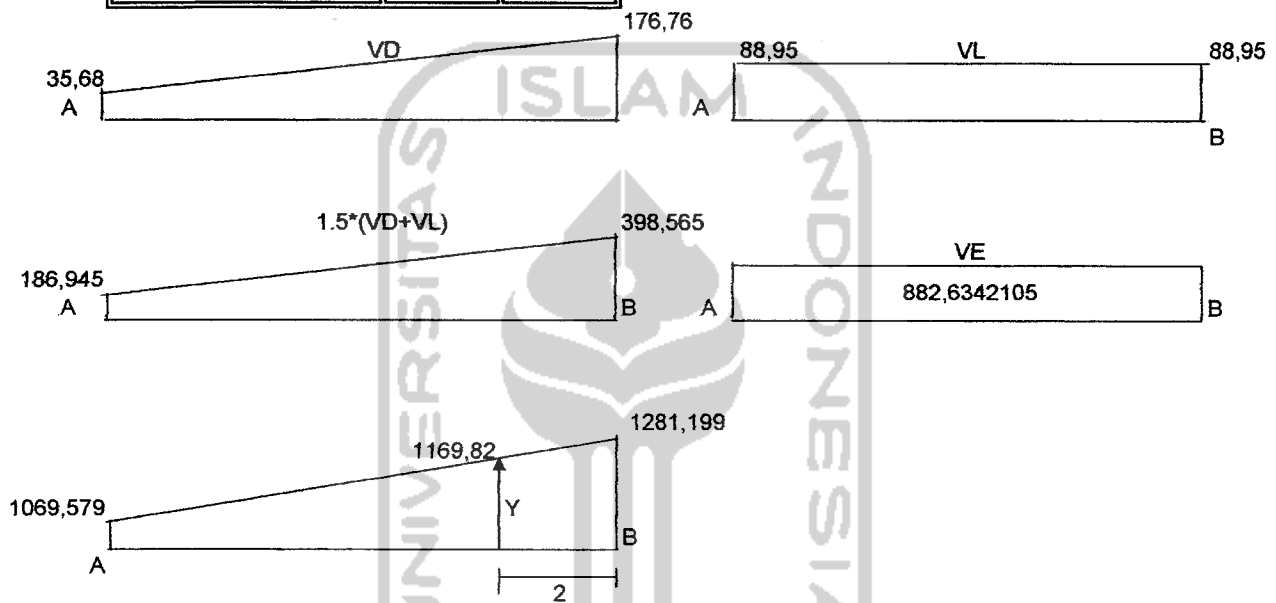


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 997,5154 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 191,9124 | mm |
| S PAKAI 2D ₁₃ -190 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 273,3665 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 350,1446 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 319 dan 460 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2275,49 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 882,6342 | KN |
| VDa | 35,68 | KN |
| VDb | 176,76 | KN |
| VLa | 88,95 | KN |
| VLb | 88,95 | KN |

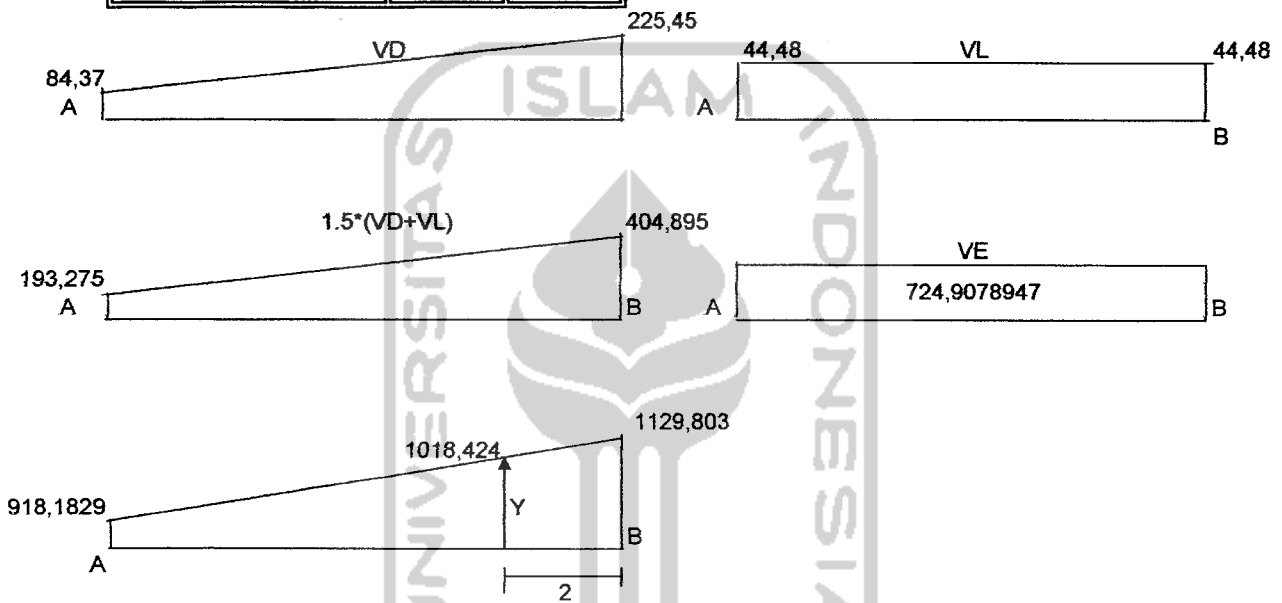


| | | |
|----------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| Fy Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 2135,332 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 89,65144 | mm |
| S PAKAI 2D13-80 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1411,196 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 135,6548 | mm |
| S PAKAI 2D ₁₃₋₁₃₀ | | |

| Perhitungan Sengkang frame 318 dan 459 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 724,9079 | KN |
| VDa | 84,37 | KN |
| VDb | 225,45 | KN |
| VL _a | 44,48 | KN |
| VL _b | 44,48 | KN |

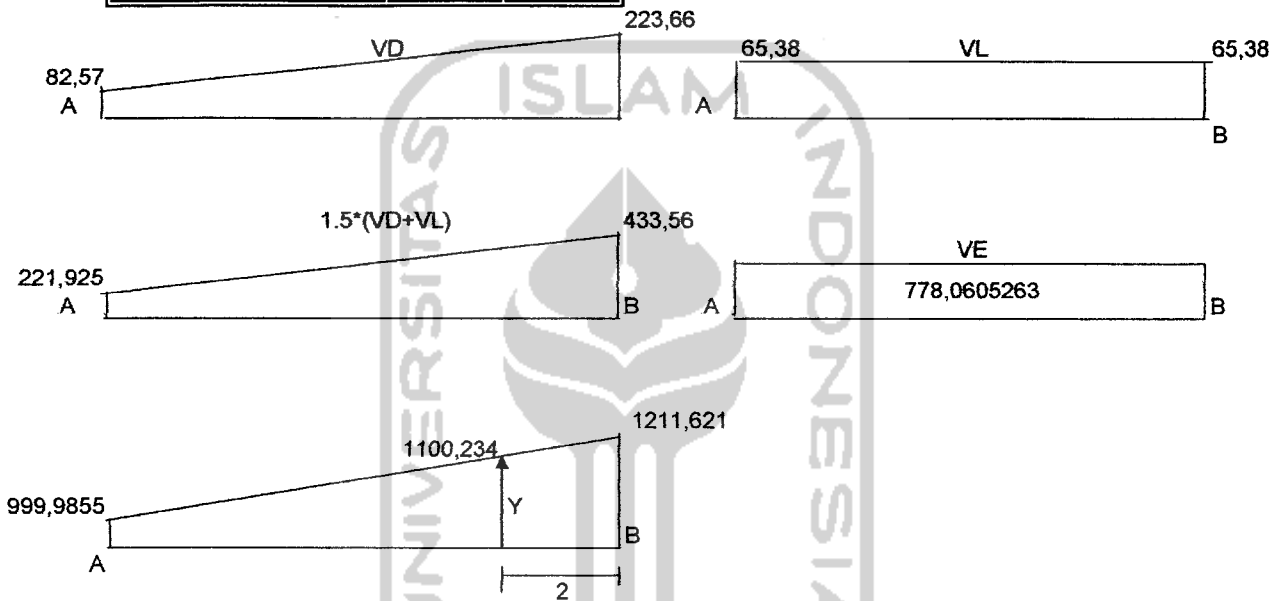


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1883,005 | KN |
| Diameter | 13 | mm |
| A ₀₁ | 132,665 | mm ² |
| Kaki | 4 | |
| S | 101,665 | mm |
| S PAKAI 2D13-100 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1158,869 | KN |
| Diameter | 13 | mm |
| A ₀₁ | 132,665 | mm ² |
| Kaki | 4 | |
| S | 165,1917 | mm |
| S PAKAI 2D ₁₃ -160 | | |

| Perhitungan Sengkang frame 314 dan 471 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 1878,11 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 778,0605 | KN |
| VDa | 82,57 | KN |
| VDb | 223,66 | KN |
| VL _a | 65,38 | KN |
| VL _b | 65,38 | KN |

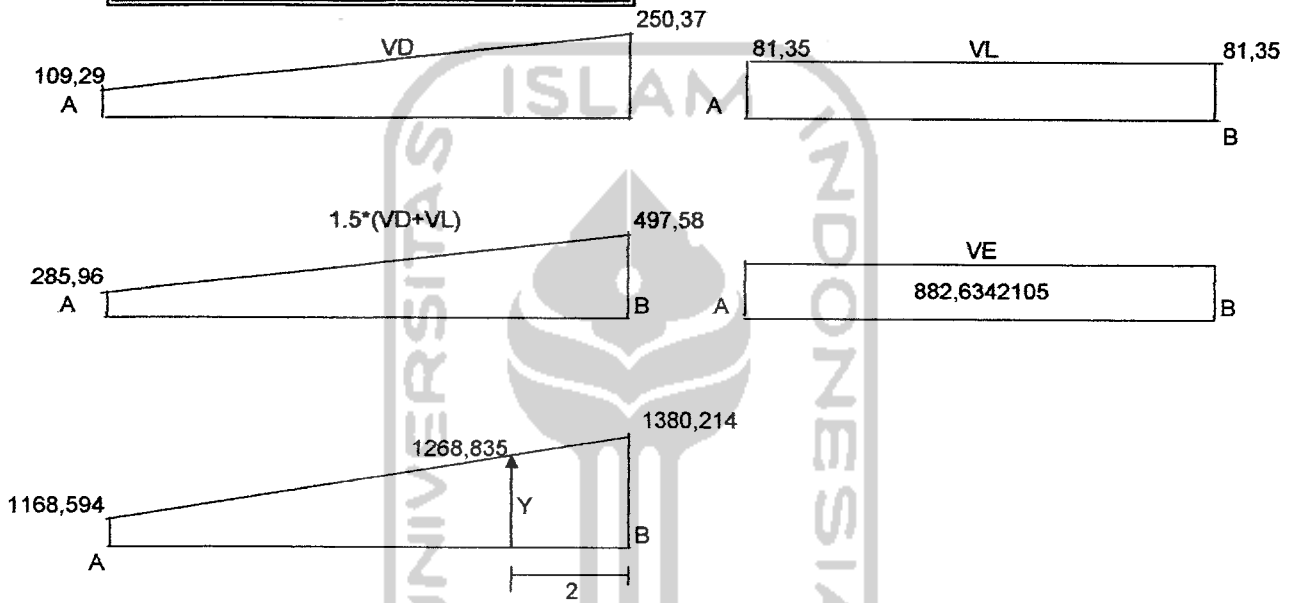


| | | |
|----------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| Fy Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 2019,368 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 94,79978 | mm |
| S PAKAI 2D13-90 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1295,219 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 147,8018 | mm |
| S PAKAI 2D ₁₃ -140 | | |

| Perhitungan Sengkang frame 313 dan 470 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2275,49 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 882,6342 | KN |
| VDa | 109,29 | KN |
| VDb | 250,37 | KN |
| VLa | 81,35 | KN |
| VLb | 81,35 | KN |

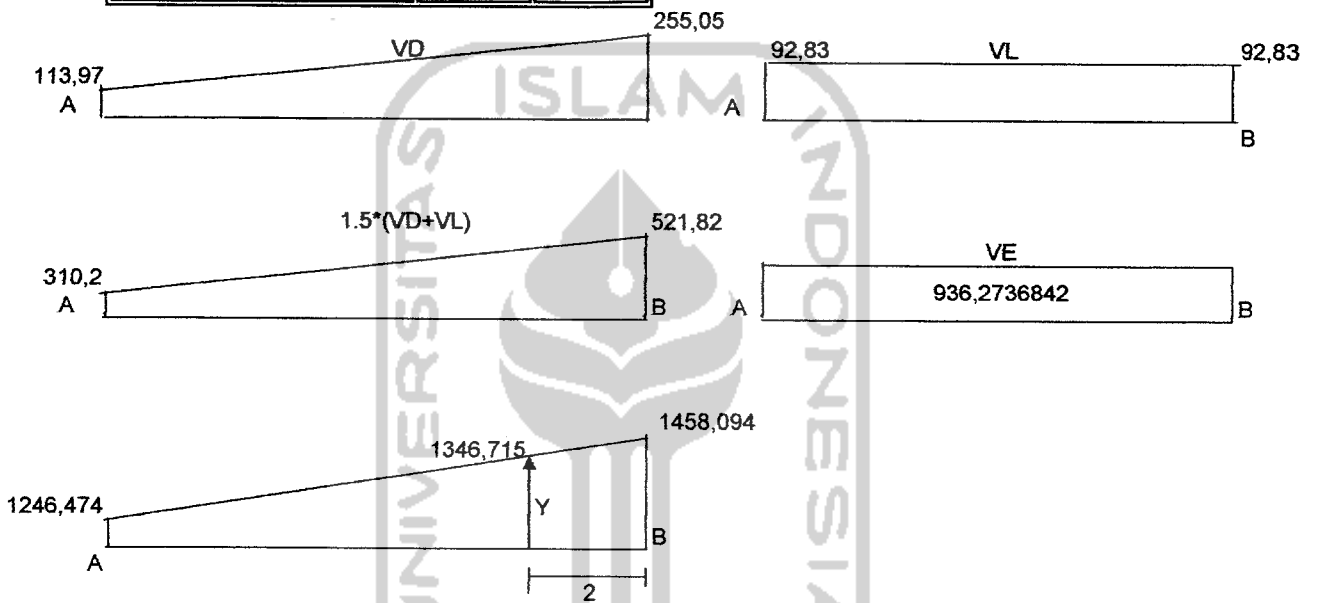


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 2300,357 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 83,21995 | mm |
| S PAKAI 2D13-80 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1576,221 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 121,4522 | mm |
| S PAKAI 2D ₁₃ -120 | | |

| Perhitungan Sengkang frame 305 dan 475 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2479,32 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 936,2737 | KN |
| VDa | 113,97 | KN |
| VDb | 255,05 | KN |
| VLa | 92,83 | KN |
| VLb | 92,83 | KN |

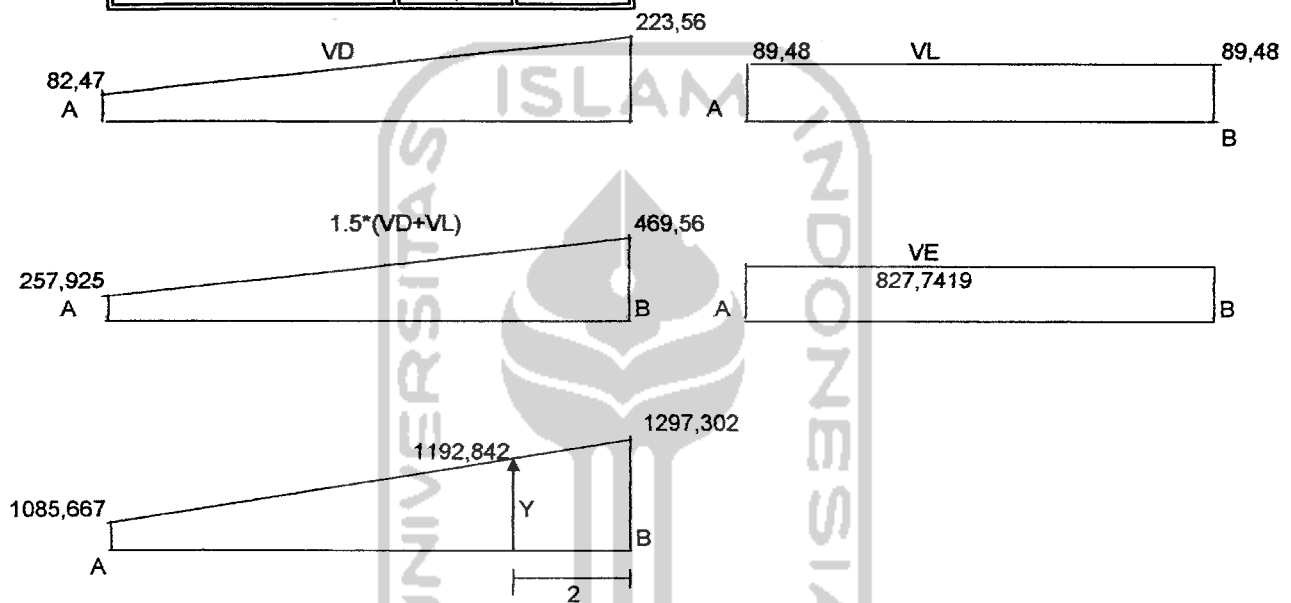


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|-----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 2430,1561 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 78,775019 | mm |
| S PAKAI 2D13-75 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1706,02 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 112,2118 | mm |
| S PAKAI 2D ₁₃ -100 | | |

| Perhitungan Senggang frame 304 dan 474 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 4,052 | m |
| MG | 2275,49 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 827,7419 | KN |
| VDa | 82,47 | KN |
| VDb | 223,56 | KN |
| VLa | 89,48 | KN |
| VLb | 89,48 | KN |



| | | |
|-------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| fc | 24,9 | MPa |
| Fy Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

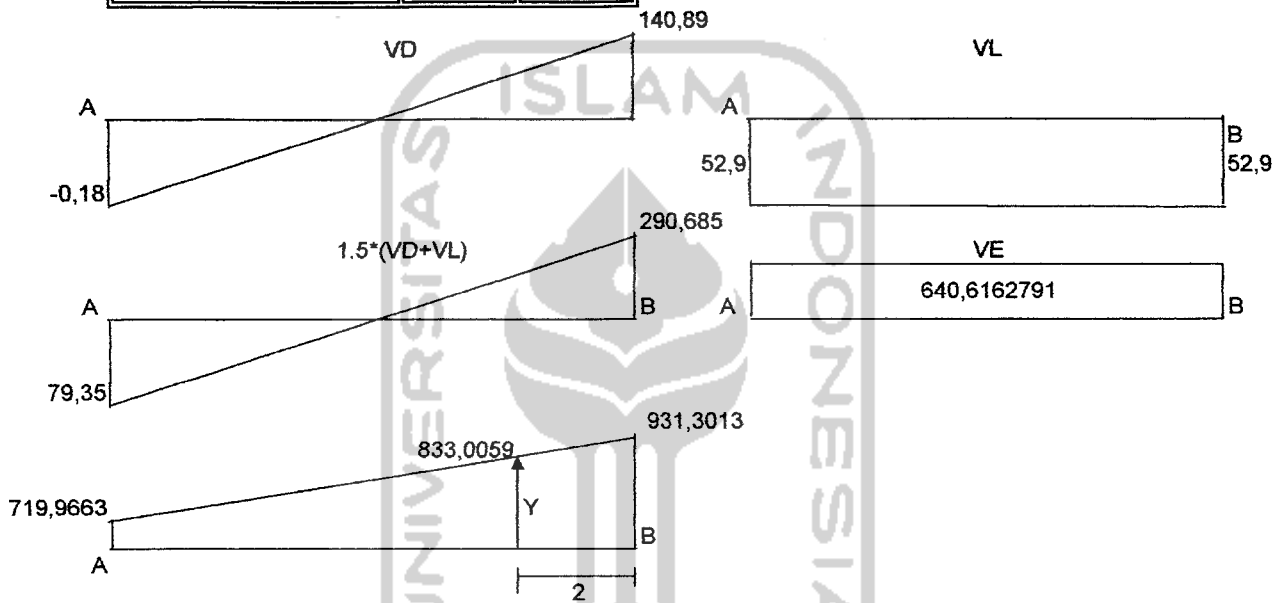
Dalam Sendi Plastis

| | | |
|-----------------|----------|-----------------|
| Vc | 0 | KN |
| Vs ₁ | 2162,17 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 88,53865 | mm |
| S PAKAI 2D13-80 | | |

Luar Sendi Plastis

| | | |
|-------------------------------|----------|-----------------|
| Vc | 538,5042 | KN |
| Vs ₂ | 1449,566 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 132,064 | mm |
| S PAKAI 2D ₁₃ -130 | | |

| Perhitungan Senggang frame 248 dan 408 | | |
|--|----------|-----|
| B Kolom | 0,7 | m |
| L Balok | 5 | m |
| L netto | 4,3 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 640,6163 | KN |
| VDa | -0,18 | KN |
| VDb | 140,89 | KN |
| VL _a | 52,9 | KN |
| VL _b | 52,9 | KN |

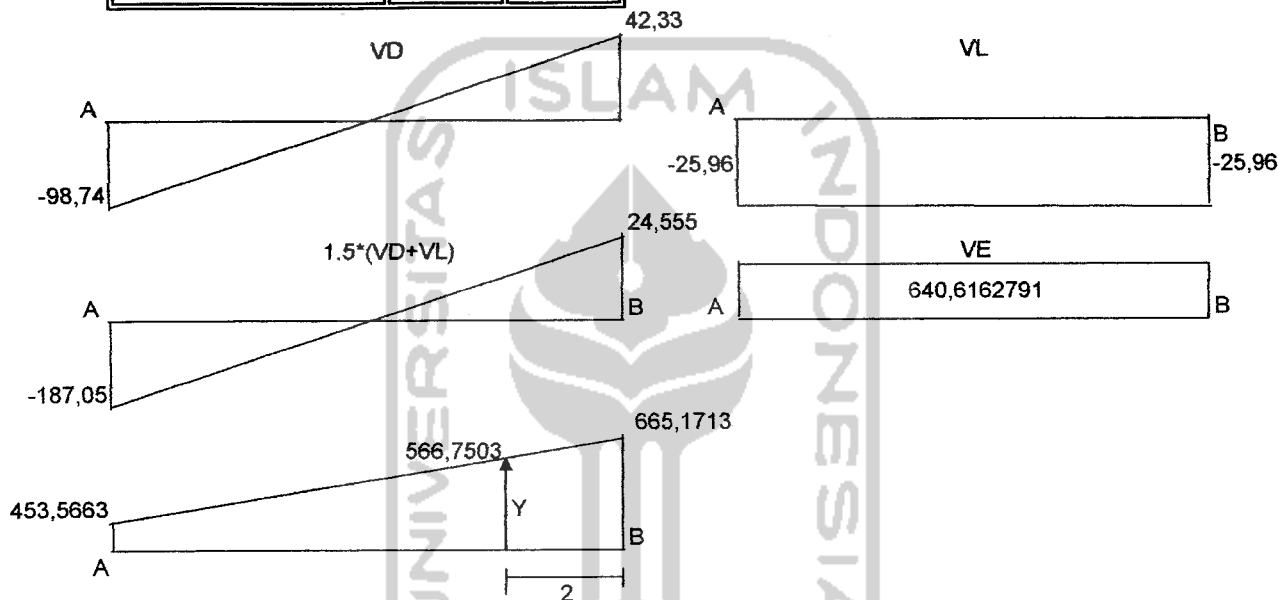


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1552,169 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 123,3343 | mm |
| S PAKAI 2D13-120 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 849,8391 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 225,261 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Perhitungan Senggang frame 247 dan 407 | | |
|--|----------|-----|
| B Kolom | 0,7 | m |
| L Balok | 5 | m |
| L netto | 4,3 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 640,6163 | KN |
| VDa | -98,74 | KN |
| VDb | 42,33 | KN |
| VLa | -25,96 | KN |
| VLb | -25,96 | KN |

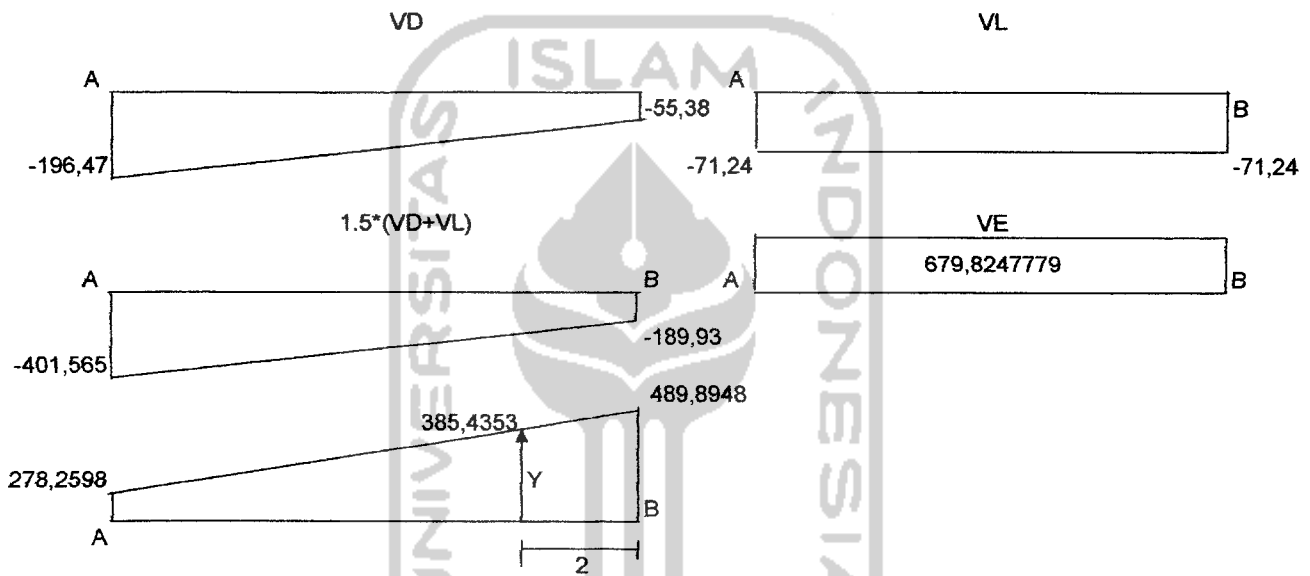


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1108,619 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 172,6794 | mm |
| S PAKAI 2D13-170 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 406,0798 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 235,7118 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 272 dan 419 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 4,052 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 679,8248 | KN |
| VDa | -196,47 | KN |
| VDb | -55,38 | KN |
| VLa | -71,24 | KN |
| VLb | -71,24 | KN |

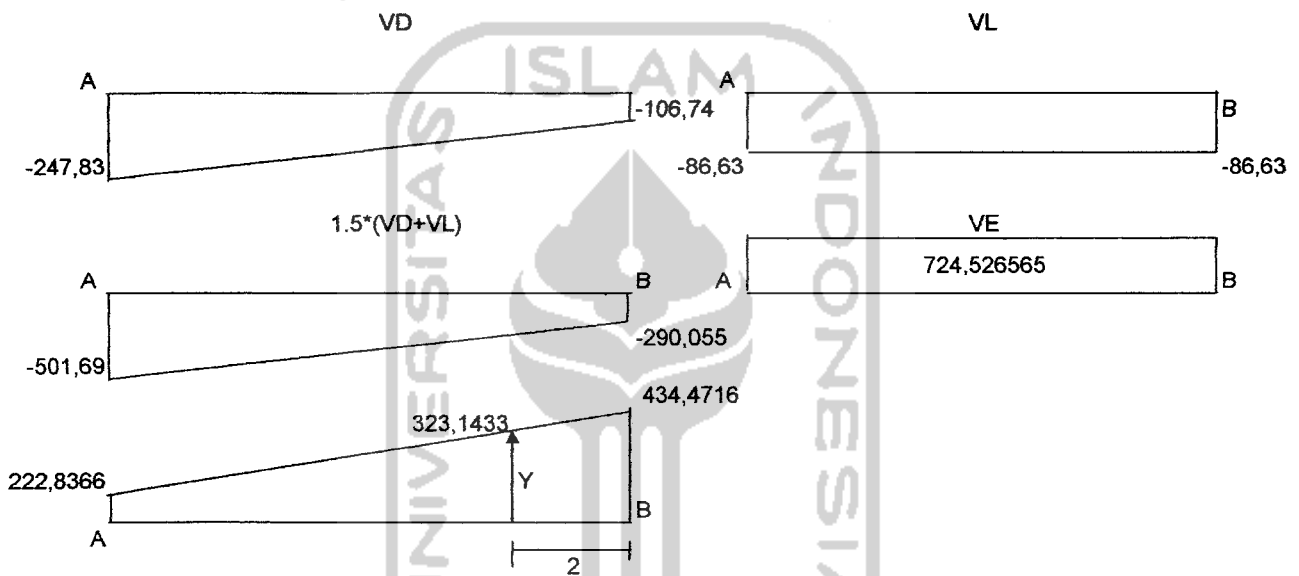


| | | |
|----------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| Fy Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 816,4913 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 234,4613 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 103,8879 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 921,3563 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 292 dan 418 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5,002 | m |
| L netto | 3,802 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 724,5266 | KN |
| VDa | -247,83 | KN |
| VDb | -106,74 | KN |
| VLa | -86,63 | KN |
| VLb | -86,63 | KN |

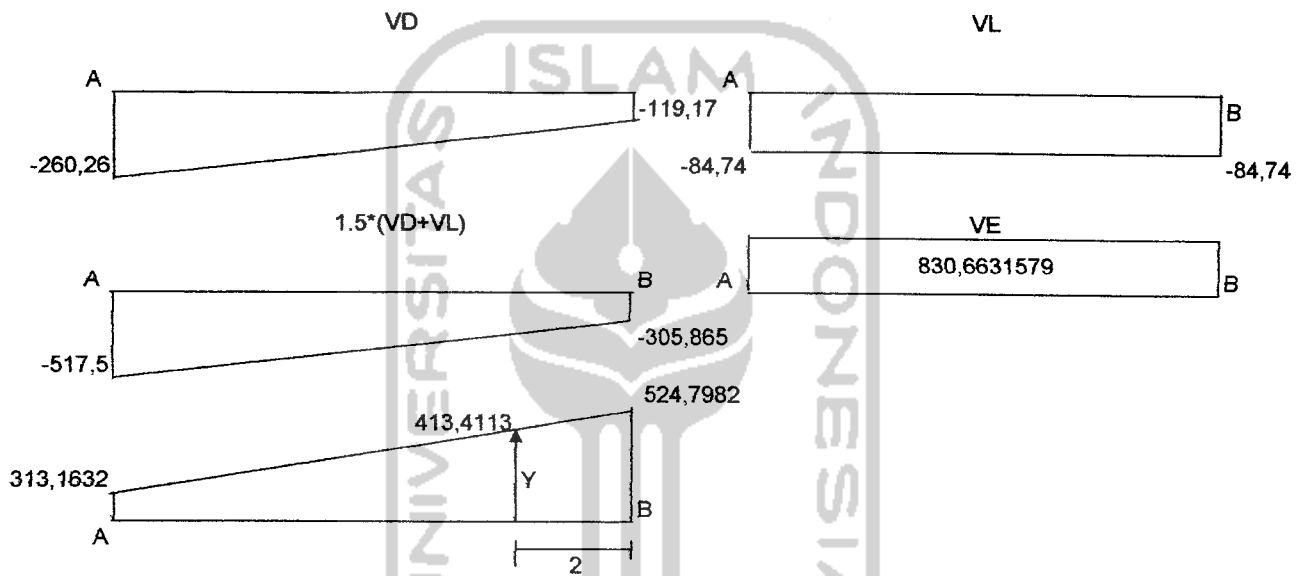


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 724,1193 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 264,3703 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 0,068032 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 1406950 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 291 dan 396 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2078 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 830,6632 | KN |
| VDa | -260,26 | KN |
| VDb | -119,17 | KN |
| VLa | -84,74 | KN |
| VLb | -84,74 | KN |

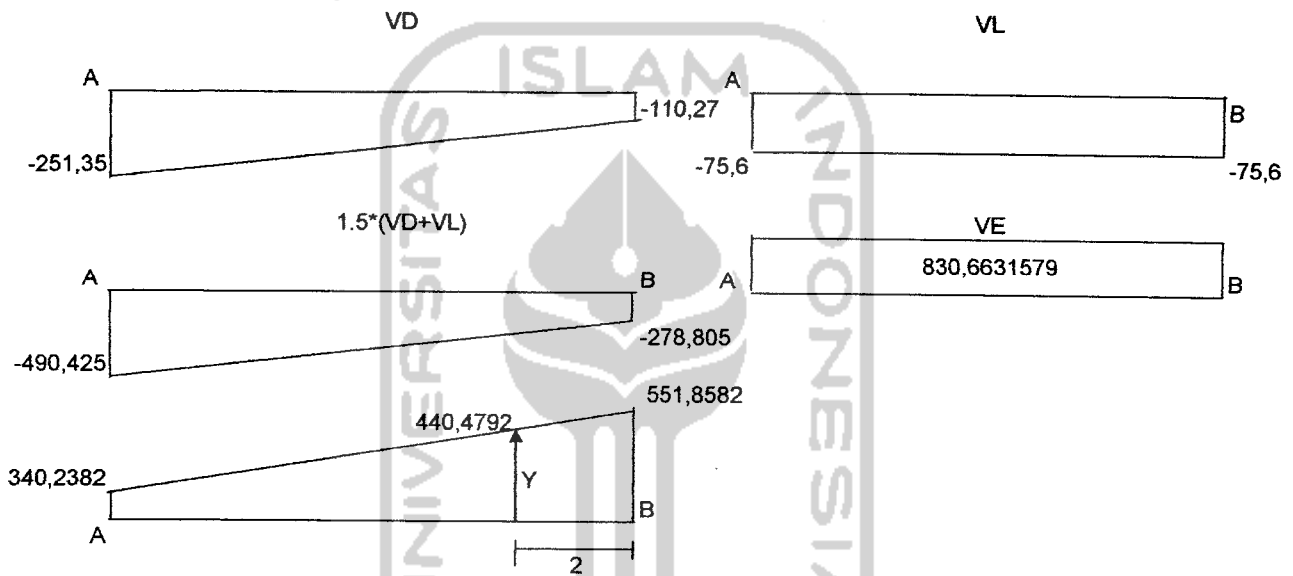


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 874,6636 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 218,8677 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 150,5147 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 635,9366 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Senggang frame 290 dan 395 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2078 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 830,6632 | KN |
| VDa | -251,35 | KN |
| VDb | -110,27 | KN |
| VL _a | -75,6 | KN |
| VL _b | -75,6 | KN |

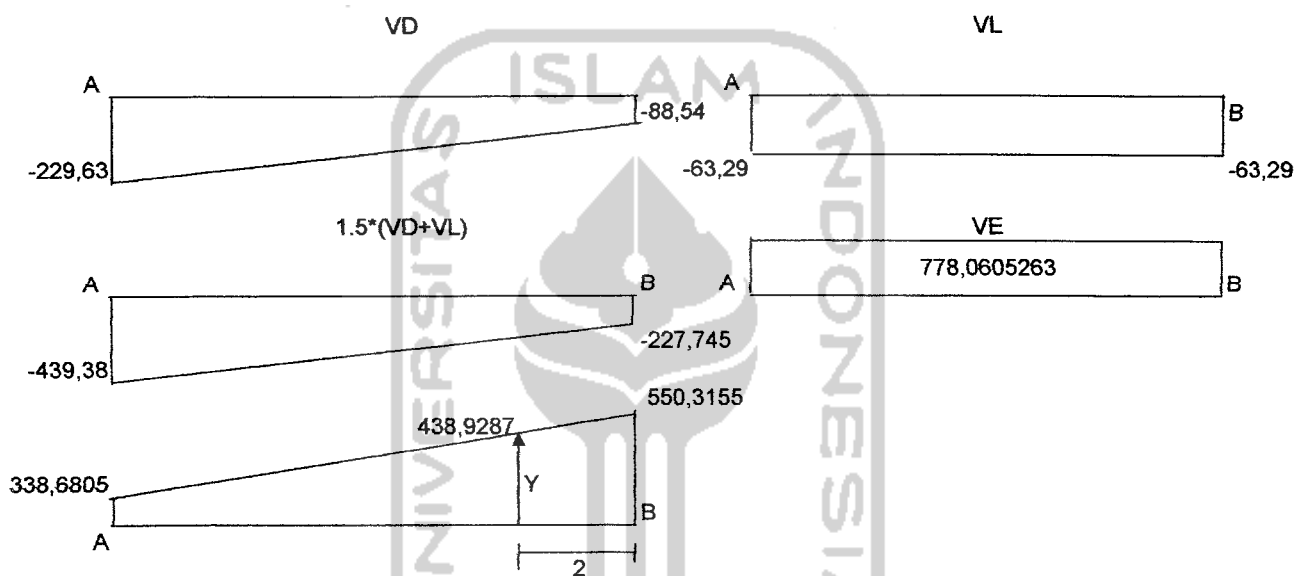


| | | |
|----------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| Fy Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 919,7636 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 208,1357 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 195,6279 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 489,2851 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 289 dan 394 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 1878,11 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 778,0605 | KN |
| VDa | -229,63 | KN |
| VDb | -88,54 | KN |
| VLa | -63,29 | KN |
| VLb | -63,29 | KN |

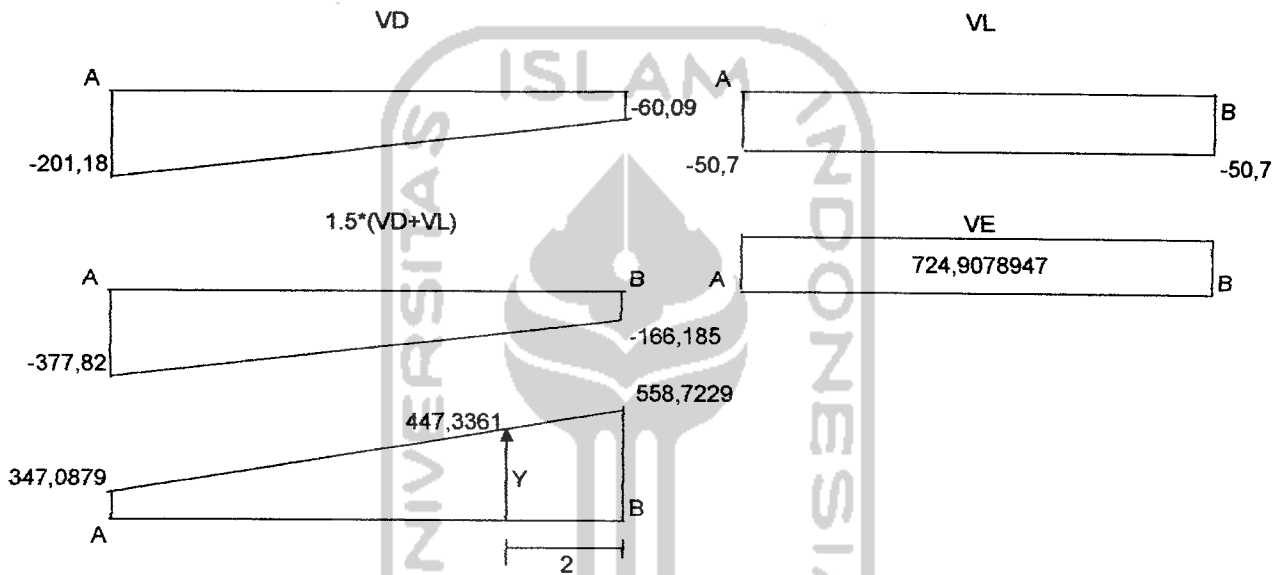


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 917,1925 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 208,7191 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 193,0436 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 495,835 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Senggang frame 299 dan 382 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 724,9079 | KN |
| VDa | -201,18 | KN |
| VDb | -60,09 | KN |
| VLa | -50,7 | KN |
| VLb | -50,7 | KN |

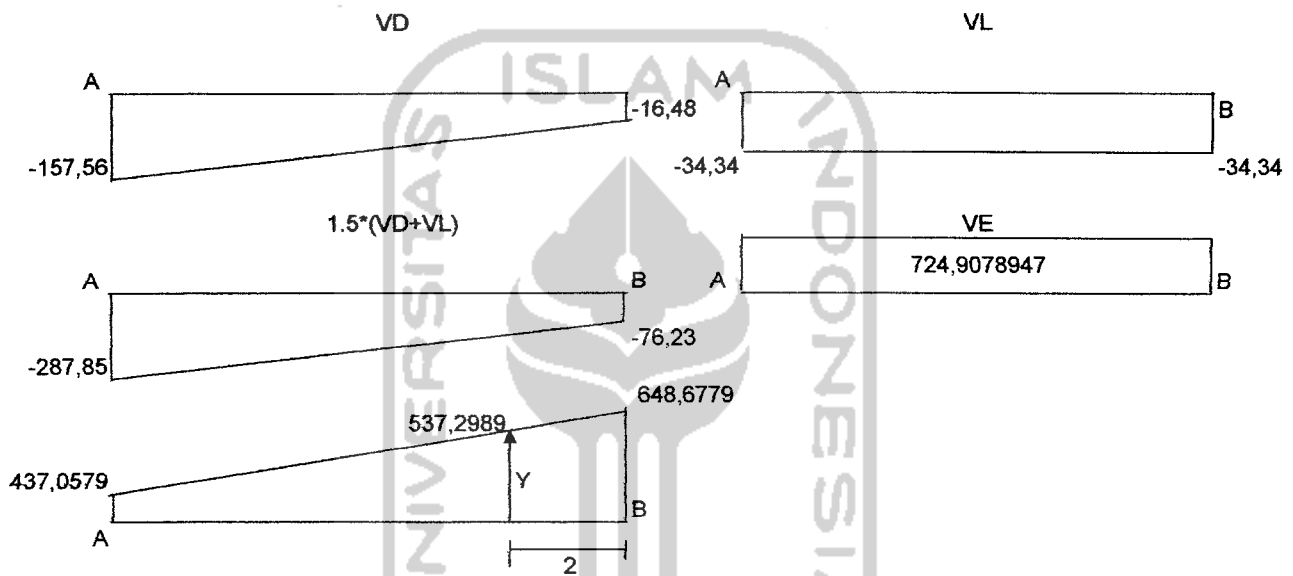


| | | |
|----------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| Fy Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 931,2048 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 205,5784 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 207,0559 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 462,2799 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Senggang frame 298 dan 381 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 724,9079 | KN |
| VDa | -157,56 | KN |
| VDb | -16,48 | KN |
| VLa | -34,34 | KN |
| VLb | -34,34 | KN |

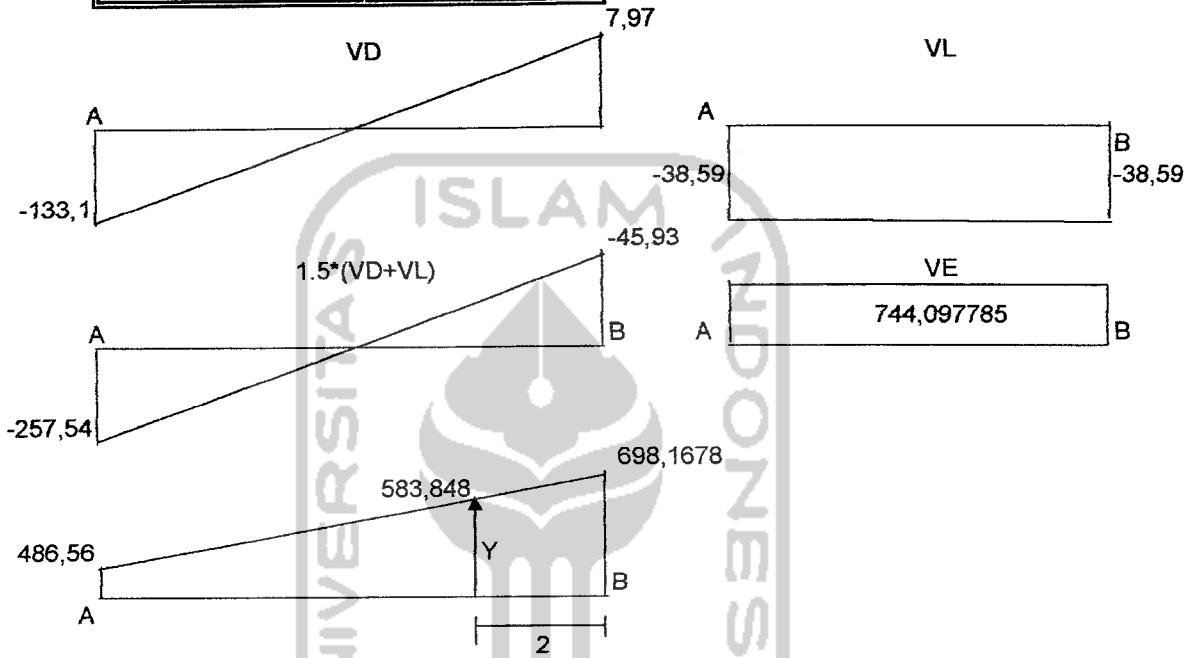


| | | |
|----------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| Fy Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1081,13 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 177,0699 | mm |
| S PAKAI 2D ₁₃ -170 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 356,9941 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 268,1215 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Senggang frame 297 dan 380 | | |
|--|---------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,702 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 744,098 | KN |
| VDa | -133,1 | KN |
| VDb | 7,97 | KN |
| VLa | -38,59 | KN |
| VLb | -38,59 | KN |



| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

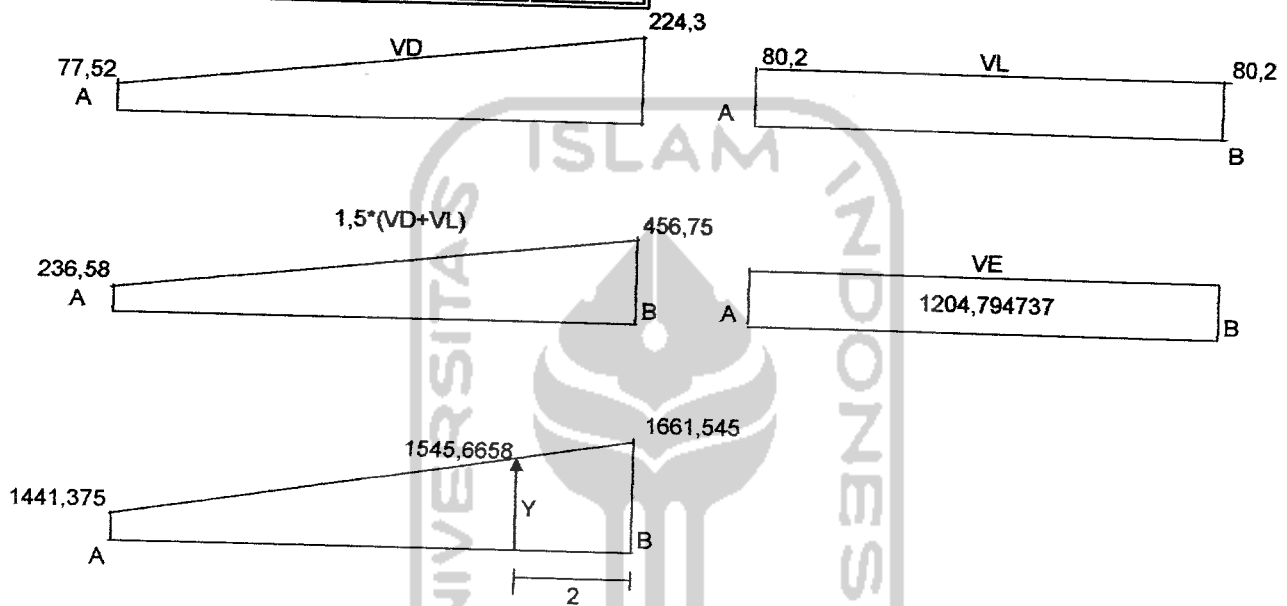
| Dalam Sendi Plastis | | |
|---------------------|---------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1163,61 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 164,518 | mm |
| S PAKAI 2D13-160 | | |

| Luar Sendi Plastis | | |
|-----------------------------|---------|-----------------|
| V _c | 538,504 | KN |
| V _{s2} | 434,577 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 220,255 | mm |
| S PAKAI D ₁₃₋₂₀₀ | | |

LAMPIRAN
PERHITUNGAN TULANGAN GESER
BALOK INDUK TENGAH



| Perhitungan Senggang frame 550 dan 660 | | |
|--|-----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 3499,7 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 1204,7947 | KN |
| VDa | 77,52 | KN |
| VDb | 224,3 | KN |
| VL _a | 80,2 | KN |
| VL _b | 80,2 | KN |

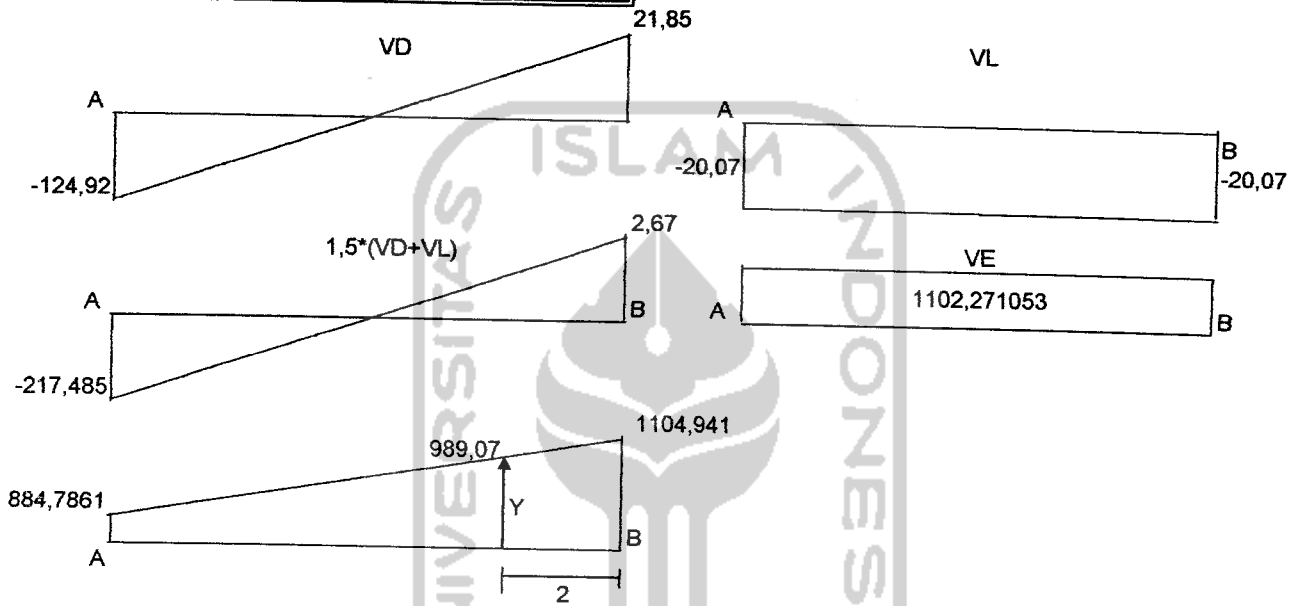


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 2769,241 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 69,12926 | mm |
| S PAKAI 2D13-65 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 2037,605 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 93,95126 | mm |
| S PAKAI 2D13-90 | | |

| Perhitungan Senggang frame 554 dan 660 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2690,43 | KNm |
| MG ⁺ | 1498,2 | KNm |
| VE | 1102,271 | KN |
| VDa | -124,92 | KN |
| VDb | 21,85 | KN |
| VL _a | -20,07 | KN |
| VL _b | -20,07 | KN |

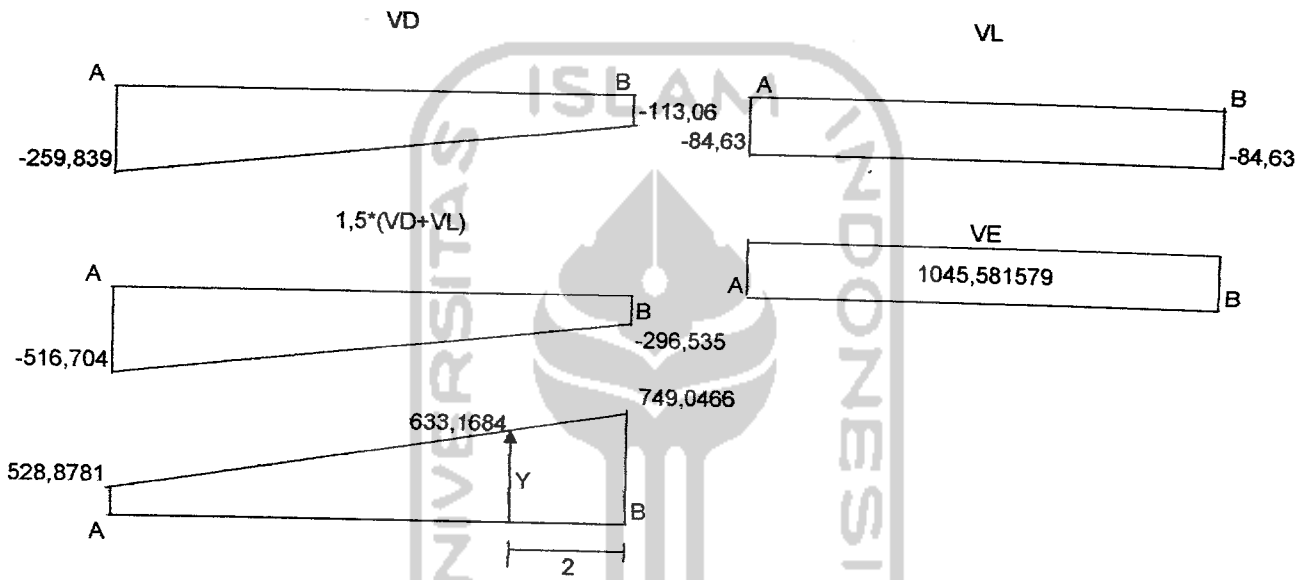


| | | |
|-------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| fc | 24,9 | MPa |
| Fy Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| Vc | 0 | KN |
| Vs ₁ | 1841,568 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 103,9525 | mm |
| S PAKAI 2D13-100 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| Vc | 538,5042 | KN |
| Vs ₂ | 1109,946 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 172,4729 | mm |
| S PAKAI 2D ₁₃ -170 | | |

| Perhitungan Sengkang frame 553 dan 658 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2894,69 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 1045,582 | KN |
| VDa | -259,839 | KN |
| VDb | -113,06 | KN |
| VLa | -84,63 | KN |
| VLb | -84,63 | KN |

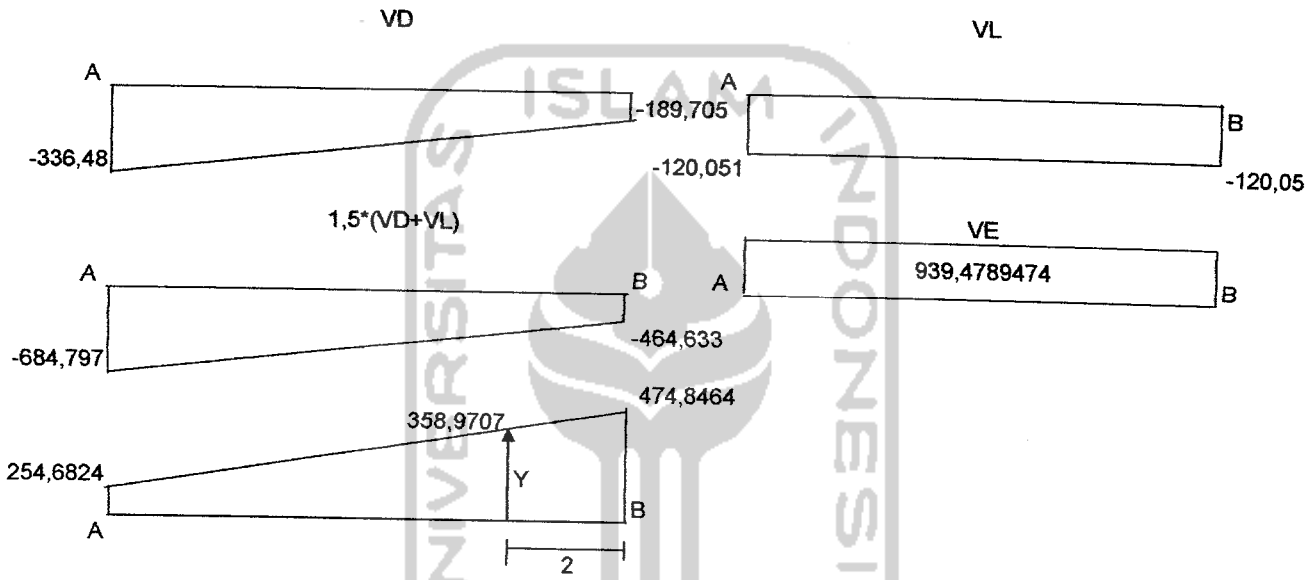


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1248,411 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 153,3434 | mm |
| S PAKAI 2D13-150 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 516,7765 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 185,2209 | mm |
| S PAKAI D13-180 | | |

| Perhitungan Sengkang frame 552 dan 669 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2491,5 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 939,4789 | KN |
| VDa | -336,48 | KN |
| VDb | -189,705 | KN |
| VLa | -120,051 | KN |
| VLb | -120,05 | KN |

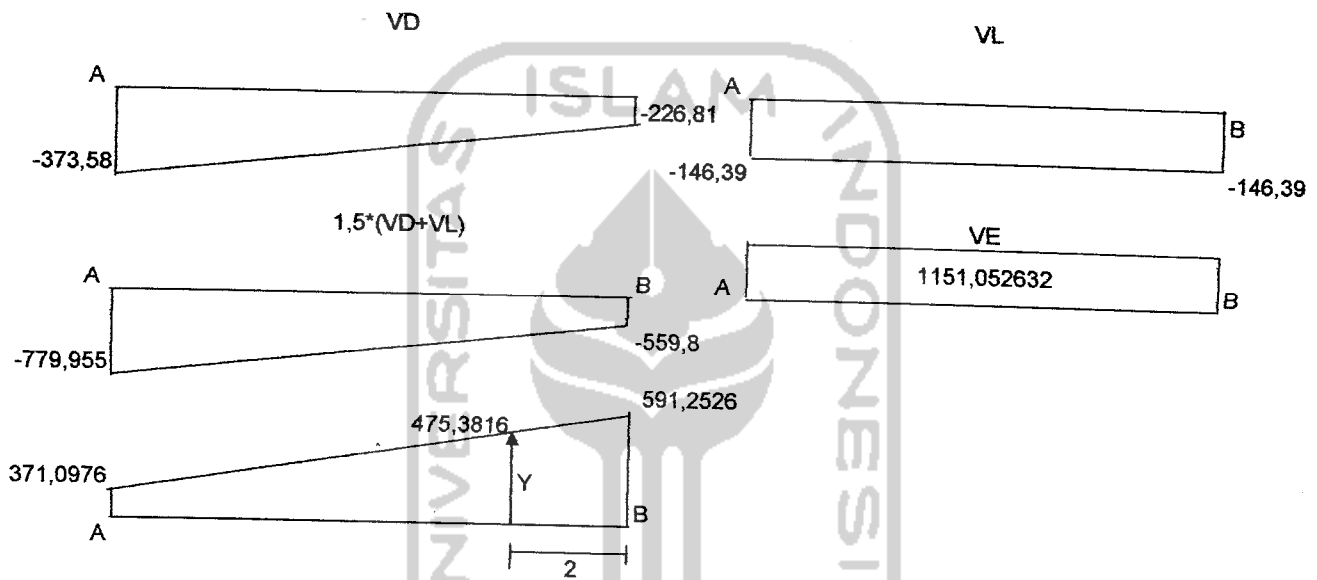


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 791,4107 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 241,8916 | mm |
| S PAKAI 2D ₁₃ -200 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 59,78027 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 1601,16 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 559 dan 668 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 3295,48 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 1151,053 | KN |
| VDa | -373,58 | KN |
| VDb | -226,81 | KN |
| VL _a | -146,39 | KN |
| VL _b | -146,39 | KN |

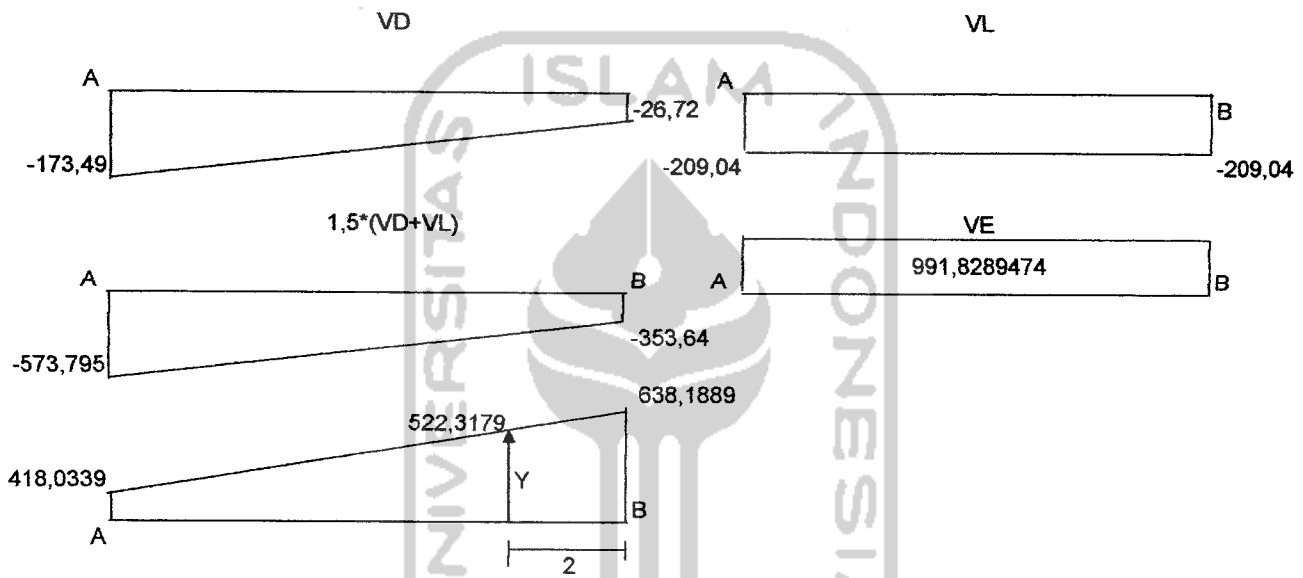


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 985,4211 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 194,2678 | mm |
| S PAKAI 2D ₁₃ -190 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 253,7985 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 377,141 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Senggang frame 558 dan 667 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2690,43 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 991,8289 | KN |
| VDa | -173,49 | KN |
| VDb | -26,72 | KN |
| VLa | -209,04 | KN |
| VLb | -209,04 | KN |

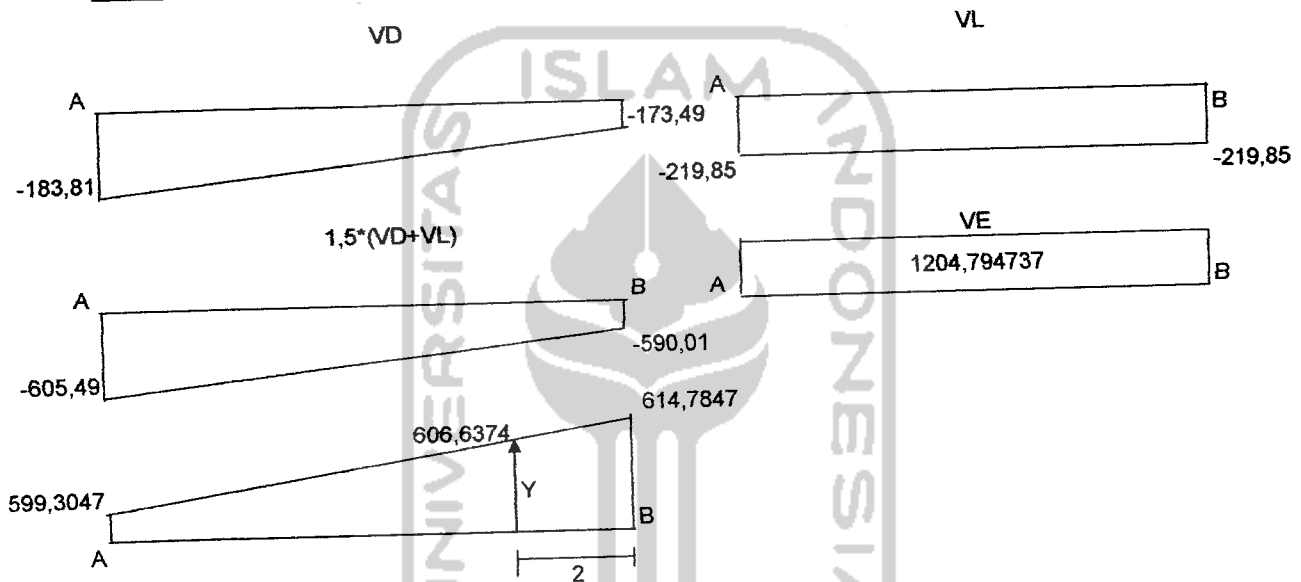


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1063,648 | KN |
| Diameter | 13 | mm |
| A ₀₁ | 132,665 | mm ² |
| Kaki | 4 | |
| S | 179,9802 | mm |
| S PAKAI 2D ₁₃ -170 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 332,0257 | KN |
| Diameter | 13 | mm |
| A ₀₁ | 132,665 | mm ² |
| Kaki | 2 | |
| S | 288,2843 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 557 dan 672 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 3499,7 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 1204,795 | KN |
| VDa | -183,81 | KN |
| VDb | -173,49 | KN |
| VL _a | -219,85 | KN |
| VL _b | -219,85 | KN |

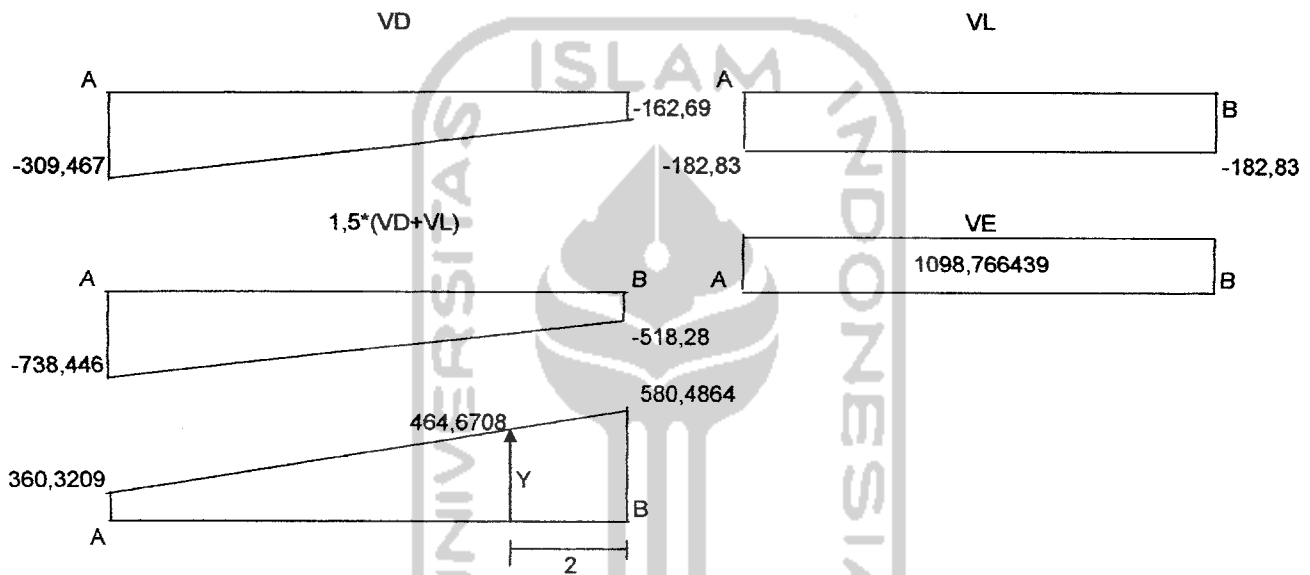


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| F _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1024,641 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 186,8318 | mm |
| S PAKAI 2D ₁₃ -180 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 472,5581 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 202,5524 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 556 dan 671 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5,002 | m |
| L netto | 3,802 | m |
| MG ⁻ | 3098,99 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 1098,766 | KN |
| VDa | -309,467 | KN |
| VDb | -162,69 | KN |
| VLa | -182,83 | KN |
| VLb | -182,83 | KN |

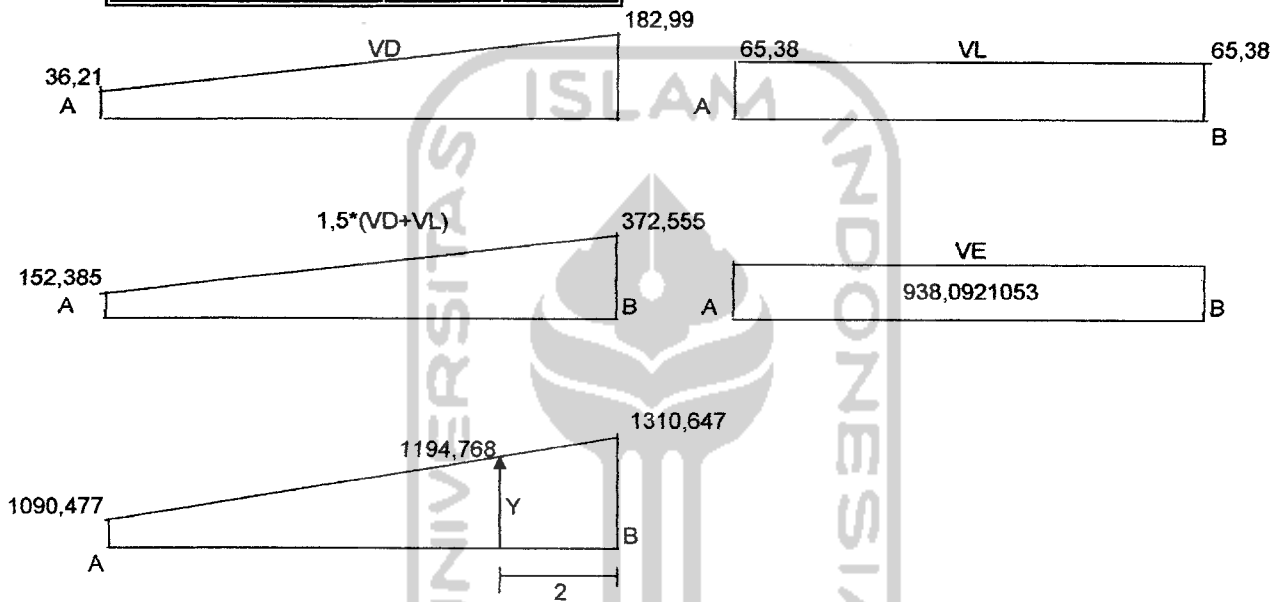


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 967,4774 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 197,8709 | mm |
| S PAKAI 2D ₁₃ -190 | | |

| Luar Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 235,9472 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 405,6747 | mm |
| S PAKAI D ₁₃ -200 | | |

| Perhitungan Sengkang frame 612 dan 675 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2486,23 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 938,0921 | KN |
| VDa | 36,21 | KN |
| VDb | 182,99 | KN |
| VLa | 65,38 | KN |
| VLb | 65,38 | KN |

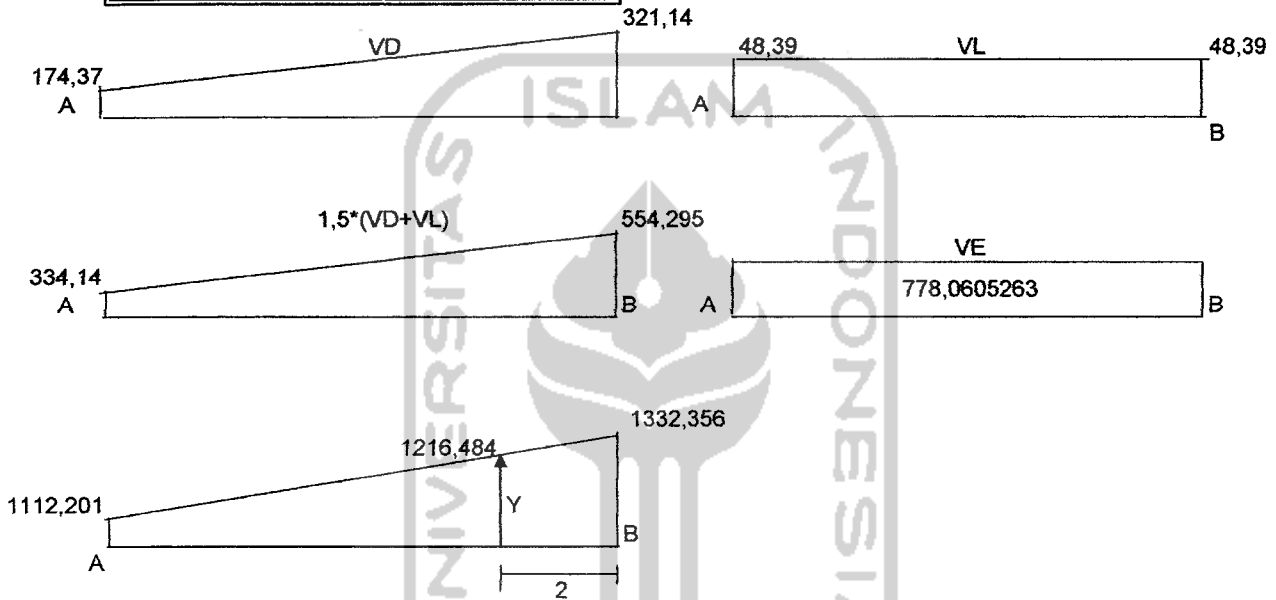


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 2184,412 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 87,63713 | mm |
| S PAKAI 2D13-80 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1452,776 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 131,7723 | mm |
| S PAKAI 2D13-130 | | |

| Perhitungan Senggang frame 611 dan 674 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 1878,11 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 778,0605 | KN |
| VDa | 174,37 | KN |
| VDb | 321,14 | KN |
| VLa | 48,39 | KN |
| VLb | 48,39 | KN |

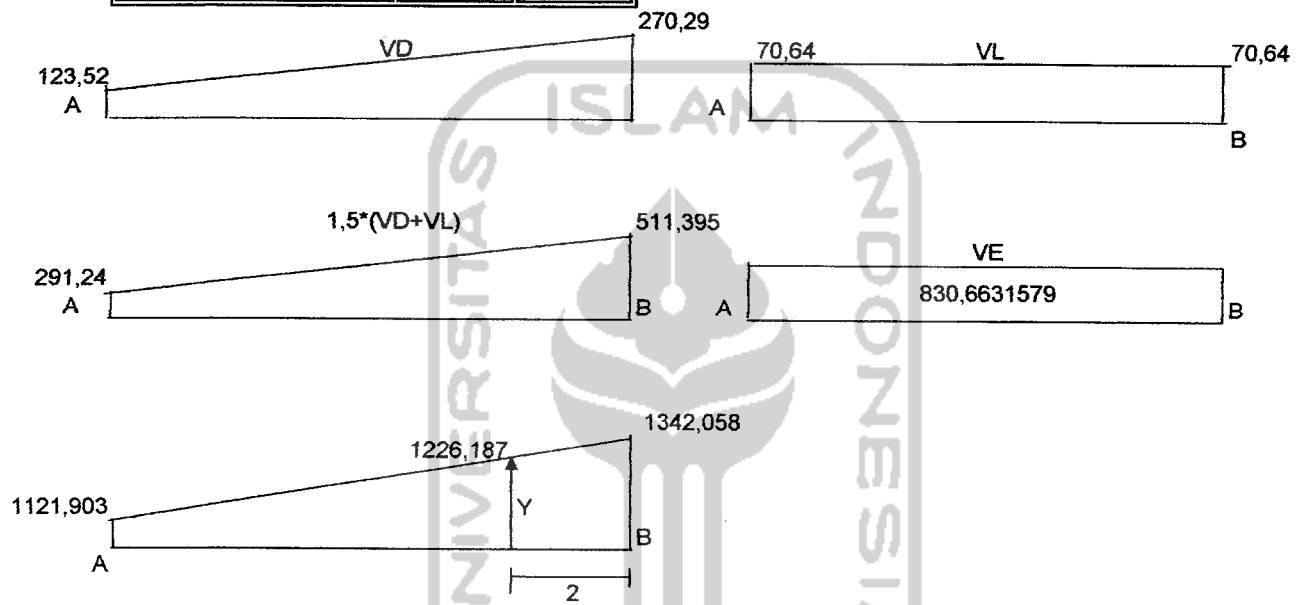


| | | |
|-------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| fc | 24,9 | MPa |
| Fy Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| Vc | 0 | KN |
| Vs ₁ | 2220,593 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 86,20924 | mm |
| S PAKAI 2D13-80 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| Vc | 538,5042 | KN |
| Vs ₂ | 1488,97 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 128,5691 | mm |
| S PAKAI 2D13-120 | | |

| Perhitungan Sengkang frame 609 dan 681 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2078 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 830,6632 | KN |
| VDa | 123,52 | KN |
| VDb | 270,29 | KN |
| VLa | 70,64 | KN |
| VLb | 70,64 | KN |

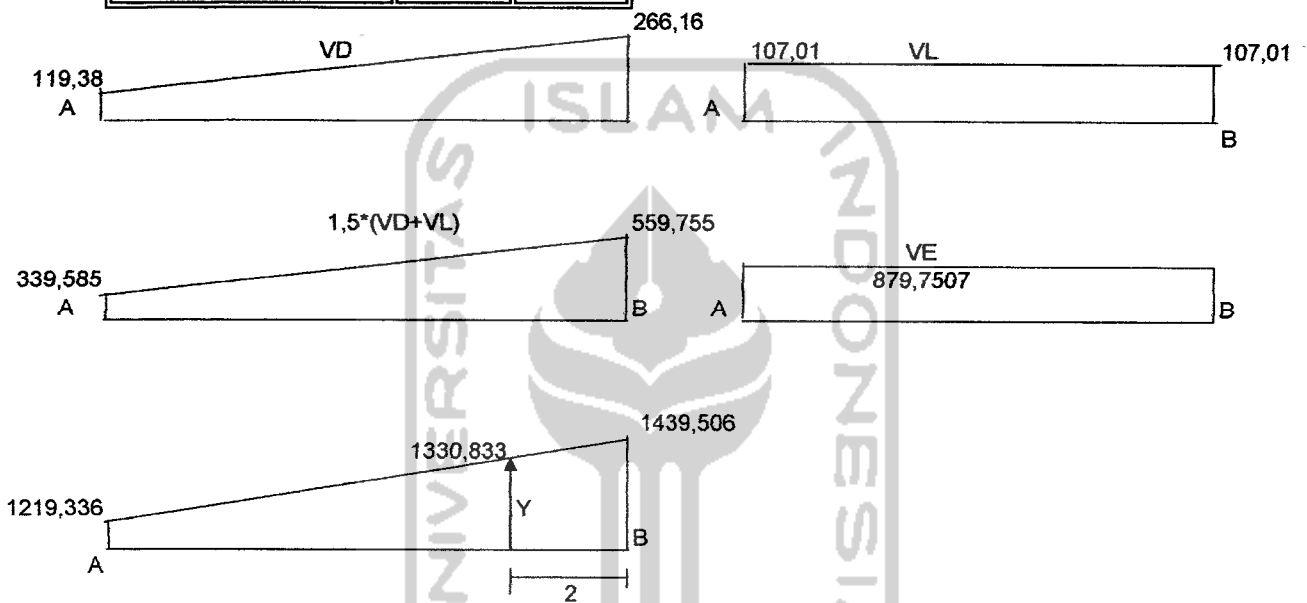


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 2236,764 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 85,58598 | mm |
| S PAKAI 2D13-80 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1505,141 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 127,1878 | mm |
| S PAKAI 2D13-120 | | |

| Perhitungan Sengkang frame 603 dan 683 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 4,052 | m |
| MG | 2486,23 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 879,7507 | KN |
| VDa | 119,38 | KN |
| VDb | 266,16 | KN |
| VLa | 107,01 | KN |
| VLb | 107,01 | KN |



| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

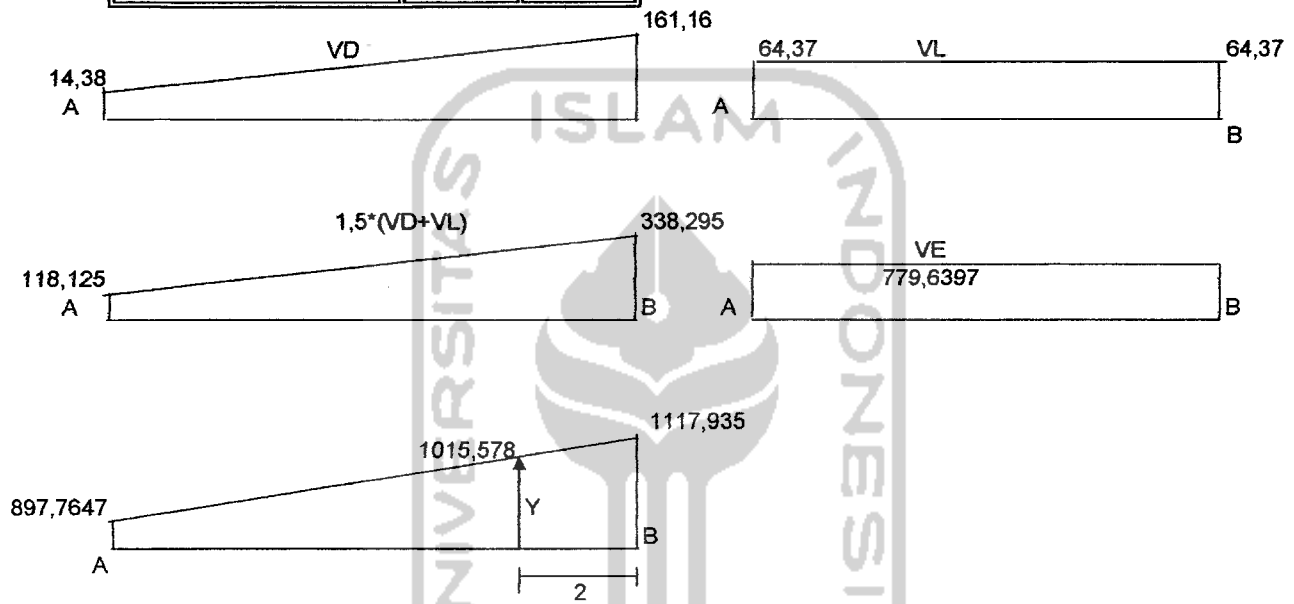
Dalam Sendi Plastis

| | | |
|-----------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 2399,176 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 79,79222 | mm |
| S PAKAI 2D13-70 | | |

Luar Sendi Plastis

| | | |
|------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1679,552 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 113,9802 | mm |
| S PAKAI 2D13-100 | | |

| Perhitungan Senggang frame 581 dan 651 | | |
|--|----------|-----|
| B Kolom | 0,7 | m |
| L Balok | 5 | m |
| L netto | 4,302 | m |
| MG | 2275,49 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 779,6397 | KN |
| VDa | 14,38 | KN |
| VDb | 161,16 | KN |
| VL _a | 64,37 | KN |
| VL _b | 64,37 | KN |



| | | |
|----------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| Fy Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

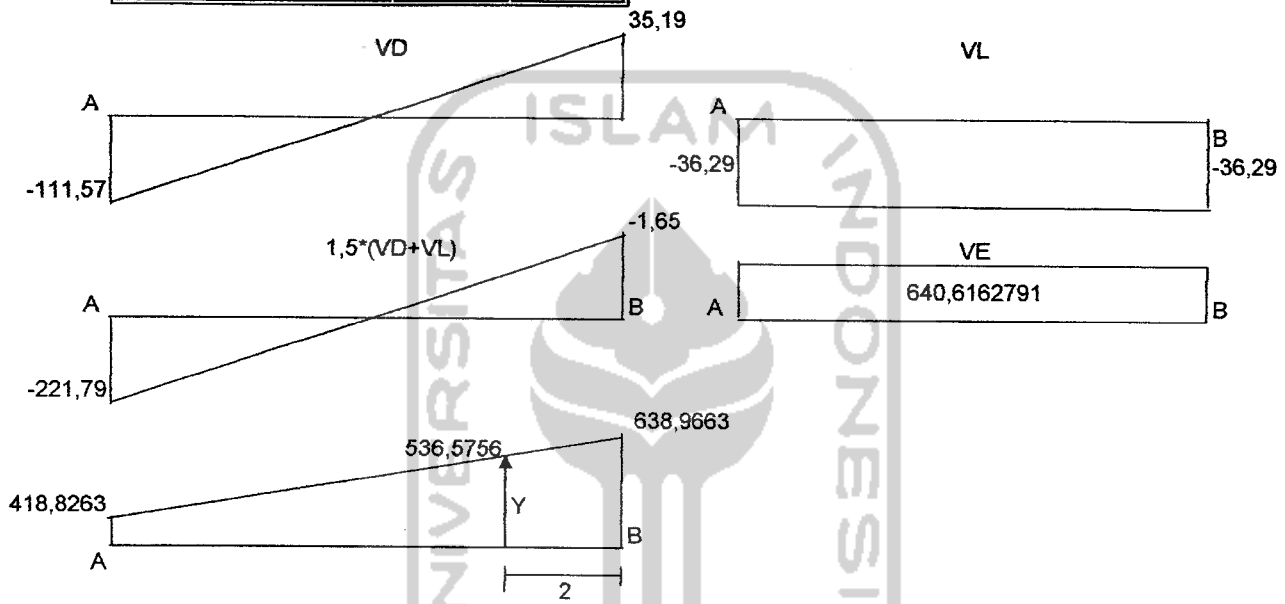
Dalam Sendi Plastis

| | | |
|------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 1863,225 | KN |
| Diameter | 13 | mm |
| A ₀₁ | 132,665 | mm ² |
| Kaki | 4 | |
| S | 102,7442 | mm |
| S PAKAI 2D13-100 | | |

Luar Sendi Plastis

| | | |
|------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 1154,125 | KN |
| Diameter | 13 | mm |
| A ₀₁ | 132,665 | mm ² |
| Kaki | 4 | |
| S | 165,8707 | mm |
| S PAKAI 2D13-160 | | |

| Perhitungan Sengkang frame 580 dan 650 | | |
|--|----------|-----|
| B Kolom | 0,7 | m |
| L Balok | 5 | m |
| L netto | 4,3 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 640,6163 | KN |
| VDa | -111,57 | KN |
| VDb | 35,19 | KN |
| VLa | -36,29 | KN |
| VLb | -36,29 | KN |

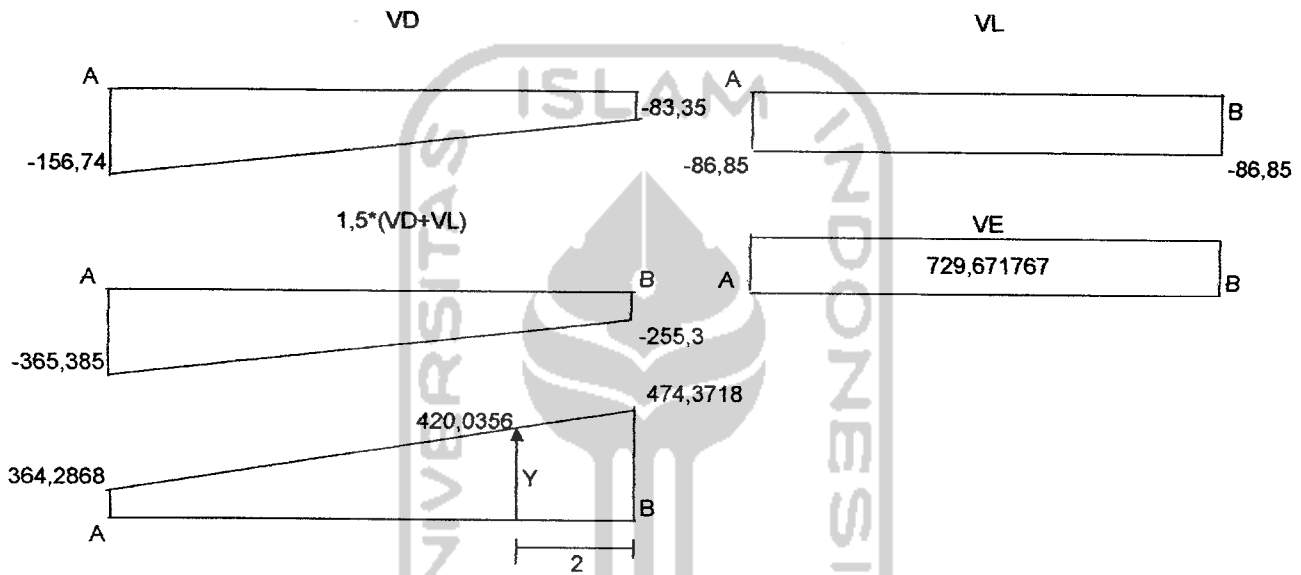


| | | |
|-------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| fc | 24,9 | MPa |
| Fy Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| Vc | 0 | KN |
| Vs ₁ | 1064,944 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 179,7612 | mm |
| S PAKAI 2D13-170 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| Vc | 538,5042 | KN |
| Vs ₂ | 355,7885 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 269,0301 | mm |
| S PAKAI D13-200 | | |

| Perhitungan Sengkang frame 584 dan 657 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 4,052 | m |
| MG ⁻ | 1878,11 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 729,6718 | KN |
| VDa | -156,74 | KN |
| VDb | -83,35 | KN |
| VL _a | -86,85 | KN |
| VL _b | -86,85 | KN |

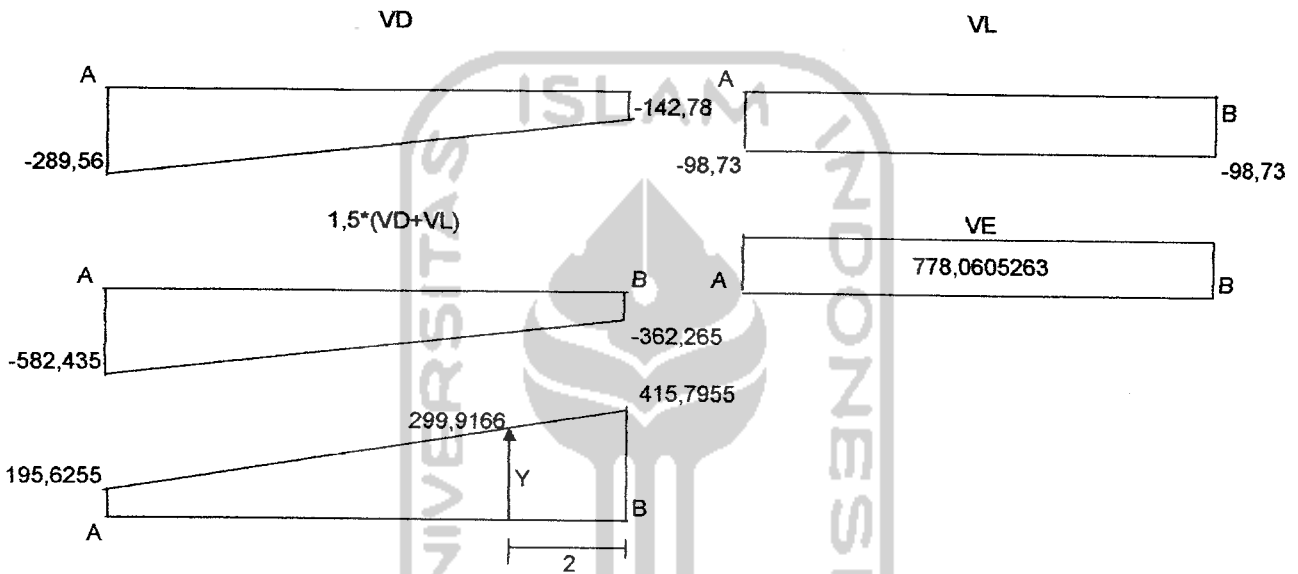


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|------------------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 790,6196 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 242,1336 | mm |
| S PAKAI 2D ₁₃₋₂₀₀ | | |

| Luar Sendi Plastis | | |
|-----------------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 161,5552 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 592,4772 | mm |
| S PAKAI D ₁₃₋₂₀₀ | | |

| Perhitungan Sengkang frame 595 dan 656 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 1878,11 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 778,0605 | KN |
| VDa | -289,56 | KN |
| VDb | -142,78 | KN |
| VLa | -98,73 | KN |
| VLb | -98,73 | KN |

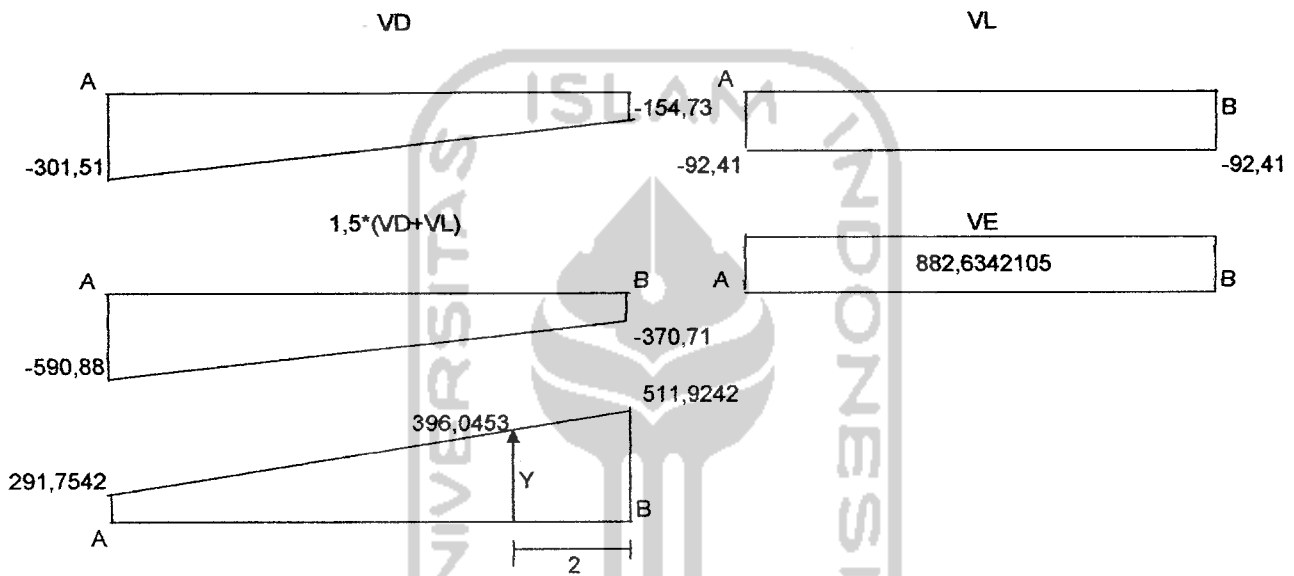


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 692,9925 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 276,2448 | mm |
| S PAKAI 2D13-200 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | -38,6432 | KN |
| Diameter | 13 | mm |
| A _{∅1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | -2476,96 | mm |
| S PAKAI D13-200 | | |

| Perhitungan Senggang frame 594 dan 647 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2275,49 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 882,6342 | KN |
| VDa | -301,51 | KN |
| VDb | -154,73 | KN |
| VLa | -92,41 | KN |
| VLb | -92,41 | KN |

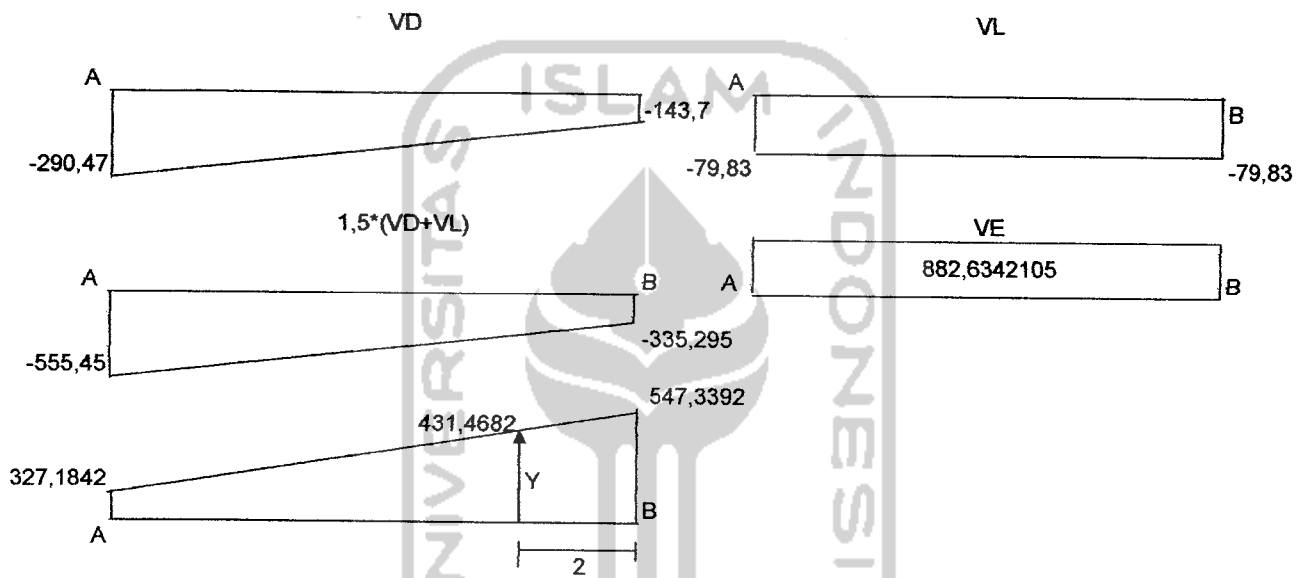


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 853,207 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 224,3718 | mm |
| S PAKAI 2D13-200 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 121,5713 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 787,3389 | mm |
| S PAKAI D13-200 | | |

| Perhitungan Senggang frame 593 dan 646 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2275,49 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 882,6342 | KN |
| VDa | -290,47 | KN |
| VDb | -143,7 | KN |
| VLa | -79,83 | KN |
| VLb | -79,83 | KN |

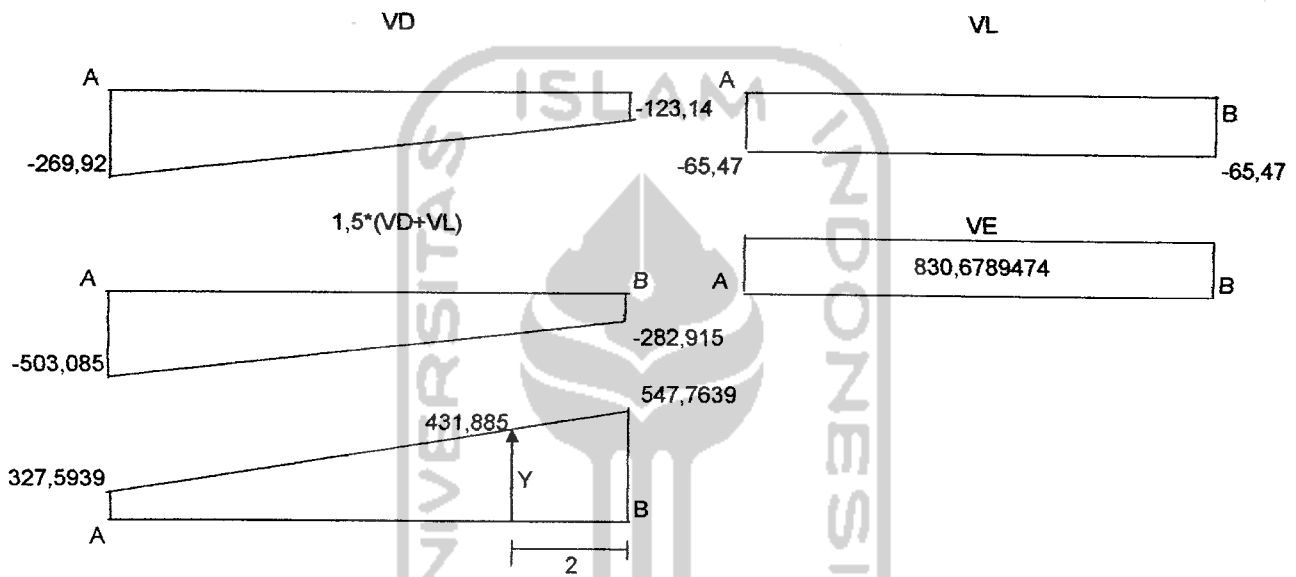


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 912,232 | KN |
| Diameter | 13 | mm |
| A _{o1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 209,8541 | mm |
| S PAKAI 2D13-200 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 180,6094 | KN |
| Diameter | 13 | mm |
| A _{o1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 529,9712 | mm |
| S PAKAI D13-200 | | |

| Perhitungan Sengkang frame 592 dan 645 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 2078,06 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 830,6789 | KN |
| VDa | -269,92 | KN |
| VDb | -123,14 | KN |
| VLa | -65,47 | KN |
| VLb | -65,47 | KN |

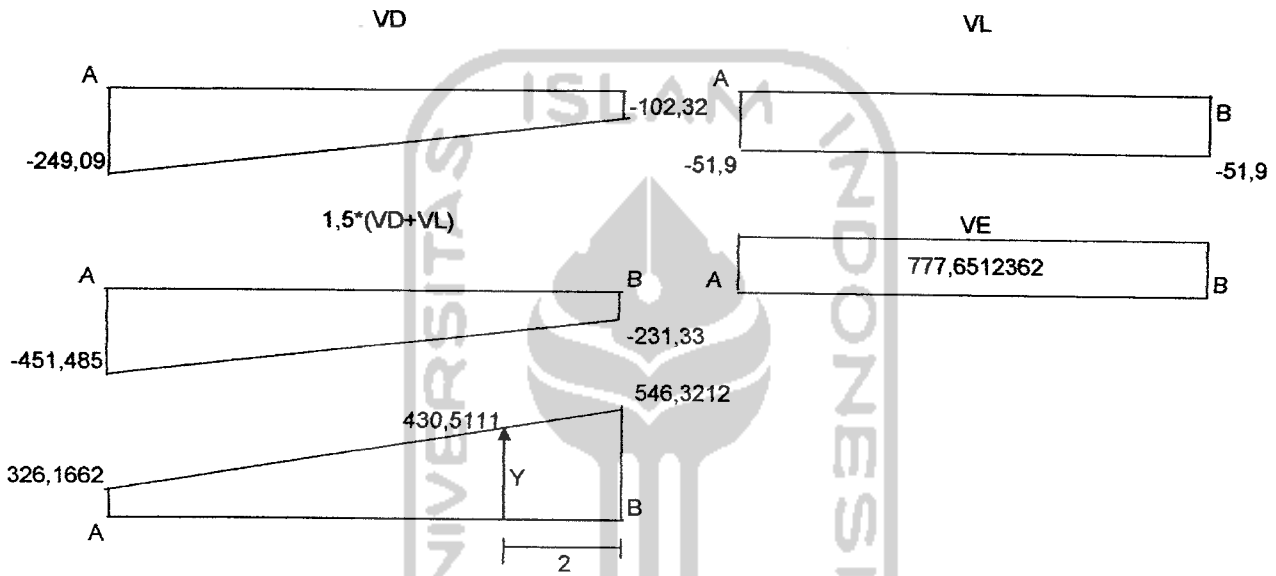


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 912,9399 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 209,6913 | mm |
| S PAKAI 2D13-200 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 181,3042 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 527,9404 | mm |
| S PAKAI D13-200 | | |

| Perhitungan Sengkang frame 600 dan 640 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5,002 | m |
| L netto | 3,802 | m |
| MG ⁻ | 1878,11 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 777,6512 | KN |
| VDa | -249,09 | KN |
| VDb | -102,32 | KN |
| VL _a | -51,9 | KN |
| VL _b | -51,9 | KN |

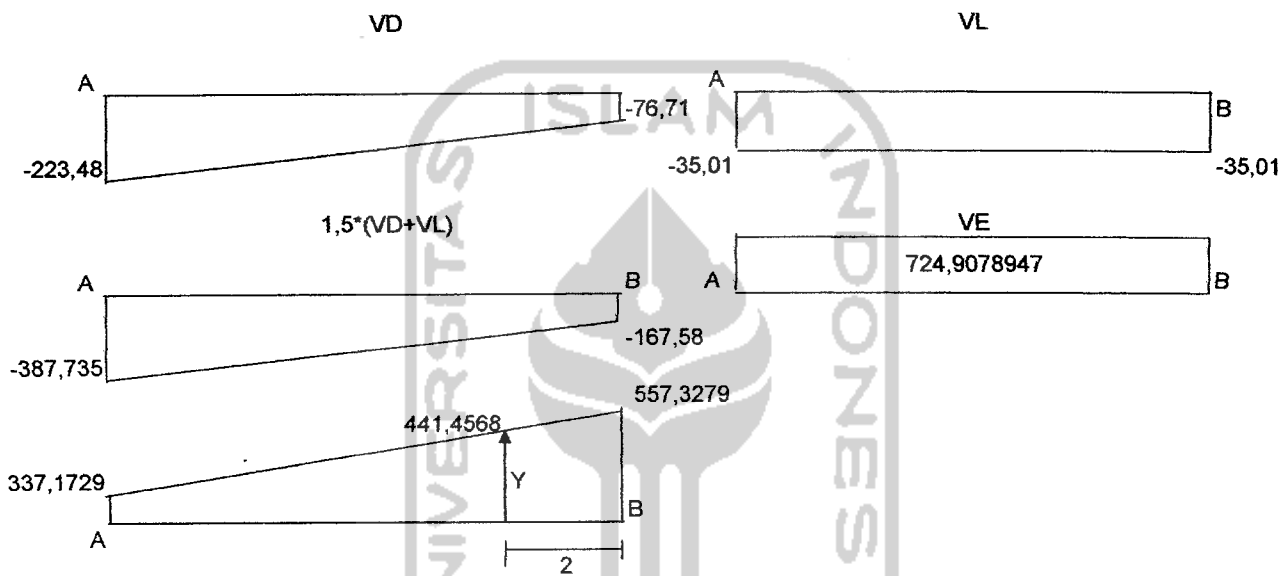


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 910,5354 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 210,2451 | mm |
| S PAKAI 2D13-200 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 179,0144 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 534,6933 | mm |
| S PAKAI D13-200 | | |

| Perhitungan Senggang frame 599 dan 639 | | |
|--|----------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,8 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 724,9079 | KN |
| VDa | -223,48 | KN |
| VDb | -76,71 | KN |
| VLa | -35,01 | KN |
| VLb | -35,01 | KN |

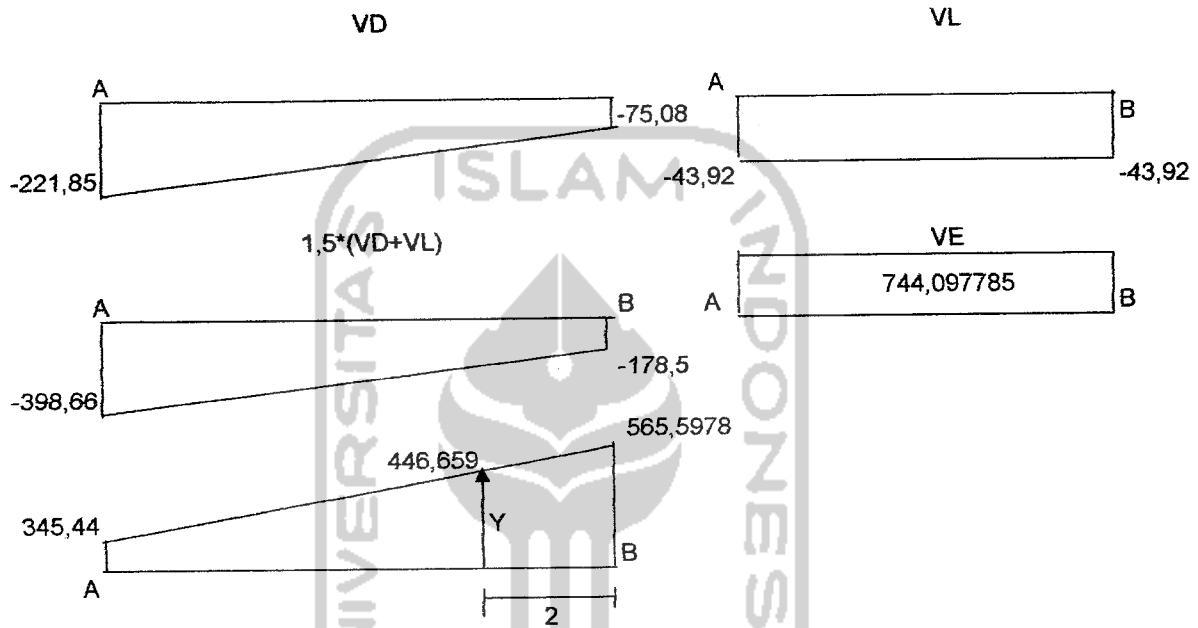


| | | |
|-------------------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 928,8798 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 206,093 | mm |
| S PAKAI 2D13-200 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 538,5042 | KN |
| V _{s2} | 197,2572 | KN |
| Diameter | 13 | mm |
| A _{Ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 485,2435 | mm |
| S PAKAI D13-200 | | |

| Perhitungan Sengkang frame 598 dan 638 | | |
|--|---------|-----|
| B Kolom | 1,2 | m |
| L Balok | 5 | m |
| L netto | 3,702 | m |
| MG ⁻ | 1676,13 | KNm |
| MG ⁺ | 1078,52 | KNm |
| VE | 744,098 | KN |
| VDa | -221,85 | KN |
| VDb | -75,08 | KN |
| VLa | -43,92 | KN |
| VLb | -43,92 | KN |



| | | |
|----------------|------|-----|
| B | 700 | mm |
| H | 1000 | mm |
| f _c | 24,9 | MPa |
| Fy Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 925 | mm |

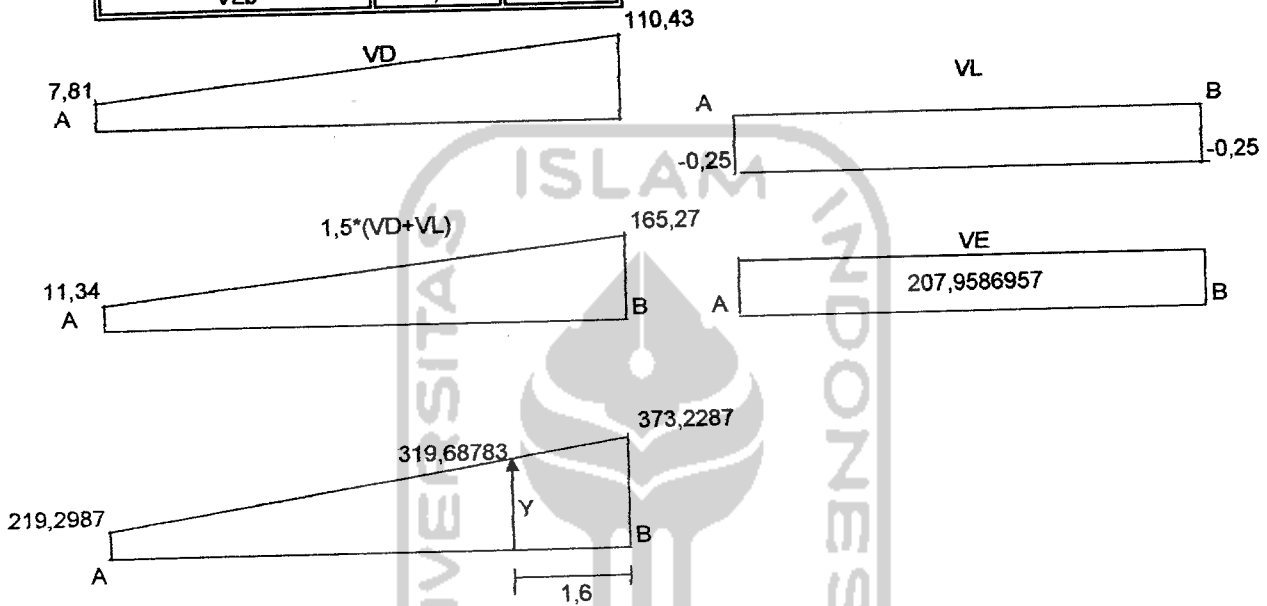
| Dalam Sendi Plastis | | |
|---------------------|---------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 942,663 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 4 | |
| S | 203,08 | mm |
| S PAKAI 2D13-200 | | |

| Luar Sendi Plastis | | |
|--------------------|---------|-----------------|
| V _c | 538,504 | KN |
| V _{s2} | 205,928 | KN |
| Diameter | 13 | mm |
| A _{ø1} | 132,665 | mm ² |
| Kaki | 2 | |
| S | 464,812 | mm |
| S PAKAI D13-200 | | |

LAMPIRAN
TABEL PERHITUNGAN
TULANGAN GESER
BALOK ANAK
BALOK LINTANG ATAS
BALOK LINTANG BAWAH

جامعة الزيتونة
الزيتونية

| Perhitungan Senggang Balok Anak | | |
|---------------------------------|----------|-----|
| B Balok Lintang | 0,4 | m |
| L Balok | 5 | m |
| L netto | 4,6 | m |
| MG ⁻ | 565,69 | KNm |
| MG ⁺ | 390,92 | KNm |
| VE | 207,9587 | KN |
| VDa | 7,81 | KN |
| VDb | 110,43 | KN |
| VLa | -0,25 | KN |
| VLb | -0,25 | KN |

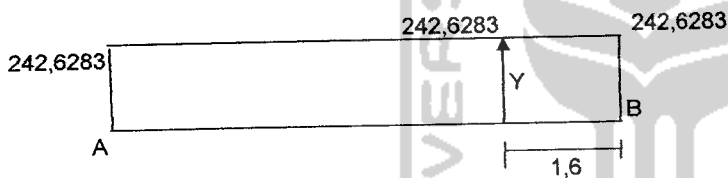
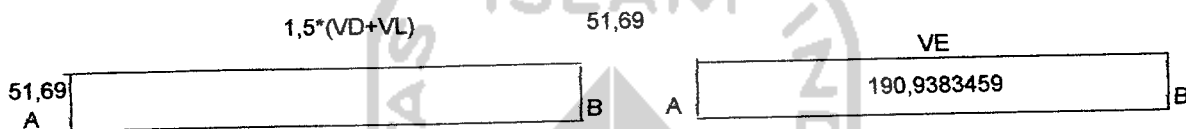
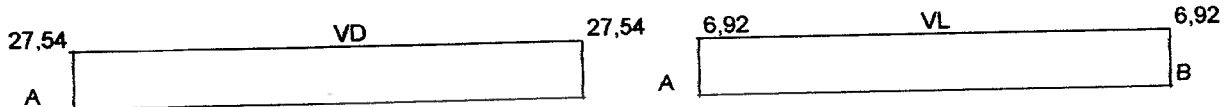


| | | |
|-------------------------|------|-----|
| B | 400 | mm |
| H | 800 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 725 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 622,0478 | KN |
| Diameter | 10 | mm |
| A _{Ø1} | 78,5 | mm ² |
| Kaki | 4 | |
| S | 142,7278 | mm |
| S PAKAI 2D10-140 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 241,1833 | KN |
| V _{s2} | 291,6297 | KN |
| Diameter | 10 | mm |
| A _{Ø1} | 78,5 | mm ² |
| Kaki | 4 | |
| S | 304,4391 | mm |
| S PAKAI 2D ₁₀ -200 | | |

| Perhitungan Senggang Balok Lintang Bawah | | |
|--|----------|-----|
| B Balok Lengkung | 1,6 | m |
| L Balok | 8,25 | m |
| L netto | 6,65 | m |
| MG ⁻ | 751,22 | KNm |
| MG ⁺ | 518,52 | KNm |
| VE | 190,9383 | KN |
| VDa | 27,54 | KN |
| VDb | 27,54 | KN |
| VLa | 6,92 | KN |
| VLb | 6,92 | KN |

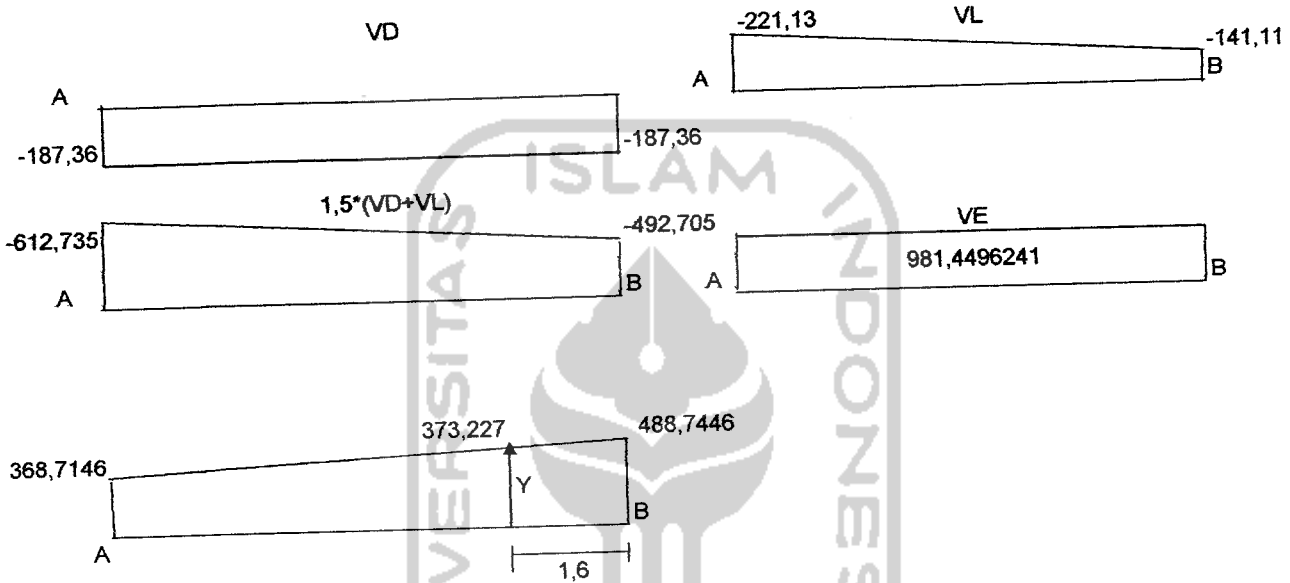


| | | |
|-------------------------|------|-----|
| B | 400 | mm |
| H | 800 | mm |
| f _c | 24,9 | MPa |
| F _y Senggang | 390 | MPa |
| Z | 75 | mm |
| D | 725 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 404,3806 | KN |
| Diameter | 10 | mm |
| A _{Ø1} | 78,5 | mm ² |
| Kaki | 2 | |
| S | 109,7772 | mm |
| S PAKAI D10-100 | | |

| Luar Sendi Plastis | | |
|--------------------|----------|-----------------|
| V _c | 241,1833 | KN |
| V _{s2} | 163,1972 | KN |
| Diameter | 10 | mm |
| A _{Ø1} | 78,5 | mm ² |
| Kaki | 2 | |
| S | 272,0129 | mm |
| S PAKAI D10-200 | | |

| Perhitungan Sengkang Balok Lintang Atas-1 | | |
|---|----------|-----|
| B Balok Anak | 0,4 | m |
| L Balok | 2,0625 | m |
| L netto | 1,6625 | m |
| MG ⁻ | 1113,14 | KNm |
| MG ⁺ | 518,52 | KNm |
| VE | 981,4496 | KN |
| VDa | -187,36 | KN |
| VDb | -187,36 | KN |
| VLa | -221,13 | KN |
| VLb | -141,11 | KN |

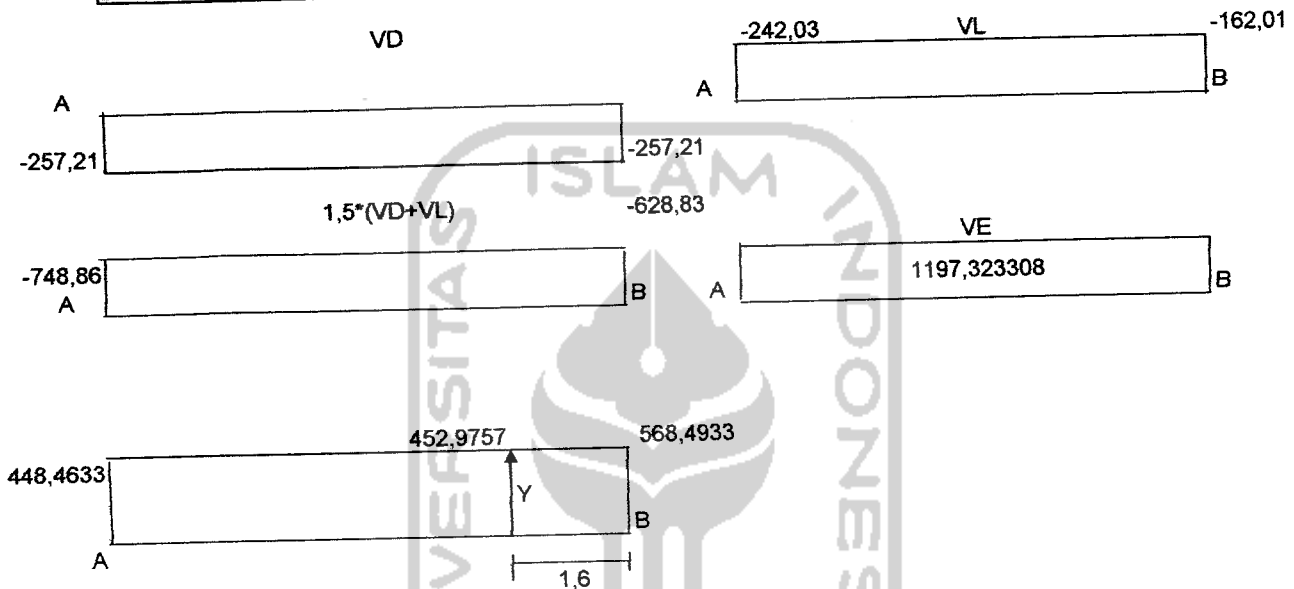


| | | |
|-------------------------|------|-----|
| B | 400 | mm |
| H | 800 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 725 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 814,5744 | KN |
| Diameter | 10 | mm |
| A ₀₁ | 78,5 | mm ² |
| Kaki | 4 | |
| S | 108,9937 | mm |
| S PAKAI 2D10-100 | | |

| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 241,1833 | KN |
| V _{s2} | 380,8617 | KN |
| Diameter | 10 | mm |
| A ₀₁ | 78,5 | mm ² |
| Kaki | 4 | |
| S | 233,1122 | mm |
| S PAKAI 2D ₁₀ -200 | | |

| Perhitungan Sengkang Balok Lintang Atas-2 | | |
|---|----------|-----|
| B Balok Anak | 0,4 | m |
| L Balok | 2,0625 | m |
| L netto | 1,6625 | m |
| MG ⁻ | 1471,96 | KNm |
| MG ⁺ | 518,59 | KNm |
| VE | 1197,323 | KN |
| VDa | -257,21 | KN |
| VDb | -257,21 | KN |
| VLa | -242,03 | KN |
| VLb | -162,01 | KN |

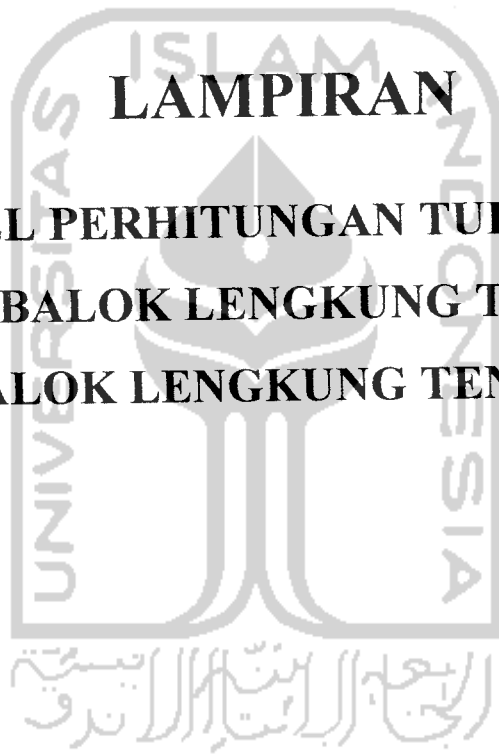


| | | |
|-------------------------|------|-----|
| B | 400 | mm |
| H | 800 | mm |
| f _c | 24,9 | MPa |
| F _y Sengkang | 390 | MPa |
| Z | 75 | mm |
| D | 725 | mm |

| Dalam Sendi Plastis | | |
|---------------------|----------|-----------------|
| V _c | 0 | KN |
| V _{s1} | 947,4888 | KN |
| Diameter | 10 | mm |
| A _{∅1} | 78,5 | mm ² |
| Kaki | 4 | |
| S | 93,70401 | mm |
| S PAKAI 2D10-90 | | |

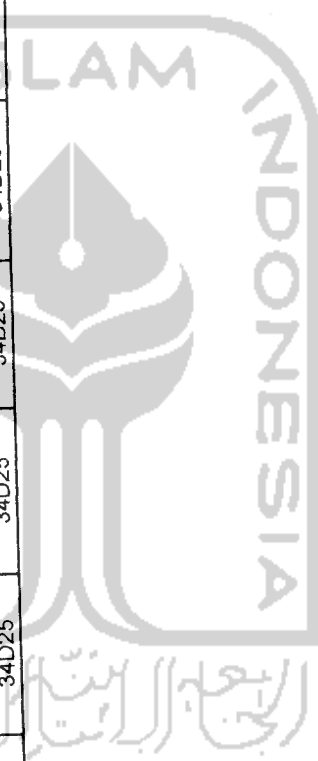
| Luar Sendi Plastis | | |
|-------------------------------|----------|-----------------|
| V _c | 241,1833 | KN |
| V _{s2} | 513,7762 | KN |
| Diameter | 10 | mm |
| A _{∅1} | 78,5 | mm ² |
| Kaki | 4 | |
| S | 172,8058 | mm |
| S PAKAI 2D ₁₀ -170 | | |

LAMPIRAN
TABEL PERHITUNGAN TULANGAN
BALOK LENGGKUNG TEPI
BALOK LENGGKUNG TENGAH



Disain Balok Lengkung Tepi Arah X

| | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 224 dan 351 | 231 dan 352 | 230 dan 326 | 227 dan 325 | 187 dan 324 | 167 dan 323 |
| b (mm) | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| h (mm) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 1226,79 | 1223,64 | 1100,48 | 951,08 | 750,57 | 850,29 |
| Nu,k (kN) | 8236,74 | 9836,11 | 10947,78 | 11689,81 | 12209,43 | 12561,7 |
| Mn,k (kN.m) | 1887,369231 | 1882,523077 | 1693,046154 | 1463,2 | 1154,723077 | 1308,138462 |
| Nn,k (kN) | 12671,90769 | 15132,47692 | 16842,73846 | 17984,32308 | 18783,73846 | 19325,69231 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 16000 | 16000 | 16000 | 16000 | 16000 | 16000 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\emptyset$ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 |
| n pakai | 34D25 | 34D25 | 34D25 | 34D25 | 34D25 | 34D25 |



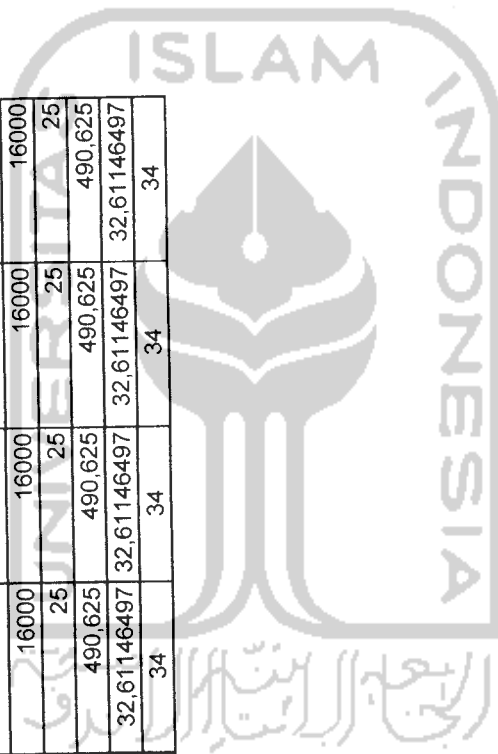
Disain Balok Lengkung Tepi Arah Y

| | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 224 dan 351 | 231 dan 352 | 230 dan 326 | 227 dan 325 | 187 dan 324 | 167 dan 323 |
| b (mm) | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| h (mm) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 153,31 | 121,45 | 116,197 | 173,57 | 522,45 | 1119,8 |
| Nu,k (kN) | 8236,74 | 9836,11 | 10947,78 | 11689,81 | 12209,43 | 12561,7 |
| Mn,k (kN.m) | 235,8615385 | 186,8461538 | 178,7646154 | 267,0307692 | 803,7692308 | 1722,769231 |
| Nn,k (kN) | 12671,90769 | 15132,47692 | 16842,73846 | 17984,32308 | 18783,73846 | 19325,69231 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 16000 | 16000 | 16000 | 16000 | 16000 | 16000 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\emptyset$ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 |
| n pakai | 34D25 | 34D25 | 34D25 | 34D25 | 34D25 | 34D25 |



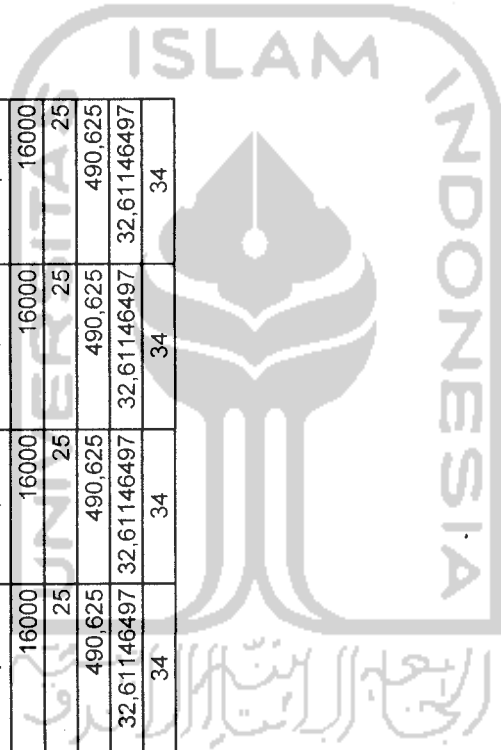
Disain Balok Lengkung Tengah Arah X

| | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 574 dan 627 | 577 dan 628 | 576 dan 617 | 575 dan 616 | 565 dan 613 | 564 dan 614 |
| b (mm) | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| h (mm) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu.k (kN.m) | 1489,05 | 1390,9 | 1234,97 | 1147,49 | 904,88 | 1252,19 |
| Nu.k (kN) | 9650,82 | 11512,58 | 12765,75 | 13700,81 | 14392,96 | 14939,09 |
| Mn.k (kN.m) | 2290,846154 | 2139,846154 | 1899,953846 | 1765,369231 | 1392,123077 | 1926,446154 |
| Nn.k (kN) | 14847,41538 | 17711,66154 | 19639,61538 | 21078,16923 | 22143,01538 | 22983,21538 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 16000 | 16000 | 16000 | 16000 | 16000 | 16000 |
| Diameter tul. (| 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\emptyset$ tul. (mm ³) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 |
| n pakai | 34 | 34 | 34 | 34 | 34 | 34 |



Disain Balok Lengkung Tengah Arah Y

| | | | | | | |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 574 dan 627 | 577 dan 628 | 576 dan 617 | 575 dan 616 | 565 dan 613 | 564 dan 614 |
| b (mm) | 1600 | 1600 | 1600 | 1600 | 1600 | 1600 |
| h (mm) | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 311,48 | 231,48 | 185,76 | 229,99 | 514,52 | 1187,51 |
| Nu,k (kN) | 9650,82 | 11512,58 | 12765,75 | 13700,81 | 14392,96 | 14939,09 |
| Mn,k (kN.m) | 479,2 | 356,1230769 | 285,7846154 | 353,8307692 | 791,5692308 | 1826,938462 |
| Nn,k (kN) | 14847,41538 | 17711,66154 | 19639,61538 | 21078,16923 | 22143,01538 | 22983,21538 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm ²) | 16000 | 16000 | 16000 | 16000 | 16000 | 16000 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 |
| ΔØ tul. (mm ³) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 | 32,61146497 |
| n pakai | 34 | 34 | 34 | 34 | 34 | 34 |







TABEL PERHITUNGAN TULANGAN
KOLOM TEPI
KOLOM TENGAH

Disain Kolom Tepi Arah X

| | | | | | | | | | |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| KOLOM | 128 dan 440 | 137 dan 438 | 321 dan 436 | 535 dan 446 | 151 dan 444 | 153 dan 442 | 155 dan 453 | 12 dan 457 | 41 dan 2 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 496,81 | 477,31 | 1968,46 | 2598,29 | 2526,56 | 2473,04 | 2549,93 | 416,89 | 860,94 |
| Nu,k (kN) | 340,600 | 401,090 | 500,120 | 579,540 | 210,780 | 549,580 | 834,090 | 1023,890 | 512,740 |
| Mn,k (kN.m) | 764,3230769 | 734,3230769 | 3028,4 | 3997,36923 | 3887,015385 | 3804,676923 | 3922,969231 | 641,3692308 | 1324,52308 |
| Nn,k (kN) | 524 | 617,0615385 | 769,4153846 | 891,6 | 324,2769231 | 845,5076923 | 1283,215385 | 1575,215385 | 788,830769 |
| r (%) | 1 | 1 | 1,1 | 1,2 | 1,2 | 1,1 | 1,1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 15840 | 17280 | 17280 | 15840 | 15840 | 19600 | 14400 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| ΔØ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 32,28535032 | 35,2203822 | 35,22038217 | 32,28535032 | 32,28535032 | 39,94904459 | 29,3503185 |
| n pakai | 30 | 30 | 34 | 36 | 36 | 34 | 34 | 40 | 30 |

Disain Kolom Tepi Arah X

| | | | | | | | | | |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 309 dan 462 | 311 dan 467 | 301 dan 465 | 303 dan 472 | 307 dan 414 | 274 dan 412 | 275 dan 411 | 278 dan 416 | 281 dan 401 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 1557,22 | 1822,29 | 2125,42 | 2221,96 | 1174,53 | 493,06 | 553,22 | 1627,2 | 1988,17 |
| Nu,k (kN) | 821,860 | 728,120 | 753,220 | 747,660 | 547,580 | 469,900 | 380,510 | 479,040 | 563,080 |
| Mn,k (kN.m) | 1946,525 | 2803,523077 | 3269,876923 | 2777,45 | 1468,1625 | 616,325 | 691,525 | 2034 | 2485,2125 |
| Nn,k (kN) | 1264,4 | 1120,184615 | 1158,8 | 1150,24615 | 842,4307692 | 722,9230769 | 585,4 | 736,9846154 | 866,276923 |
| r (%) | 1 | 1 | 1 | 1 | 2,5 | 1 | 1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 14400 | 14400 | 12250 | 4900 | 4900 | 14400 | 14400 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| ΔØ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 29,35031847 | 29,3503185 | 24,96815287 | 9,987261146 | 9,987261146 | 29,35031847 | 29,3503185 |
| n pakai | 30 | 30 | 30 | 30 | 26 | 10 | 10 | 30 | 30 |

Disain Kolom Tepi Arah X

| | | | | | | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 283 dan 398 | 285 dan 393 | 287 dan 389 | 294 dan 386 | 296 dan 385 | 1 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 2147,43 | 2071,07 | 1844,55 | 1485,24 | 978,72 | 359,12 |
| Nu,k (kN) | 620,830 | 649,890 | 656,700 | 670,730 | 696,750 | 1324,250 |
| Mn,k (kN.m) | 3303,738462 | 3186,261538 | 2837,769231 | 2284,984615 | 1505,723077 | 552,4923077 |
| Nn,k (kN) | 955,1230769 | 999,8307692 | 1010,307692 | 1031,892308 | 1071,923077 | 2037,307692 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 14400 | 14400 | 14400 | 19600 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\phi$ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 29,35031847 | 29,35031847 | 29,35031847 | 39,94904459 |
| n pakai | 30 | 30 | 30 | 30 | 30 | 40 |



Disain Kolom Tepi Arah Y

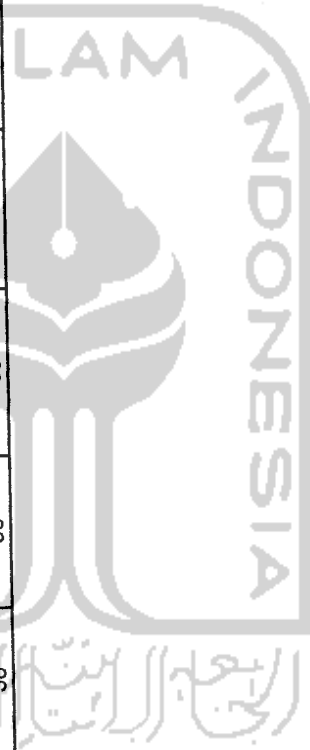
| | | | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| KOLOM | 128 dan 440 | 137 dan 438 | 321 dan 436 | 535 dan 446 | 151 dan 444 | 153 dan 442 | 155 dan 453 | 12 dan 457 | 41 dan 2 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 287,54 | 97,6 | 130,93 | 203,97 | 194,74 | 147,71 | 115,83 | 1202,55 | 5,83 |
| Nu,k (kN) | 340,600 | 401,090 | 500,120 | 579,540 | 210,780 | 549,580 | 834,090 | 1023,890 | 512,740 |
| Mn,k (kN.m) | 442,3692308 | 150,1538462 | 201,4307692 | 313,8 | 299,6 | 227,2461538 | 178,2 | 1850,076923 | 8,96923077 |
| Nn,k (kN) | 524 | 617,0615385 | 769,4153846 | 891,6 | 324,2769231 | 845,5076923 | 1283,215385 | 1575,215385 | 788,830769 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 14400 | 14400 | 14400 | 14400 | 14400 | 19600 | 14400 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\emptyset$ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 29,35031847 | 29,3503185 | 29,35031847 | 29,35031847 | 29,35031847 | 39,94904459 | 29,3503185 |
| n pakai | 30 | 30 | 34 | 36 | 36 | 34 | 34 | 40 | 30 |

Disain Kolom Tepi Arah Y

| | | | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 309 dan 462 | 311 dan 467 | 301 dan 465 | 303 dan 472 | 307 dan 414 | 274 dan 412 | 275 dan 411 | 278 dan 416 | 281 dan 401 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 83,32 | 113,19 | 123,29 | 12,39 | 53,8 | 61,42 | 115,55 | 59,14 | 163 |
| Nu,k (kN) | 821,860 | 728,120 | 753,220 | 747,660 | 547,580 | 469,900 | 380,510 | 479,040 | 563,080 |
| Mn,k (kN.m) | 104,15 | 174,1384615 | 189,6769231 | 15,4875 | 67,25 | 76,775 | 144,4375 | 73,925 | 203,75 |
| Nn,k (kN) | 1264,4 | 1120,184615 | 1158,8 | 1150,24615 | 842,4307692 | 722,9230769 | 585,4 | 736,9846154 | 866,276923 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 14400 | 14400 | 4900 | 4900 | 4900 | 14400 | 14400 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\emptyset$ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 29,35031847 | 29,3503185 | 9,987261146 | 9,987261146 | 9,987261146 | 29,35031847 | 29,3503185 |
| n pakai | 30 | 30 | 30 | 30 | 26 | 10 | 10 | 30 | 30 |

Disain Kolom Tepi Arah Y

| | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-----------|
| KOLOM | 283 dan 398 | 285 dan 393 | 287 dan 399 | 294 dan 386 | 296 dan 385 | 1 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 171,53 | 144,98 | 97,41 | 34,81 | 113,78 | 567,78 |
| Nu,k (kN) | 620,830 | 649,890 | 656,700 | 670,730 | 696,750 | 1324,250 |
| Min,k (kN.m) | 263,8923077 | 223,046154 | 149,8615385 | 53,55384615 | 175,0461538 | 873,50769 |
| Nn,k (kN) | 955,1230769 | 999,830769 | 1010,307692 | 1031,892308 | 1071,923077 | 2037,3077 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 14400 | 14400 | 14400 | 19600 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\emptyset$ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,3503185 | 29,35031847 | 29,35031847 | 29,35031847 | 39,949045 |
| n pakai | 30 | 30 | 30 | 30 | 30 | 40 |



Disain Kolom Tengah Arah X

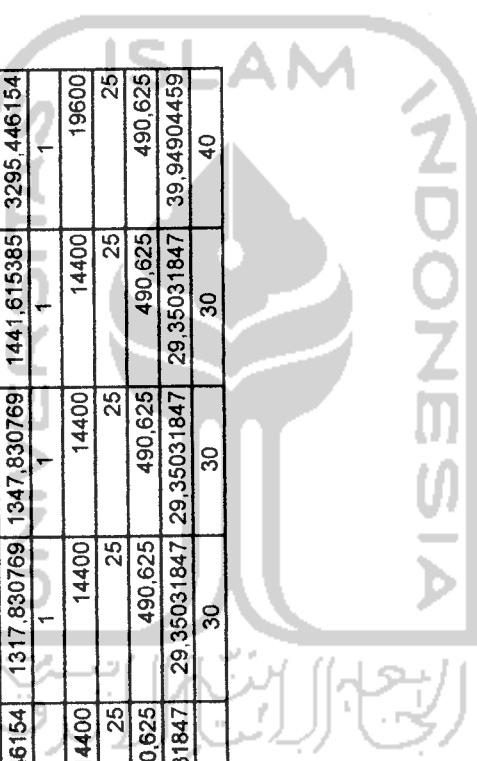
| | | | | | | | | | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| KOLOM | 551 dan 663 | 555 dan 662 | 613 dan 661 | 773 dan 666 | 560 dan 665 | 561 dan 664 | 562 dan 670 | 544 dan 673 | 43 dan 4 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 518,48 | 702,88 | 2441,31 | 3102,32 | 3134,1 | 3182,3 | 3204,46 | 321,21 | 1286,36 |
| Nu,k (kN) | 424,120 | 539,520 | 679,100 | 778,840 | 485,770 | 746,160 | 1046,980 | 1915,710 | 619,470 |
| Mn,k (kN.m) | 797,6615385 | 1081,353846 | 3755,861538 | 4772,8 | 4821,692308 | 4895,846154 | 4929,938462 | 494,1692308 | 1979,01538 |
| Nn,k (kN) | 652,4923077 | 830,0307692 | 1044,769231 | 1198,21538 | 747,3384615 | 1147,938462 | 1610,738462 | 2947,246154 | 953,030769 |
| r (%) | 1 | 1 | 1,2 | 1,5 | 1,5 | 1,5 | 1,5 | 1 | 1 |
| As (mm) | 14400 | 14400 | 17280 | 21600 | 21600 | 21600 | 21600 | 19600 | 14400 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\phi$ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 35,22038217 | 44,0254777 | 44,0254777 | 44,0254777 | 44,0254777 | 39,94904459 | 29,3503185 |
| n pakai | 30 | 30 | 36 | 44 | 44 | 44 | 44 | 40 | 30 |

Disain Kolom Tengah Arah X

| | | | | | | | | | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 606 dan 676 | 607 dan 679 | 601 dan 678 | 602 dan 682 | 605 dan 654 | 585 dan 653 | 586 dan 652 | 587 dan 655 | 588 dan 649 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 2052,75 | 2243,11 | 2563,59 | 2668,84 | 1381,39 | 530,83 | 714,01 | 1989,99 | 2585,91 |
| Nu,k (kN) | 1106,570 | 930,480 | 961,610 | 961,290 | 742,360 | 656,530 | 534,040 | 635,620 | 735,840 |
| Mn,k (kN.m) | 2565,9375 | 3450,938462 | 3943,984615 | 3336,05 | 1726,7375 | 663,5375 | 892,5125 | 2487,4875 | 3232,3875 |
| Nn,k (kN) | 1702,415385 | 1431,507692 | 1479,4 | 1478,90769 | 1142,092308 | 1010,046154 | 821,6 | 977,8769231 | 1132,06154 |
| r (%) | 1 | 1 | 1,1 | 1 | 2,8 | 1 | 1,2 | 1 | 1 |
| As (mm) | 14400 | 14400 | 15840 | 14400 | 13720 | 4900 | 5880 | 14400 | 14400 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\phi$ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 32,28535032 | 29,3503185 | 27,96433121 | 9,987261146 | 11,98471338 | 29,35031847 | 29,3503185 |
| n pakai | 30 | 30 | 30 | 30 | 28 | 10 | 12 | 30 | 30 |

Disain Kolom Tengah Arah X

| KOLOM | 589 dan 648 | 590 dan 644 | 591 dan 642 | 596 dan 642 | 597 dan 641 | 543 |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| b (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 2467,44 | 2442,27 | 1865,74 | 1862,25 | 1410,81 | 345,23 |
| Nu,k (kN) | 803,250 | 840,610 | 856,590 | 876,090 | 937,050 | 2142,040 |
| Mn,k (kN.m) | 3796,061538 | 3757,338462 | 2870,369231 | 2865 | 2170,476923 | 531,1230769 |
| Nn,k (kN) | 1235,769231 | 1293,246154 | 1317,880769 | 1347,830769 | 1441,615385 | 3295,446154 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 14400 | 14400 | 14400 | 19600 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\emptyset$ tul. (mm ²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 29,35031847 | 29,35031847 | 29,35031847 | 39,94904459 |
| n pakai | 30 | 30 | 30 | 30 | 30 | 40 |



Disain Kolom Tengah Arah Y

| | | | | | | | | | |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|
| KOLOM | 551 dan 663 | 555 dan 662 | 613 dan 661 | 773 dan 666 | 560 dan 665 | 561 dan 664 | 562 dan 670 | 544 dan 673 | 43 dan 4 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 15,54 | 27,89 | 24,11 | 12,3 | 13,77 | 60,99 | 122,08 | 128,79 | 47,7 |
| Nu,k (kN) | 424,120 | 539,520 | 679,100 | 778,840 | 485,770 | 746,160 | 1046,980 | 1915,710 | 619,470 |
| Mn,k (kN.m) | 23,90769231 | 42,90769231 | 37,09230769 | 18,9230769 | 21,18461538 | 93,83076923 | 187,8153846 | 198,1384615 | 73,3846154 |
| Nn,k (kN) | 652,4923077 | 830,0307692 | 1044,769231 | 1198,21538 | 747,3384615 | 1147,938462 | 1610,738462 | 2947,246154 | 953,030769 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 14400 | 14400 | 14400 | 14400 | 14400 | 19600 | 14400 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| ΔØ tul. (mm²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 29,35031847 | 29,3503185 | 29,35031847 | 29,35031847 | 29,35031847 | 39,94904459 | 29,3503185 |
| n pakai | 30 | 30 | 36 | 44 | 44 | 44 | 44 | 40 | 30 |

Disain Kolom Tengah Arah Y

| | | | | | | | | | |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 606 dan 676 | 607 dan 679 | 601 dan 678 | 602 dan 682 | 605 dan 654 | 585 dan 653 | 586 dan 652 | 587 dan 655 | 588 dan 649 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 73,36 | 51,74 | 24,69 | 22,34 | 13,45 | 47,2 | 58,1 | 13,45 | 16,78 |
| Nu,k (kN) | 1106,570 | 930,480 | 961,610 | 961,290 | 742,360 | 656,530 | 534,040 | 635,620 | 735,840 |
| Mn,k (kN.m) | 91,7 | 79,6 | 37,98461538 | 27,925 | 16,8125 | 59 | 72,625 | 16,8125 | 20,975 |
| Nn,k (kN) | 1702,415385 | 1431,507692 | 1479,4 | 1478,90769 | 1142,092308 | 1010,046154 | 821,6 | 977,8769231 | 1132,06154 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 14400 | 14400 | 4900 | 4900 | 4900 | 14400 | 14400 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 |
| ΔØ tul. (mm²) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,35031847 | 29,35031847 | 29,3503185 | 9,987261146 | 9,987261146 | 9,987261146 | 29,35031847 | 29,3503185 |
| n pakai | 30 | 30 | 30 | 30 | 28 | 10 | 12 | 30 | 30 |

Disain Kolom Tengah Arah Y

| | | | | | | |
|--------------------------------------|-------------|-------------|-------------|-------------|-------------|-----------|
| KOLOM | 589 dan 648 | 590 dan 644 | 591 dan 642 | 596 dan 642 | 597 dan 641 | 543 |
| b (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| h (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| d' (mm) | 80 | 80 | 80 | 80 | 80 | 80 |
| Mu,k (kN.m) | 19,54 | 49,53 | 41,87 | 126,2 | 261,84 | 504,44 |
| Nu,k (kN) | 803,250 | 840,610 | 856,590 | 876,090 | 937,050 | 2.142,040 |
| Mn,k (kN.m) | 30,06153846 | 76,2 | 64,41538462 | 194,1538462 | 402,8307692 | 776,06154 |
| Nn,k (kN) | 1235,769231 | 1293,24615 | 1317,830769 | 1347,830769 | 1441,615385 | 3295,4462 |
| r (%) | 1 | 1 | 1 | 1 | 1 | 1 |
| As (mm) | 14400 | 14400 | 14400 | 14400 | 14400 | 19600 |
| Diameter tul. (mm) | 25 | 25 | 25 | 25 | 25 | 25 |
| $\Delta\phi$ tul. (mm ³) | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 | 490,625 |
| n tulangan | 29,35031847 | 29,3503185 | 29,35031847 | 29,35031847 | 29,35031847 | 39,949045 |
| n pakai | 30 | 30 | 30 | 30 | 30 | 40 |



TABEL PERHITUNGAN TULANGAN GESER KOLOM TEPI

| KOLOM | 128 dan 440 | 137 dan 438 | 321 dan 436 | 535 dan 446 | 151 dan 444 | 153 dan 442 | 155 dan 453 | 12 dan 457 | 41 dan 2 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|
| f_c (Mpa) | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 |
| f_y (Mpa) | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 |
| b kolom (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| h kolom (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| d kolom (mm) | 1120 | 1120 | 1120 | 1120 | 1120 | 1120 | 1120 | 1320 | 1120 |
| P_u (kN) | 340,600 | 401,090 | 500,120 | 579,540 | 210,780 | 549,580 | 834,090 | 1023,890 | 512,740 |
| V_u (kN) | 2060,7645 | 1170,948571 | 2384,0025 | 2290,205623 | 1548,167555 | 1112,128691 | 900,4807364 | 392,4705 | 337,9214083 |
| V_s (kN) | 3434,608 | 1951,581 | 3973,338 | 3817,009 | 2580,279 | 1863,548 | 1500,801 | 654,118 | 563,202 |
| Dalam Sendi Plastis | | | | | | | | | |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $A_1 \sigma$ | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 |
| S | 67,522 | 118,832 | 58,367 | 60,757 | 89,878 | 125,117 | 154,524 | 417,849 | 411,770 |
| Pakai Tulangan | 2D13-60 | 2D13-100 | 2D13-50 | 2D13-60 | 2D13-80 | 2D13-100 | 2D13-100 | 2D13-100 | 2D13-100 |
| Luar Sendi Plastis | | | | | | | | | |
| V_c (kN) | 1136,642 | 1139,996 | 1145,487 | 1149,890 | 1129,444 | 1148,229 | 1164,003 | 1594,265 | 1146,186 |
| V_s (kN) | 2297,965 | 811,585 | 2827,851 | 2667,119 | 1450,835 | 705,319 | 336,798 | -940,148 | -582,984 |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| $A_1 \sigma$ | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 |
| S | 100,920 | 285,749 | 82,009 | 86,951 | 159,846 | 328,801 | 688,573 | -290,723 | -397,798 |
| Pakai Tulangan | 2D13-100 | 2D13-200 | 2D13-80 | 2D13-80 | 2D13-150 | 2D13-200 | 2D13-200 | 2D13-200 | 2D13-200 |

| TABEL PERHITUNGAN TULANGAN GESER KOLOM TEPI | | | | | | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--|--|--|
| KOLOM | 309 dan 462 | 311 dan 467 | 301 dan 465 | 303 dan 472 | 307 dan 414 | 274 dan 412 | 275 dan 411 | 278 dan 416 | 281 dan 401 | | | |
| Fc (Mpa) | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | | | |
| fy (Mpa) | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | | | |
| b kolom (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 | | | |
| h kolom (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 | | | |
| d kolom (mm) | 1120 | 1120 | 1120 | 1120 | 620 | 620 | 620 | 1120 | 1120 | | | |
| Pu (kN) | 821,860 | 728,120 | 753,220 | 747,660 | 547,580 | 459,900 | 380,510 | 479,040 | 563,080 | | | |
| Vu (kN) | 747,5623202 | 1238,639547 | 2078,58 | 3204,7365 | 2279,2635 | 1129,124169 | 1093,7535 | 2520,6465 | 2125,2045 | | | |
| Vs (kN) | 1245,937 | 2064,399 | 3464,300 | 5341,228 | 3798,773 | 1881,874 | 1822,923 | 4201,078 | 3542,008 | | | |
| Dalam Sendi Plastis | | | | | | | | | | | | |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | | | |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| A1ø | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | | | |
| S | 186,133 | 112,338 | 66,943 | 43,419 | 33,795 | 68,219 | 70,425 | 55,202 | 65,474 | | | |
| Pakai Tulangan | 2D13-100 | 2D13-100 | 2D13-60 | 2D13-40 | 2D13-30 | 2D13-60 | 2D13-70 | 2D13-50 | 2D13-60 | | | |
| Luar Sendi Plastis | | | | | | | | | | | | |
| Vc (kN) | 1163,325 | 1158,128 | 1159,520 | 1159,211 | 389,754 | 385,667 | 380,963 | 1144,318 | 1148,977 | | | |
| Vs1 (kN) | 82,612 | 906,271 | 2304,780 | 4182,016 | 3409,019 | 1496,207 | 1441,959 | 3056,760 | 2393,030 | | | |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | | | |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| A1ø | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | | | |
| S | 2807,219 | 255,894 | 100,621 | 55,454 | 37,659 | 85,803 | 89,031 | 75,868 | 96,911 | | | |
| Pakai Tulangan | 2 D13-200 | 2 D13-200 | 2 D13-100 | 2 D13-50 | 2 D13-30 | 2 D13-60 | 2 D13-80 | 2 D13-70 | 2 D13-90 | | | |

| TABEL PERHITUNGAN TULANGAN GESER KOLOM TEPI | | | | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|--|--|--|
| KOLOM | 283 dan 398 | 285 dan 393 | 287 dan 389 | 294 dan 386 | 296 dan 385 | 1 | | | |
| f'c (Mpa) | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | | | |
| fy (Mpa) | 390 | 390 | 390 | 390 | 390 | 390 | | | |
| b kolom (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | | | |
| h kolom (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | | | |
| d kolom (mm) | 1120 | 1120 | 1120 | 1120 | 1120 | 1320 | | | |
| Pu (kN) | 620,830 | 649,890 | 656,700 | 670,730 | 696,750 | 1324,250 | | | |
| Vu (kN) | 1604,897371 | 1093,150013 | 709,3689228 | 435,9688228 | 224,868466 | 160,3709091 | | | |
| Vs (kN) | 2674,829 | 1821,917 | 1182,282 | 726,615 | 374,781 | 267,285 | | | |
| Dalam Sendi Plastis | | | | | | | | | |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 | | | |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| A1Ø | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | | | |
| S | 86,701 | 127,289 | 196,155 | 319,165 | 618,788 | 1022,588 | | | |
| Pakai Tulangan | 2 D13-80 | 2 D13-100 | 2 D13-100 | 2 D13-100 | 2 D13-100 | 2 D13-100 | | | |
| Luar Sendi Plastis | | | | | | | | | |
| Vc (kN) | 1152,179 | 1153,790 | 1154,168 | 1154,946 | 1156,389 | 1611,088 | | | |
| Vs1 (kN) | 1522,650 | 668,126 | 28,113 | -428,331 | -781,608 | -1343,803 | | | |
| Pakai Diameter | 10 | 10 | 10 | 10 | 10 | 10 | | | |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| A1Ø | 78,540 | 78,540 | 78,540 | 78,540 | 78,540 | 78,540 | | | |
| S | 90,122 | 205,387 | 4881,101 | -320,371 | -175,567 | -120,352 | | | |
| Pakai Tulangan | 2 D13-90 | 2 D13-200 | 2 D13-200 | 2 D13-200 | 2 D13-200 | 2 D13-200 | | | |

TABEL PERHITUNGAN TULANGAN GESER KOLOM TENGAH

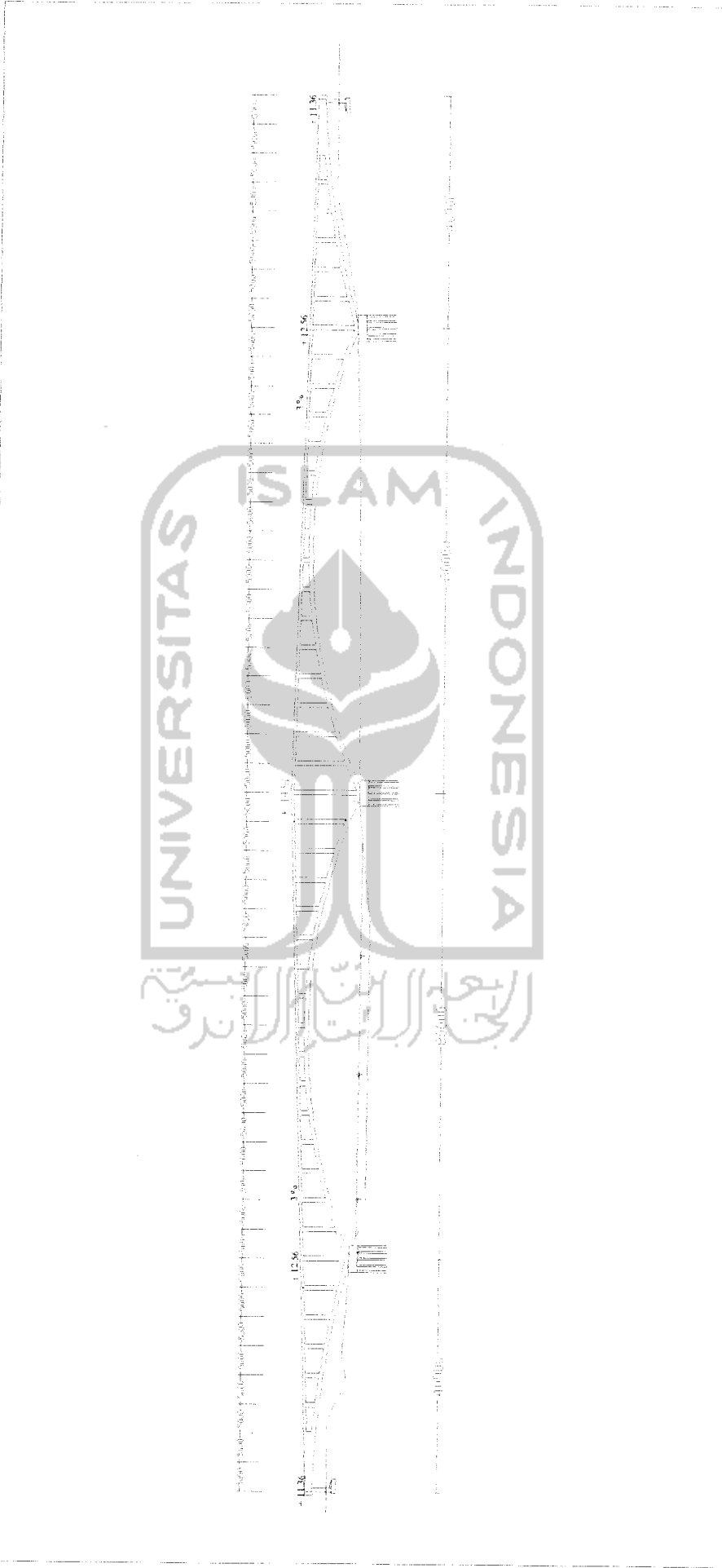
| KOLOM | 551 dan 663 | 555 dan 662 | 613 dan 661 | 773 dan 666 | 560 dan 665 | 561 dan 664 | 562 dan 670 | 544 dan 673 | 43 dan 4 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| f_c (Mpa) | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 |
| f_y (Mpa) | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 |
| b kolom (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| h kolom (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 | 1200 |
| d kolom (mm) | 1120 | 1120 | 1120 | 1120 | 1120 | 1120 | 1120 | 1320 | 1120 |
| Pu (kN) | 424,120 | 539,520 | 679,100 | 778,840 | 485,770 | 746,160 | 1046,980 | 1915,710 | 619,470 |
| Vu (kN) | 2560,4217 | 1738,617143 | 3020,84394 | 2726,508603 | 1746,6945 | 1427,882327 | 1131,726901 | 344,9805 | 490,8979374 |
| Vs (kN) | 4267,370 | 2897,695 | 5034,740 | 4544,181 | 2911,158 | 2379,804 | 1886,212 | 574,968 | 818,163 |
| Dalam Sendi Plastis | | | | | | | | | |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| A1 \emptyset | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 |
| S | 54,345 | 80,033 | 46,062 | 51,034 | 79,662 | 97,449 | 122,950 | 475,370 | 283,452 |
| Pakai Tulangan | 2D13-50 | 2D13-80 | 2D13-40 | 2D13-50 | 2D13-70 | 2D13-90 | 2D13-100 | 2D13-100 | 2D13-100 |
| Luar Sendi Plastis | | | | | | | | | |
| Vc (kN) | 1141,273 | 1147,671 | 1155,410 | 1160,940 | 1144,691 | 1159,128 | 1175,807 | 1644,216 | 1152,104 |
| Vs1 (kN) | 3126,097 | 1750,024 | 3879,330 | 3383,241 | 1766,467 | 1220,676 | 710,405 | -1069,249 | -333,941 |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| A1 \emptyset | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 |
| S | 74,185 | 132,518 | 59,781 | 68,547 | 131,285 | 189,985 | 326,448 | -255,621 | -694,464 |
| Pakai Tulangan | 2D13-70 | 2D13-130 | 2D13-50 | 2D13-60 | 2D13-130 | 2D13-180 | 2D13-200 | 2D13-200 | 2D13-200 |

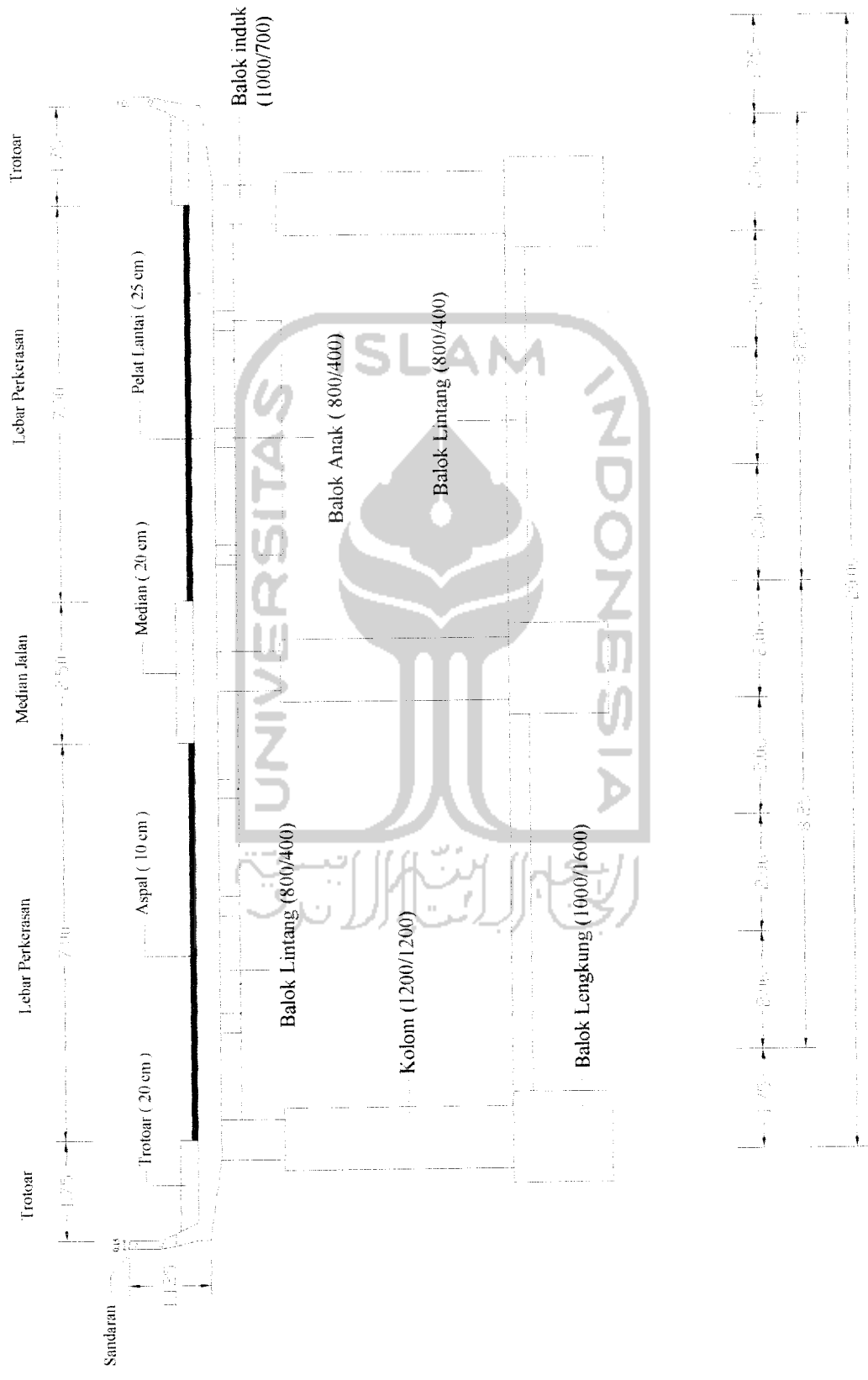
TABEL PERHITUNGAN TULANGAN GESER KOLOM TENGAH

| KOLOM | 606 dan 676 | 607 dan 679 | 601 dan 678 | 602 dan 682 | 605 dan 654 | 585 dan 653 | 586 dan 652 | 587 dan 655 | 588 dan 649 |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| f'c (Mpa) | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 |
| fy (Mpa) | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 | 390 |
| b kolom (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| h kolom (mm) | 1200 | 1200 | 1200 | 1200 | 700 | 700 | 700 | 1200 | 1200 |
| d kolom (mm) | 1120 | 1120 | 1120 | 1120 | 620 | 620 | 620 | 1120 | 1120 |
| Pu (kN) | 1106,570 | 930,480 | 961,610 | 961,290 | 742,360 | 656,530 | 534,040 | 635,620 | 735,840 |
| Vu (kN) | 988,7607862 | 1506,003 | 2526,125179 | 3436,8955 | 2103,327 | 1214,556541 | 1402,134 | 2805,8625 | 2551,906977 |
| Vs (kN) | 1647,935 | 2510,005 | 4210,209 | 5726,493 | 3505,545 | 2024,261 | 2336,890 | 4676,438 | 4253,178 |
| Dalam Sendi Plastis | | | | | | | | | |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| A1ø | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 |
| S | 140,728 | 92,394 | 55,083 | 40,498 | 36,622 | 63,420 | 54,936 | 49,591 | 54,526 |
| Pakai Tulangan | 2D13-100 | 2D13-90 | 2D13-50 | 2D13-40 | 2D13-30 | 2D13-60 | 2D13-50 | 2D13-40 | 2D13-50 |
| Luar Sendi Plastis | | | | | | | | | |
| Vc (kN) | 1179,111 | 1169,348 | 1171,074 | 1171,056 | 400,002 | 395,486 | 389,041 | 1152,999 | 1158,556 |
| Vs1 (kN) | 468,824 | 1340,657 | 3039,135 | 4555,437 | 3105,543 | 1628,775 | 1947,849 | 3523,438 | 3094,622 |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| A1ø | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 |
| S | 494,663 | 172,982 | 76,308 | 50,908 | 41,339 | 78,819 | 65,908 | 65,819 | 74,940 |
| Pakai Tulangan | 2 D13-200 | 2 D13-170 | 2 D13-70 | 2 D13-50 | 2 D13-40 | 2 D13-70 | 2 D13-60 | 2 D13-60 | 2 D13-70 |

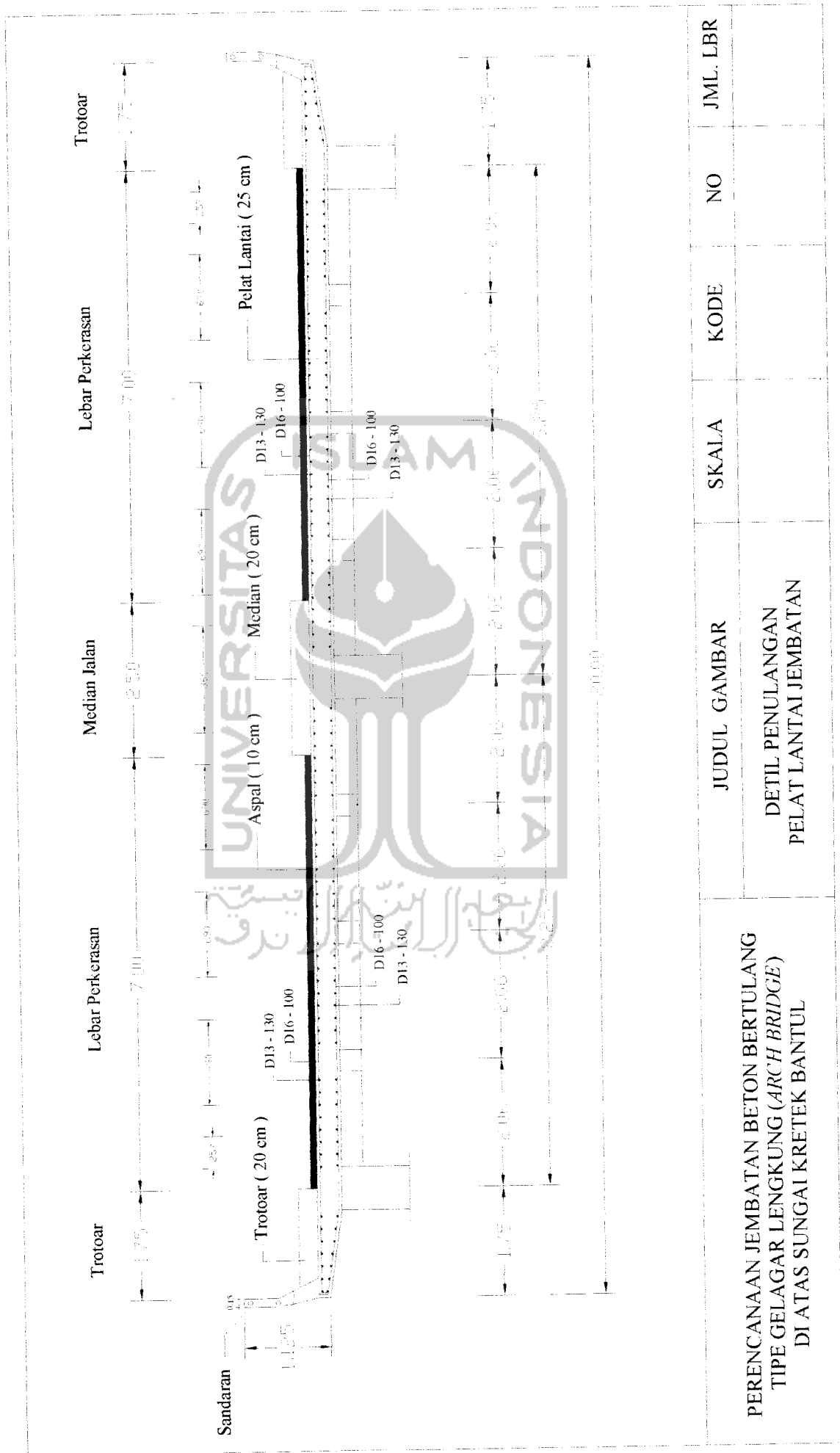
| TABEL PERHITUNGAN TULANGAN GESER KOLOM TENGAH | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| KOLOM | 589 dan 648 | 590 dan 644 | 591 dan 643 | 596 dan 642 | 597 dan 641 | 543 |
| f _c (Mpa) | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 | 24,9 |
| f _y (Mpa) | 390 | 390 | 390 | 390 | 390 | 390 |
| b kolom (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| h kolom (mm) | 1200 | 1200 | 1200 | 1200 | 1200 | 1400 |
| d kolom (mm) | 1120 | 1120 | 1120 | 1120 | 1120 | 1320 |
| P _u (kN) | 803,250 | 840,610 | 856,590 | 876,090 | 937,050 | 2142,040 |
| V _u (kN) | 1776,0495 | 1150,506 | 711,8436606 | 538,1279138 | 322,4370801 | 181,9927273 |
| V _s (kN) | 2960,083 | 1917,510 | 1186,406 | 896,880 | 537,395 | 303,321 |
| Dalam Sendi Plastik | | | | | | |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 |
| A _{1∅} | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 |
| S | 78,346 | 120,943 | 195,473 | 258,574 | 431,544 | 901,099 |
| Pakai Tulangan | 2 D13-70 | 2 D13-100 | 2 D13-100 | 2 D13-100 | 2 D13-100 | 2 D13-100 |
| Luar Sendi Plastik | | | | | | |
| V _c (kN) | 1162,293 | 1164,365 | 1165,251 | 1166,332 | 1169,712 | 1656,893 |
| V _{s1} (kN) | 1797,789 | 753,145 | 21,155 | -269,452 | -632,317 | -1353,572 |
| Pakai Diameter | 13 | 13 | 13 | 13 | 13 | 13 |
| Jml Kaki | 4 | 4 | 4 | 4 | 4 | 4 |
| A _{1∅} | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 | 132,732 |
| S | 128,997 | 307,922 | 10962,266 | -860,672 | -366,762 | -201,927 |
| Pakai Tulangan | 2 D13-120 | 2 D13-200 | 2 D13-200 | 2 D13-200 | 2 D13-200 | 3 D13-200 |



| | | | | | | |
|---|--|--|--------------|-------------|-----------|-----------------|
|  | <p>PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL</p> | <p>JUDUL GAMBAR GAMBAR TAMPAK MEMANJANG JEMBATAN KRETEK II</p> | <p>SKALA</p> | <p>KODE</p> | <p>NO</p> | <p>JML. LBR</p> |
|---|--|--|--------------|-------------|-----------|-----------------|



| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| POTONGAN MELINTANG JEMBATAN | | | | |



PERENCANAAN JEMBATAN BETON BERTULANG
 TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
 DI ATAS SUNGAI KRETEK BANTUL

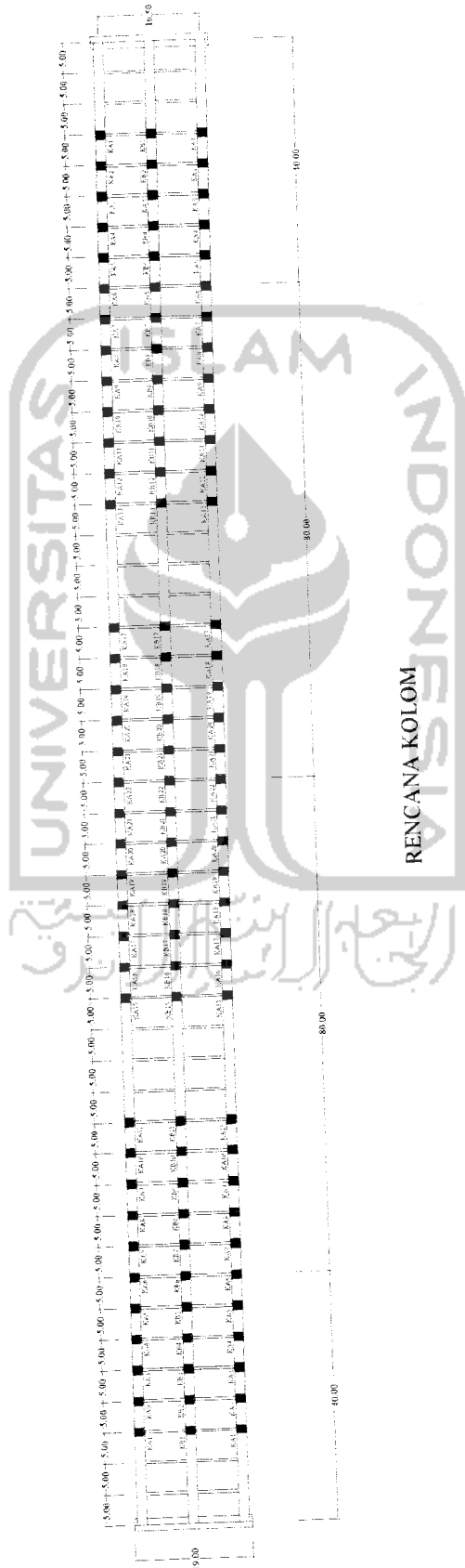
JUDUL GAMBAR
 DETIL PENULANGAN
 PELAT LANTAI JEMBATAN

SKALA

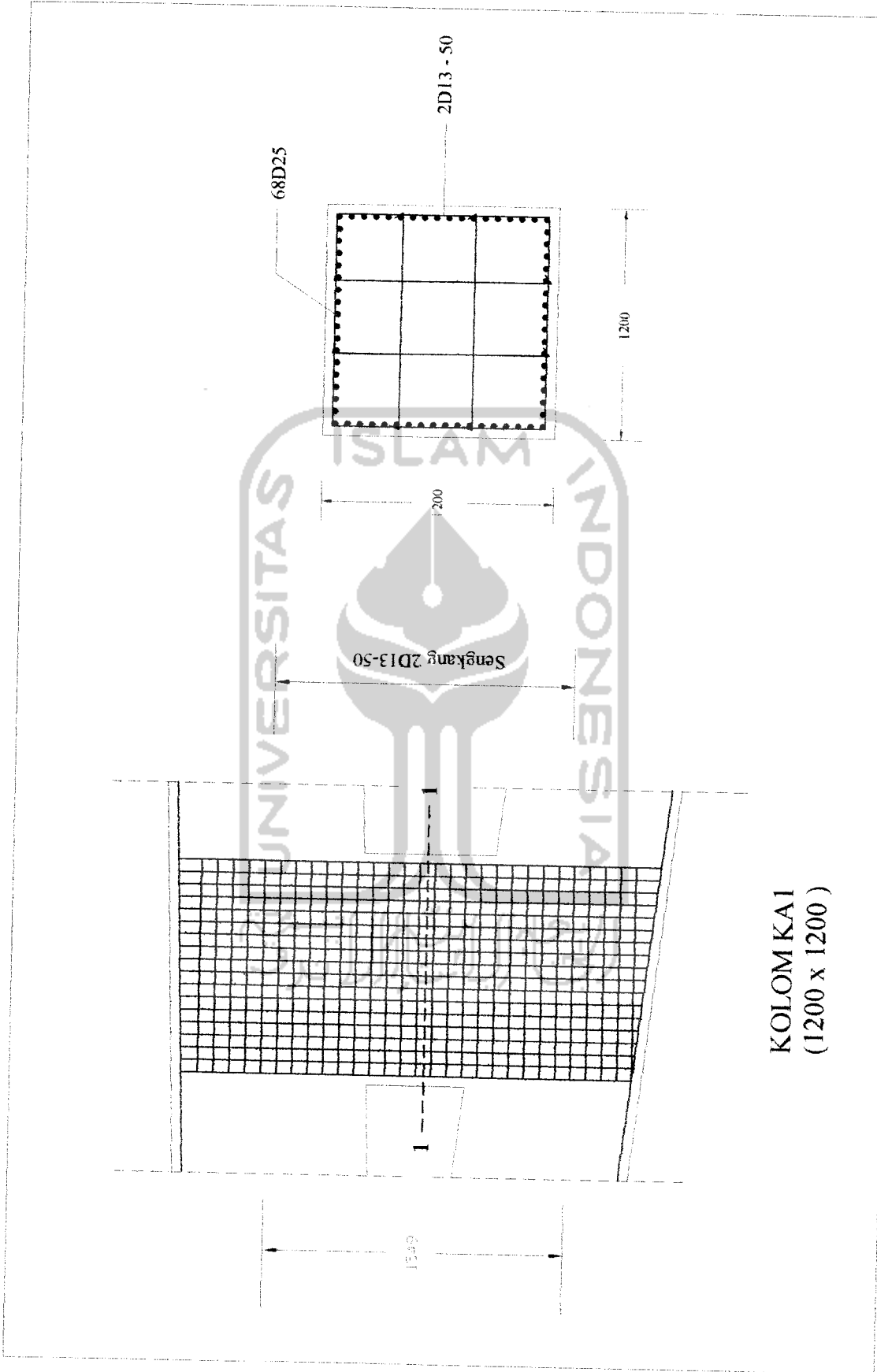
KODE

NO

JML. LBR

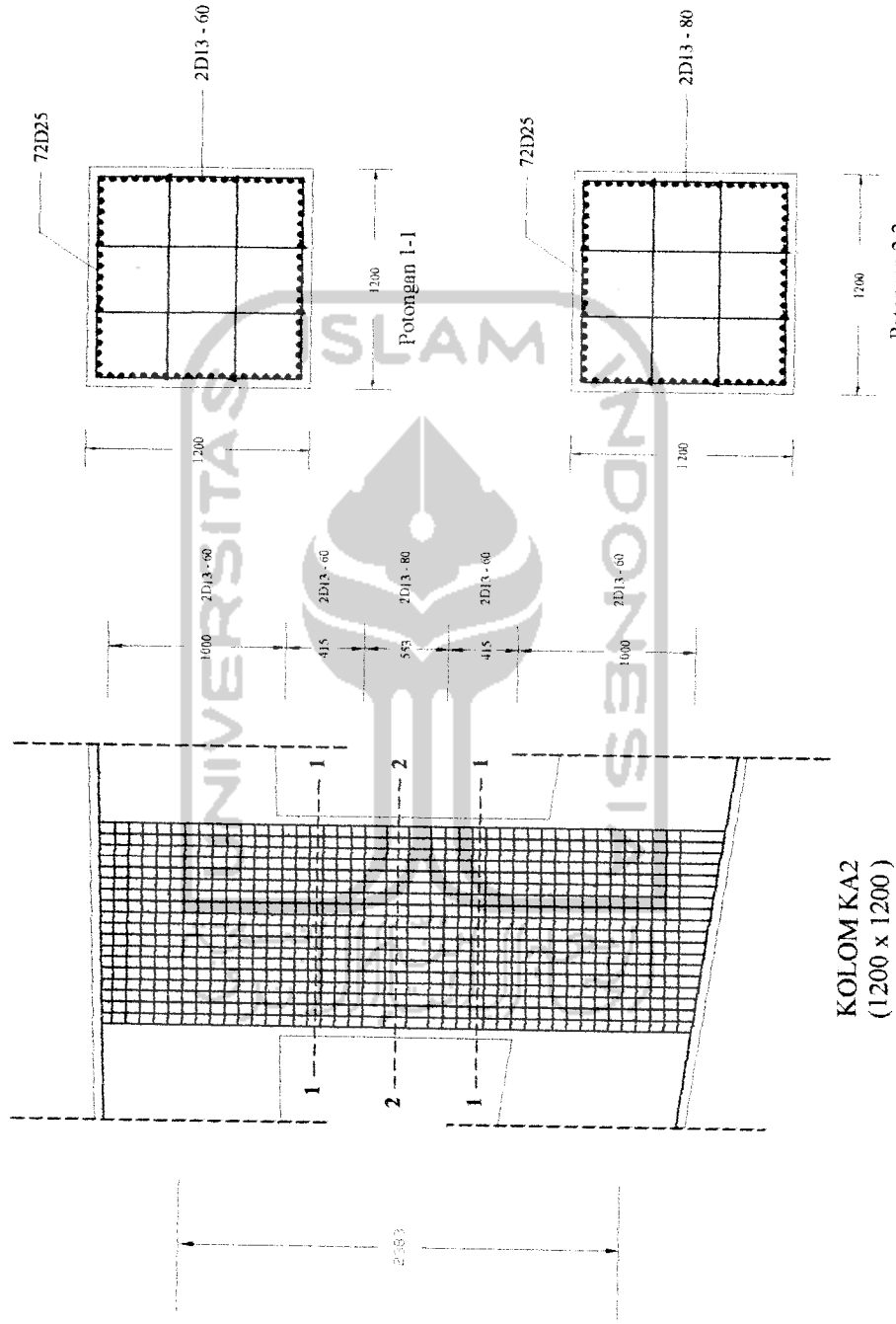


| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|---|-------|------|----|-----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| RENCANA KOLOM | | | | |

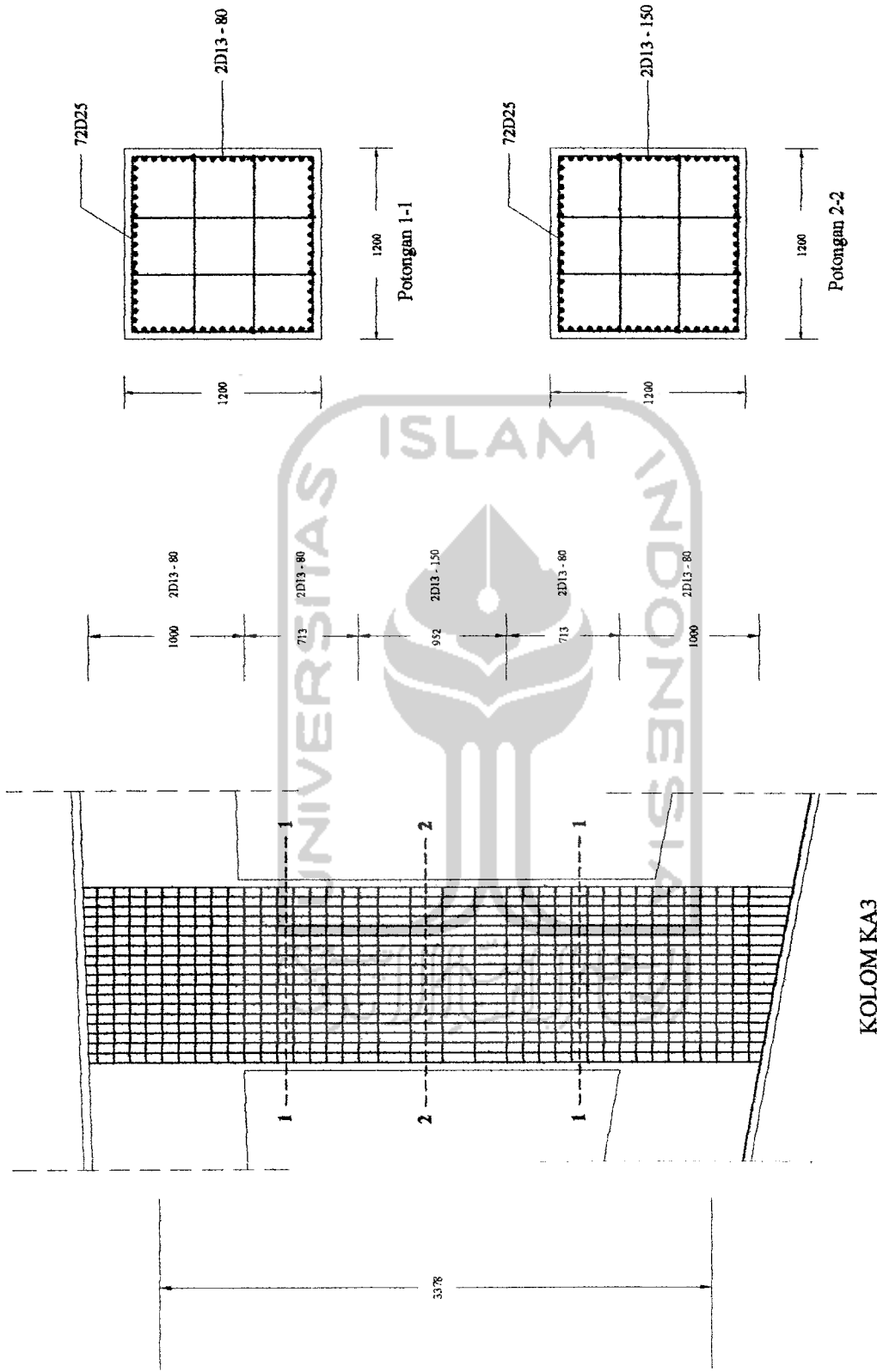


**KOLOM KAI
(1200 x 1200)**

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KA I | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |

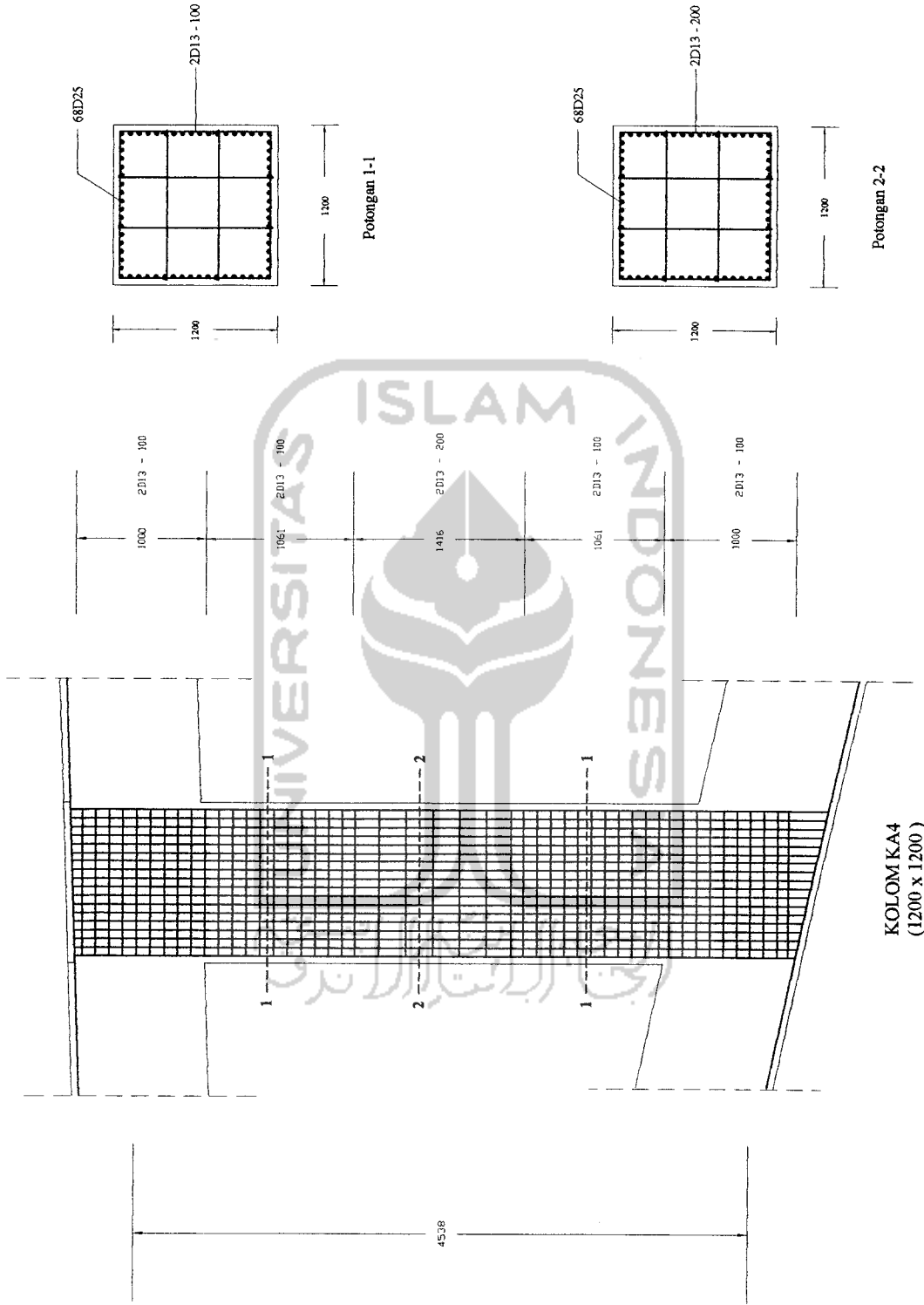


| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KA 2 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |

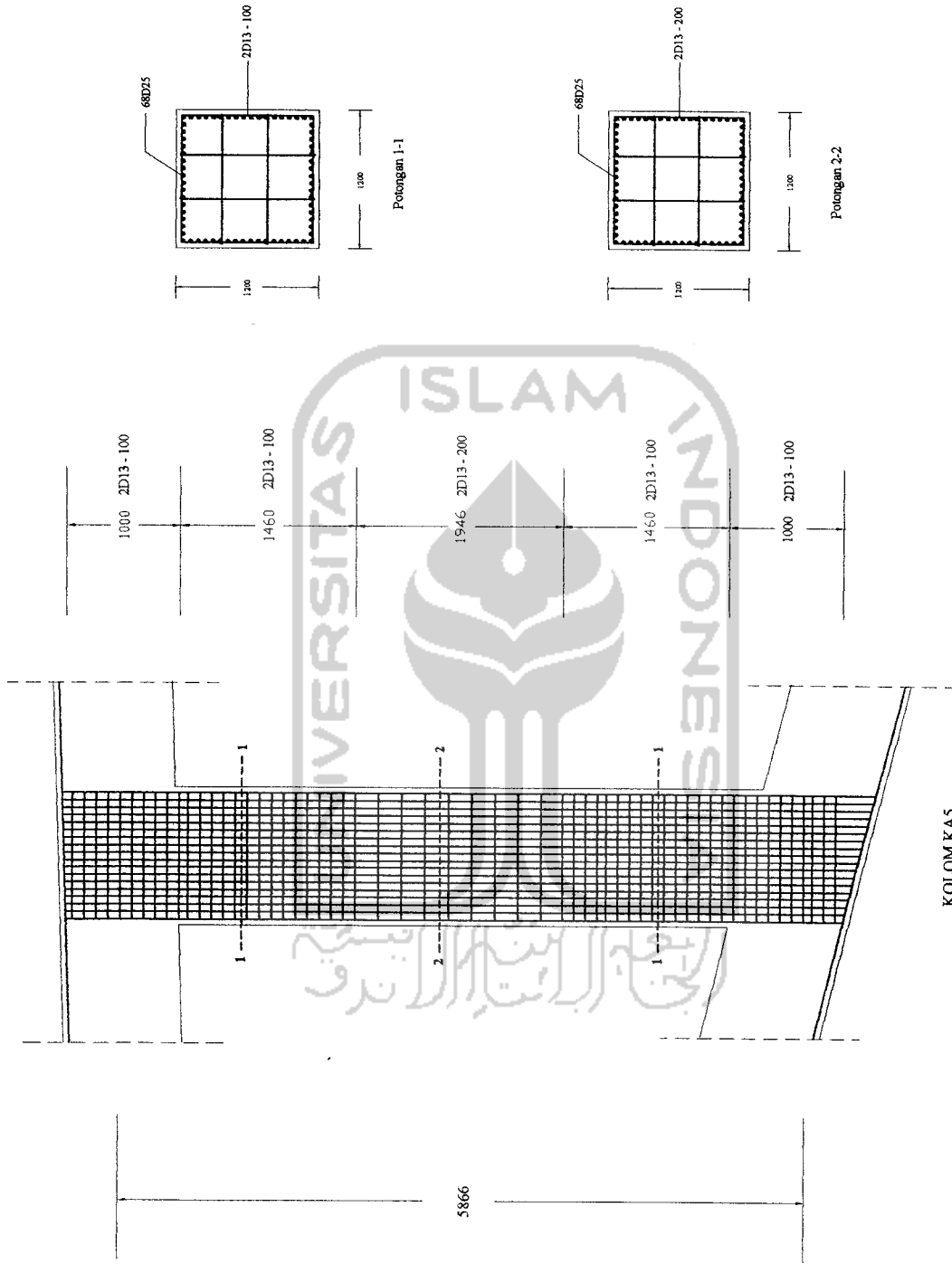


| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|--------------------------------|-------|------|----|----------|
| DETIL PENULANGAN KOLOM KA 3 | | | | |

PERENCANAAN JEMBATAN BETON BERTULANG
 TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
 DI ATAS SUNGAI KRETEK BANTUL



| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KA 4 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |



KOLOM KA5
(1200 x 1200)

5866

PERENCANAAN JEMBATAN BETON BERTULANG
TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
DI ATAS SUNGAI KRETEK BANTUL

JUDUL GAMBAR

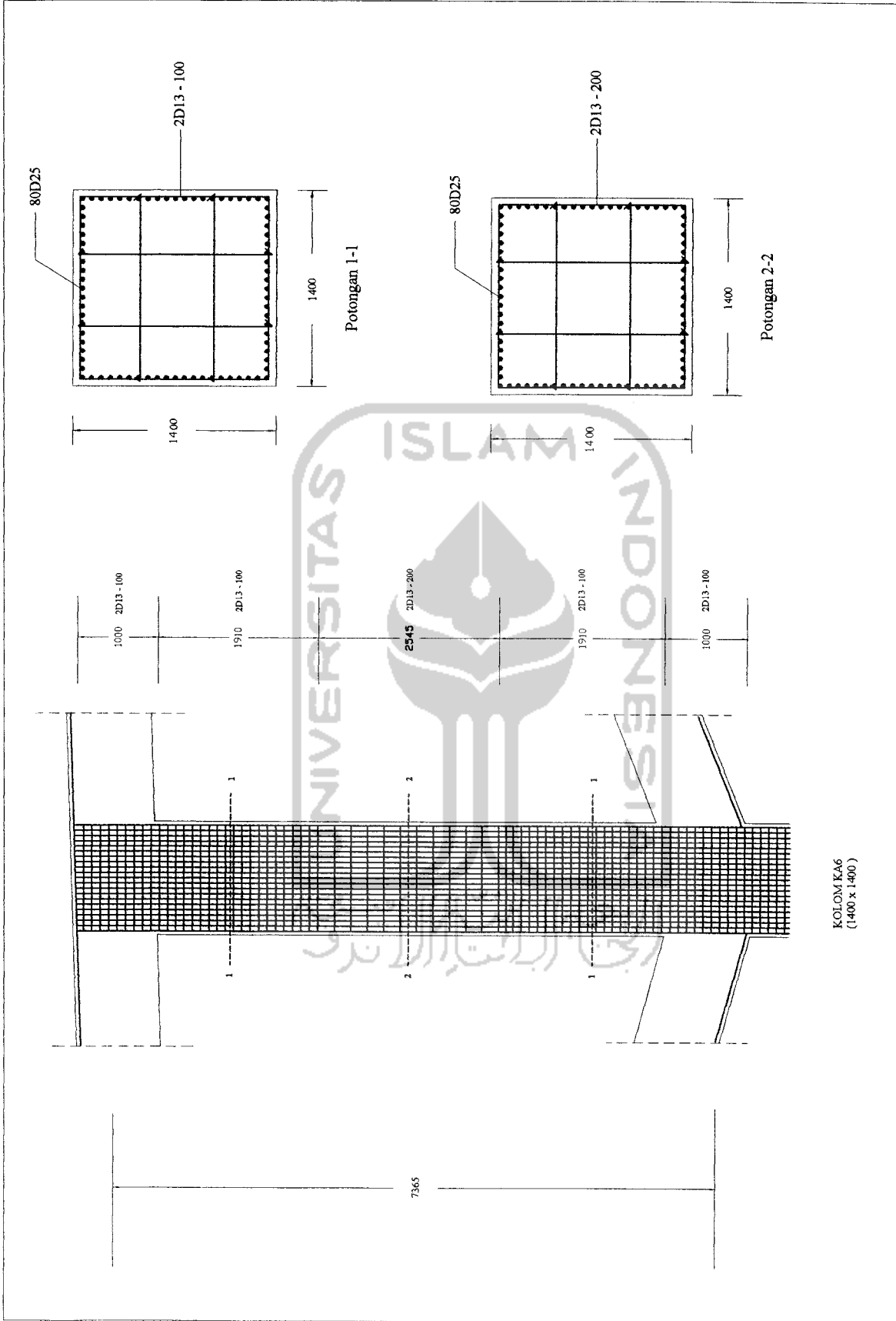
DETIL PENULANGAN
KOLOM KA 5

SKALA

KODE

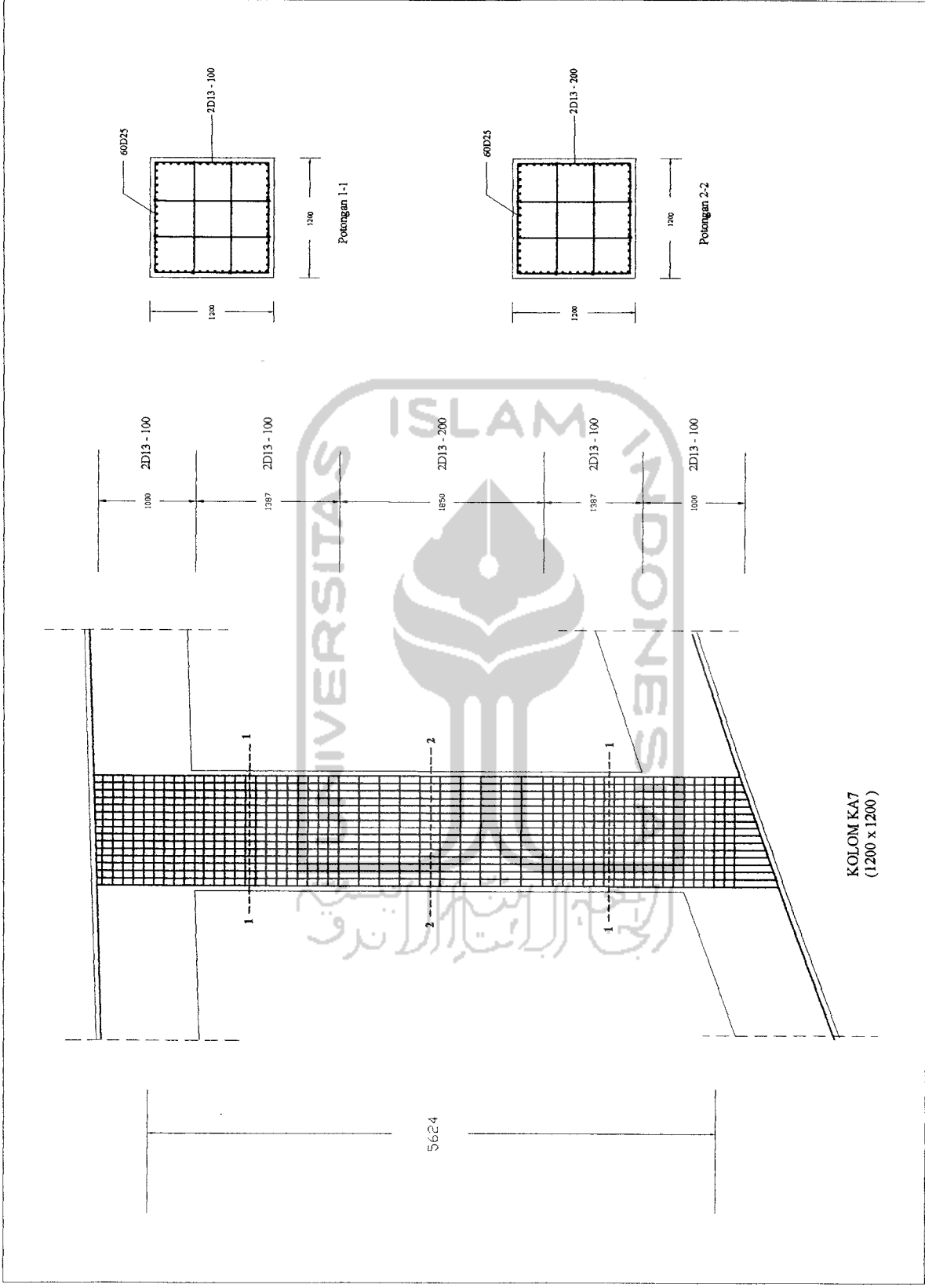
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JML. LBR

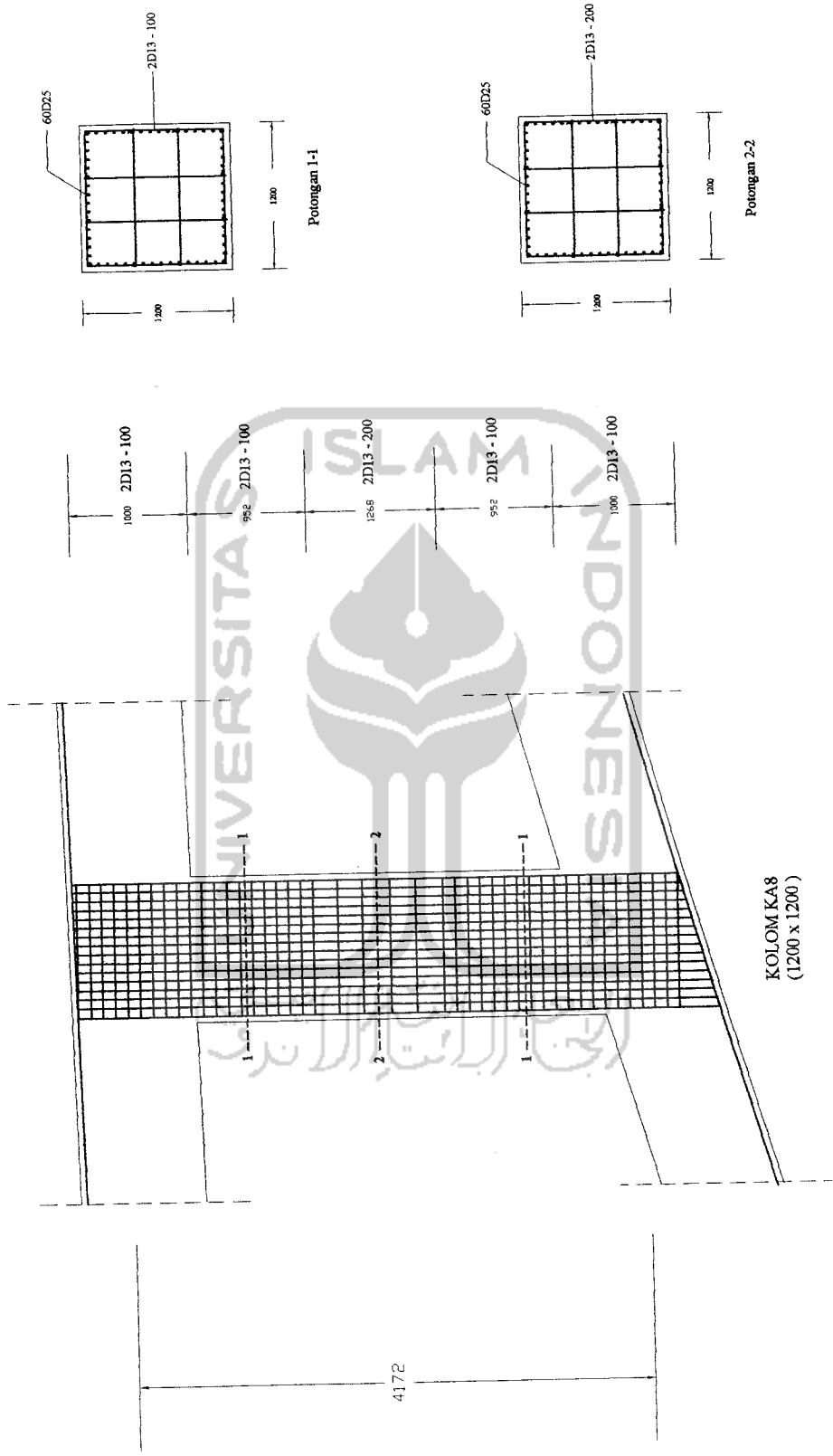


KOLOM KA6
(1400 x 1400)

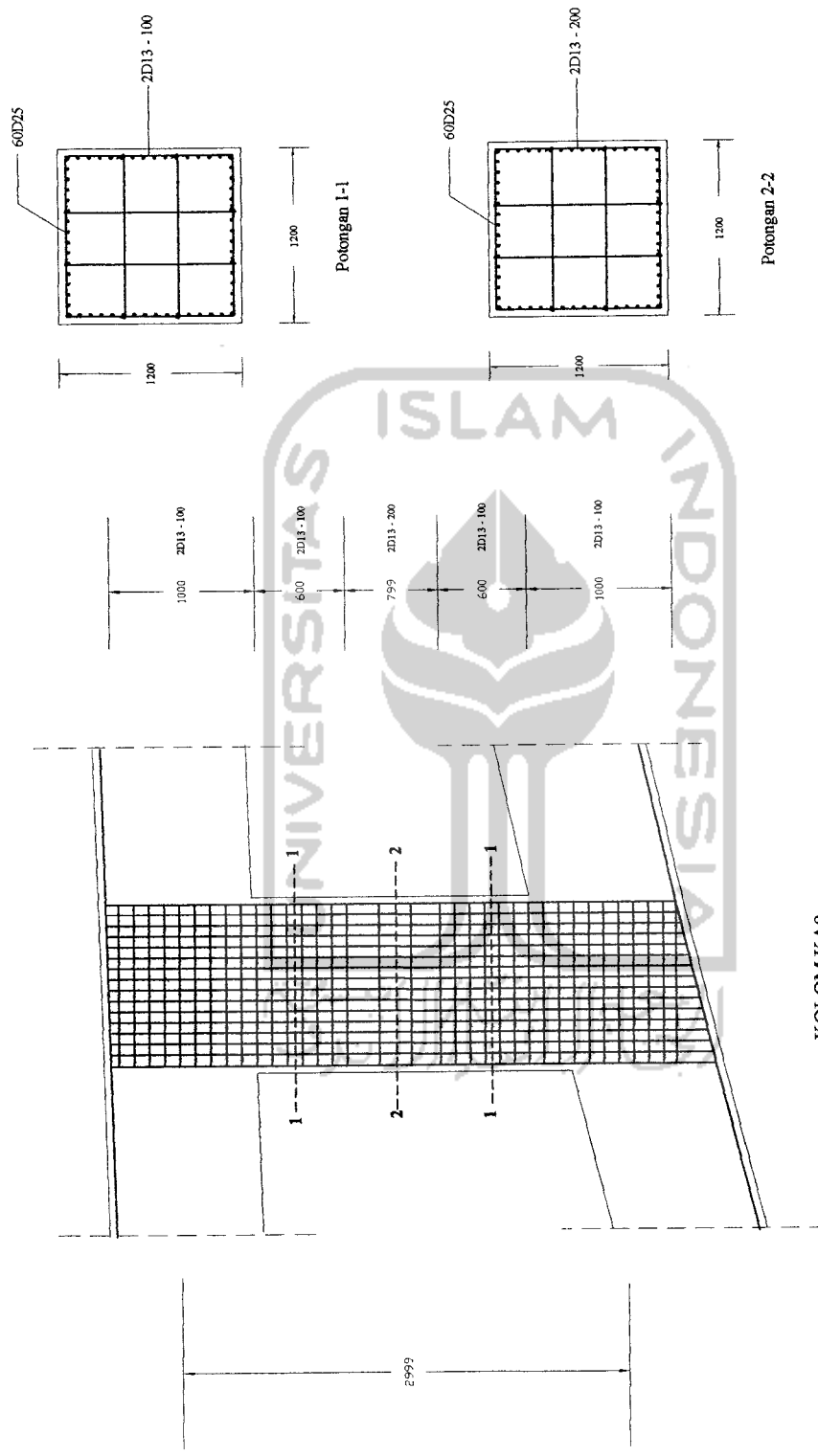
| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|--------------------------------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTEK | DETIL PENULANGAN KOLOM KA 6 | | | |



| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KA 7 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |

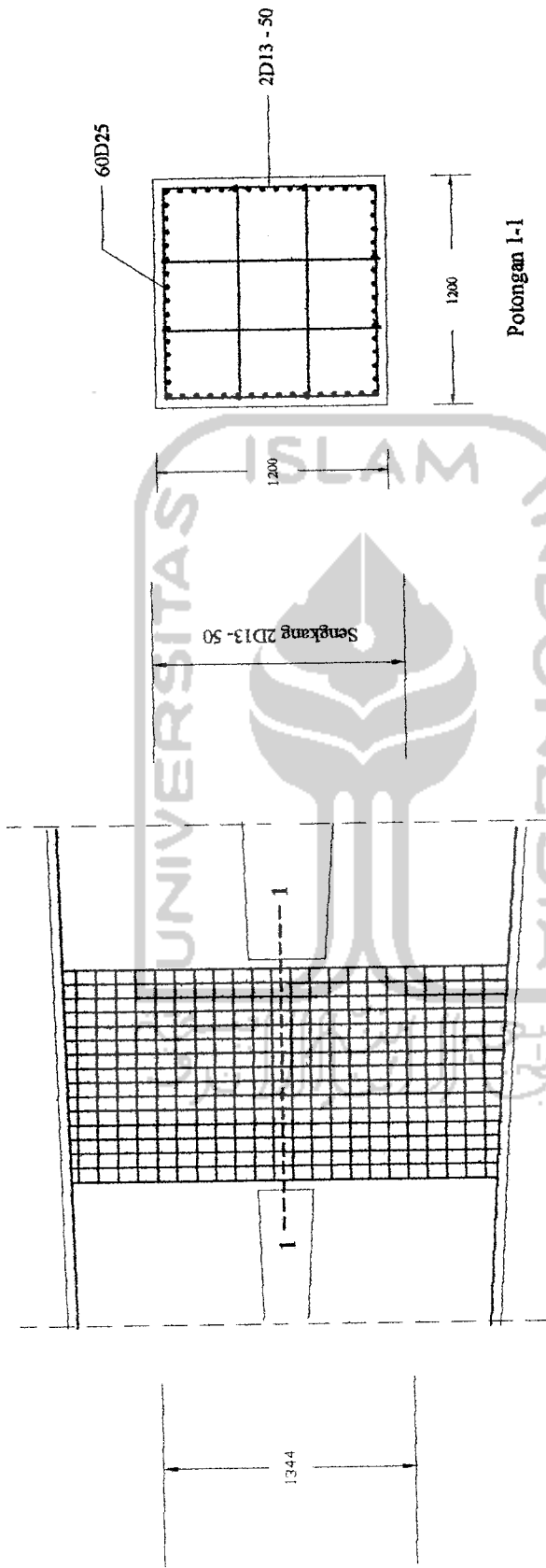


| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|--------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN KOLOM KA 4 | | | | |



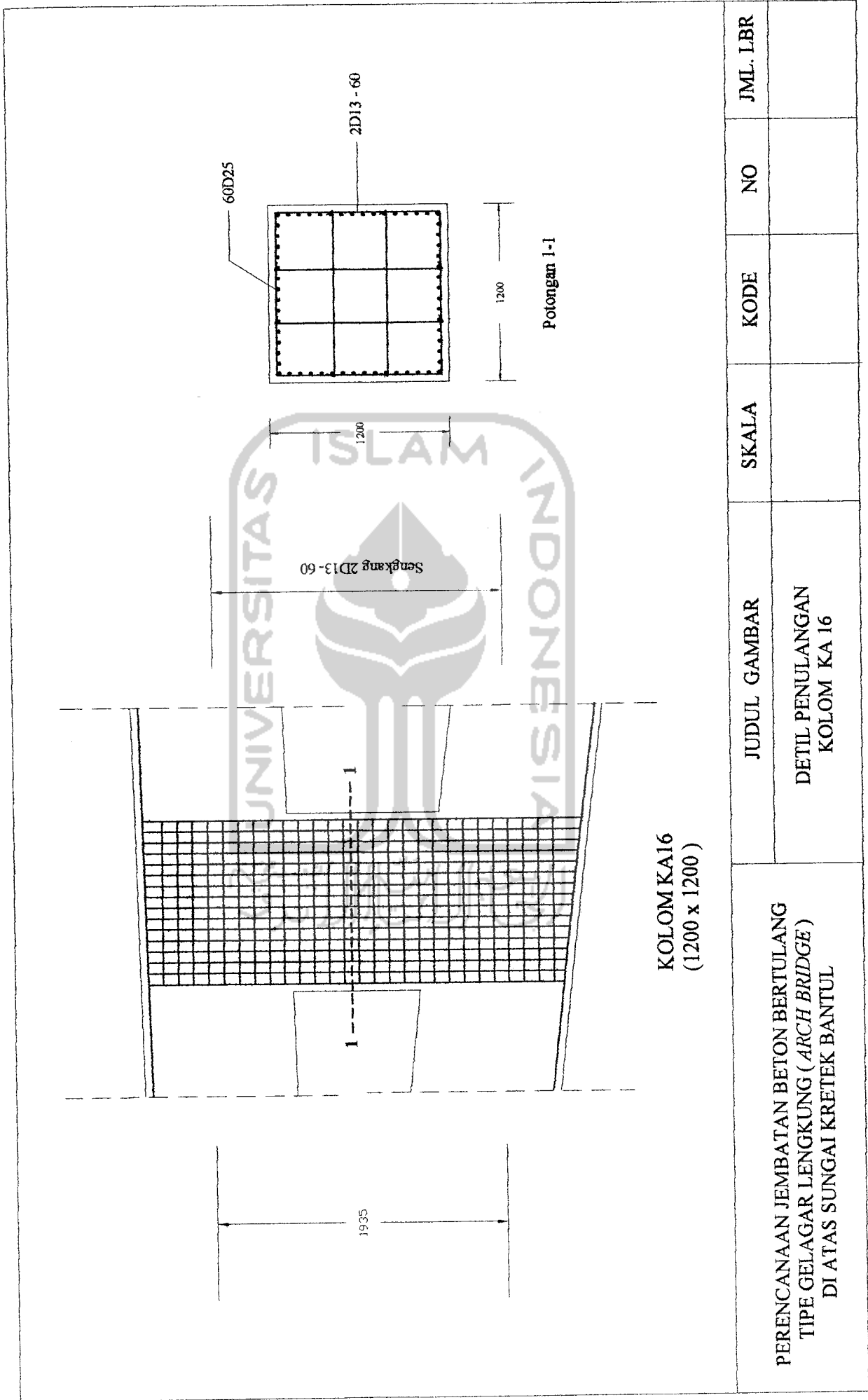
KOLOM KA9
(1200 x 1200)

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KA 9 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |

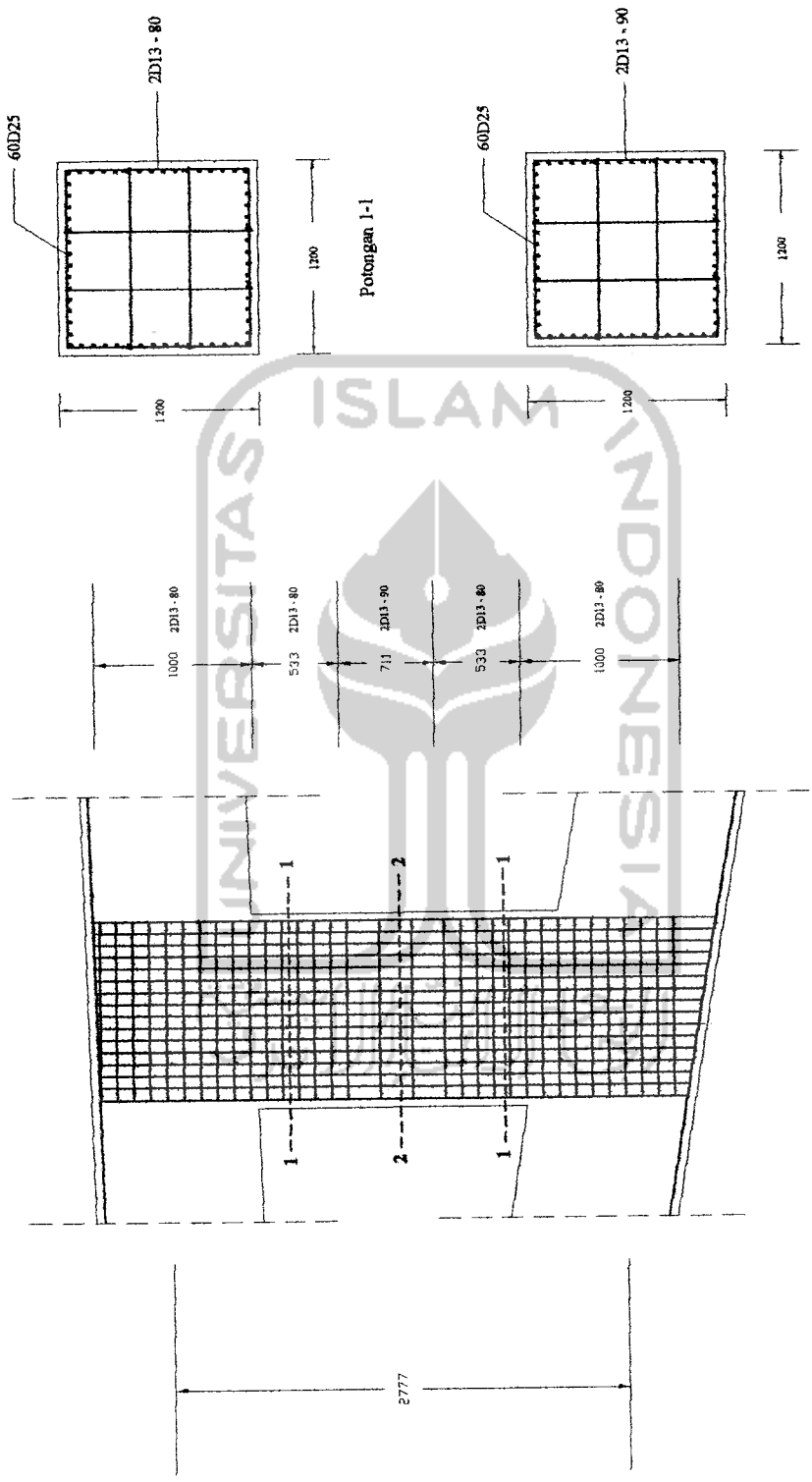


KOLOM KA15
(1200 x 1200)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN KOLOM KA 15 | | | | |

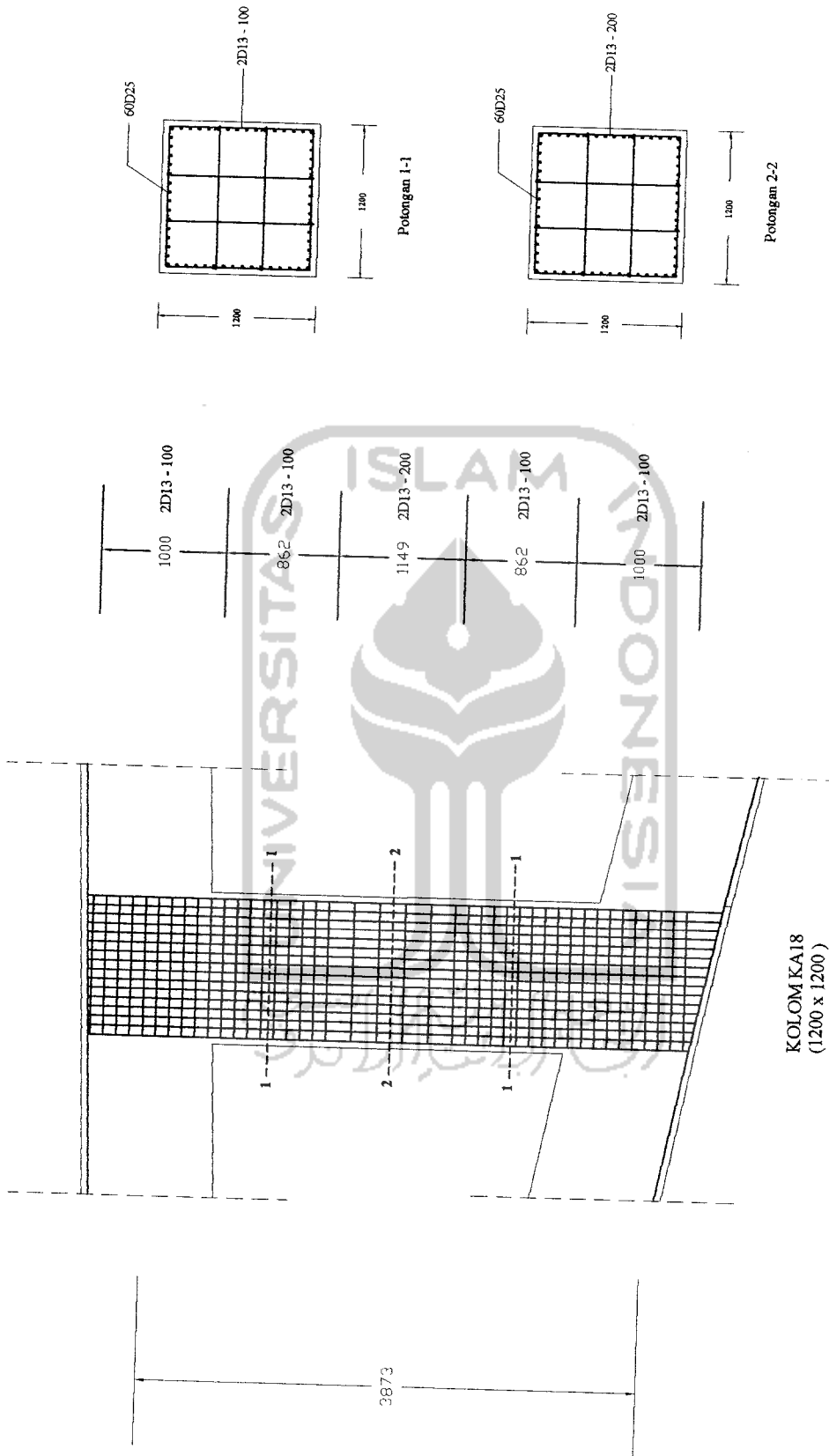


| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KA 16 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



KOLOM KAI17
(1200 x 1200)

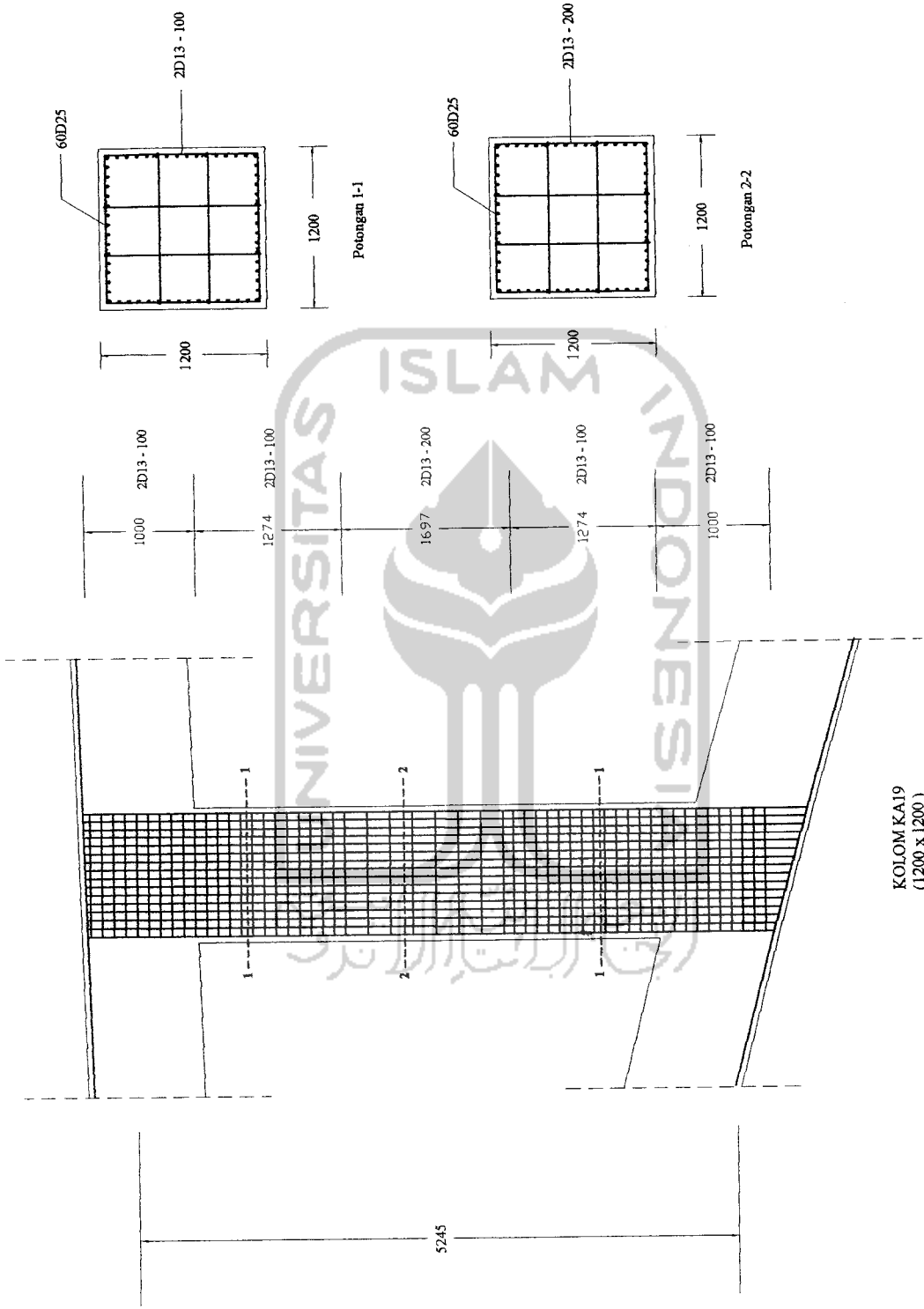
| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|---------------------------------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | DETIL PENULANGAN KOLOM KAI17 | | | |



KOLOM KA18
(1200 x 1200)

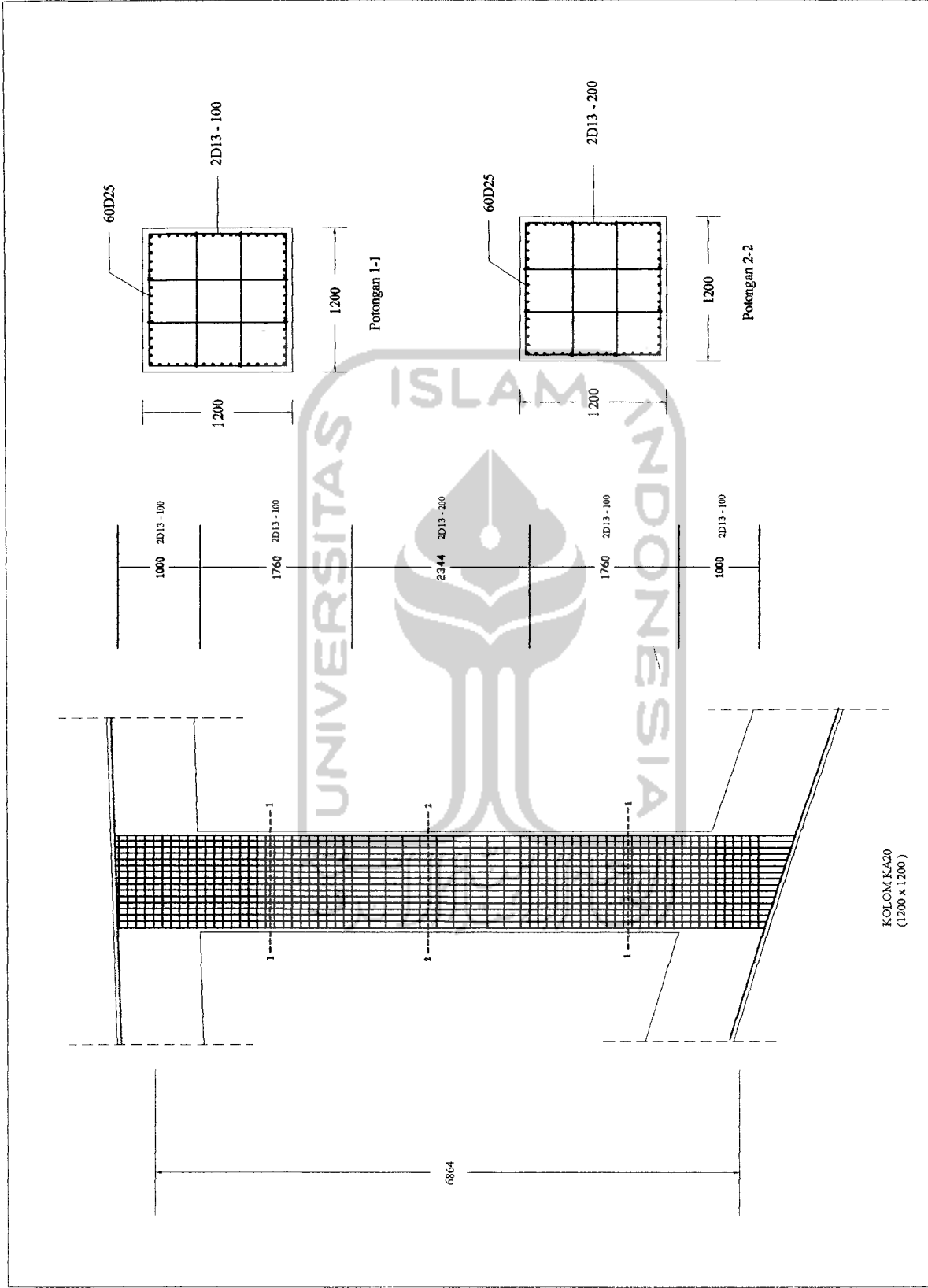
PERENCANAAN JEMBATAN BETON BERTULANG
 TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
 DI ATAS SUNGAI KRETEK BANTUL

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|----------------------------------|-------|------|----|----------|
| DETIL PENJULANGAN KOLOM KA 18 | | | | |

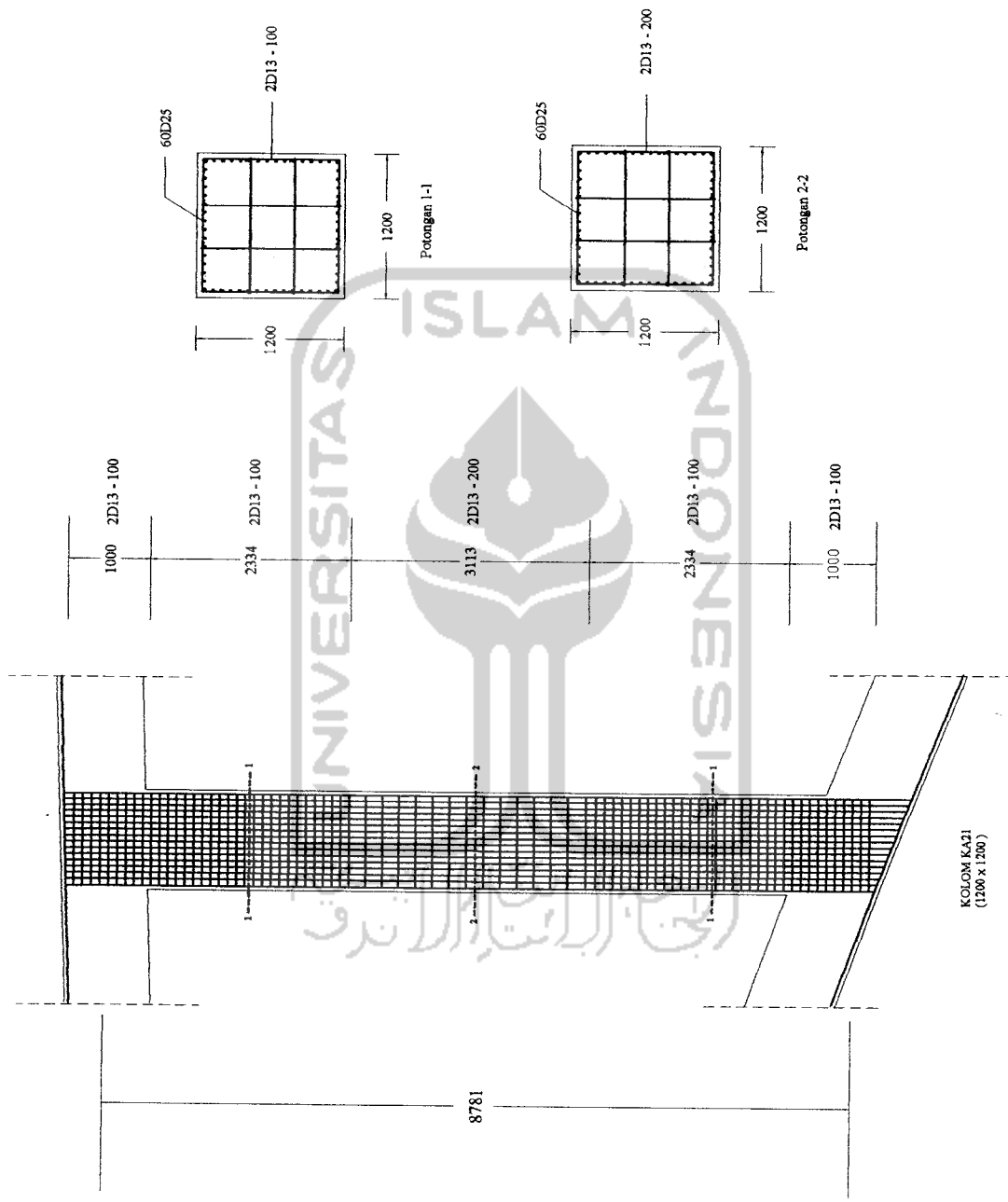


KOLOM KA19
(1200 x 1200)

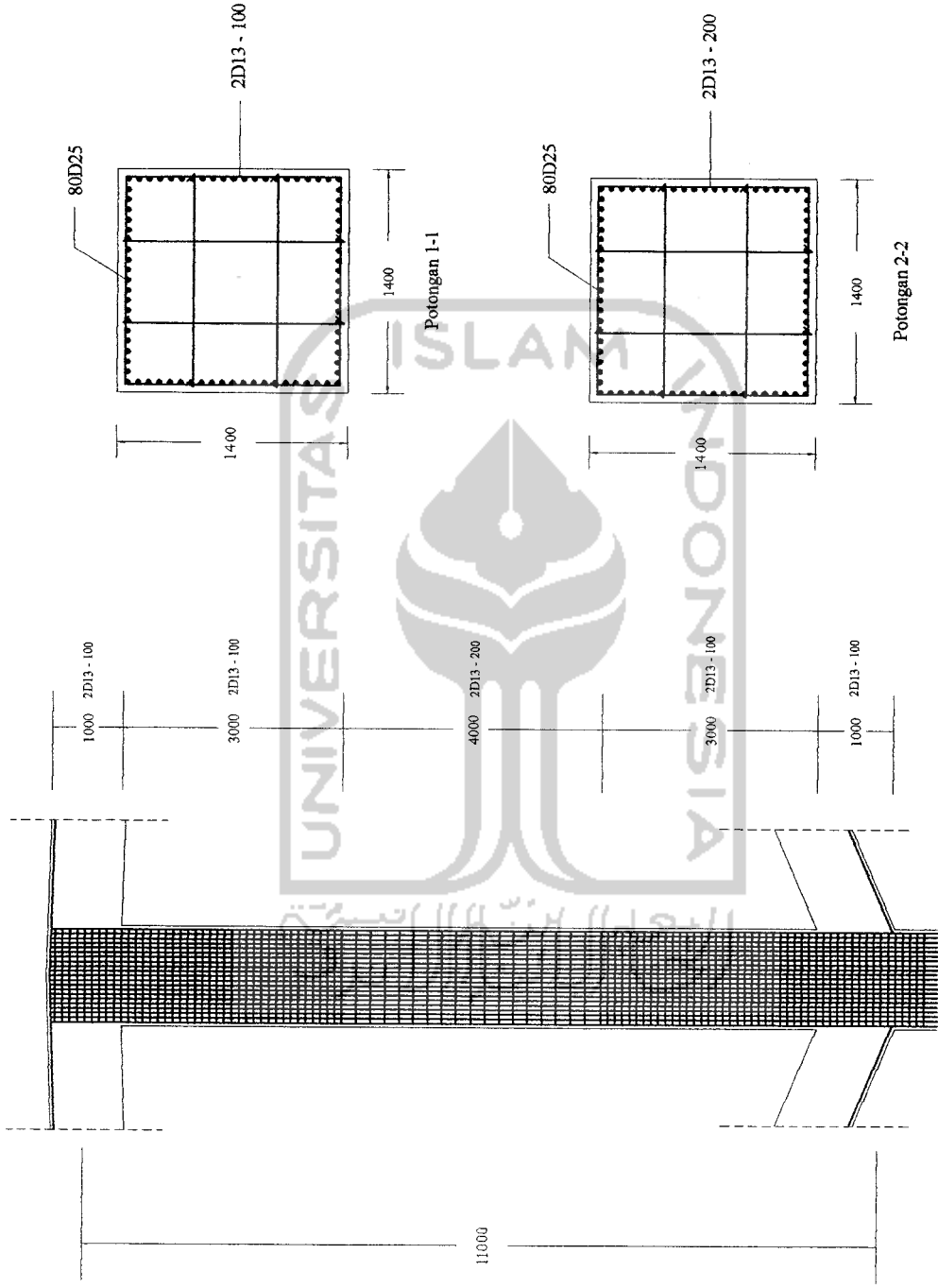
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KA 19 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (<i>ARCH BRIDGE</i>) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|--|---------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN KOLOM KA 20 | | | | |



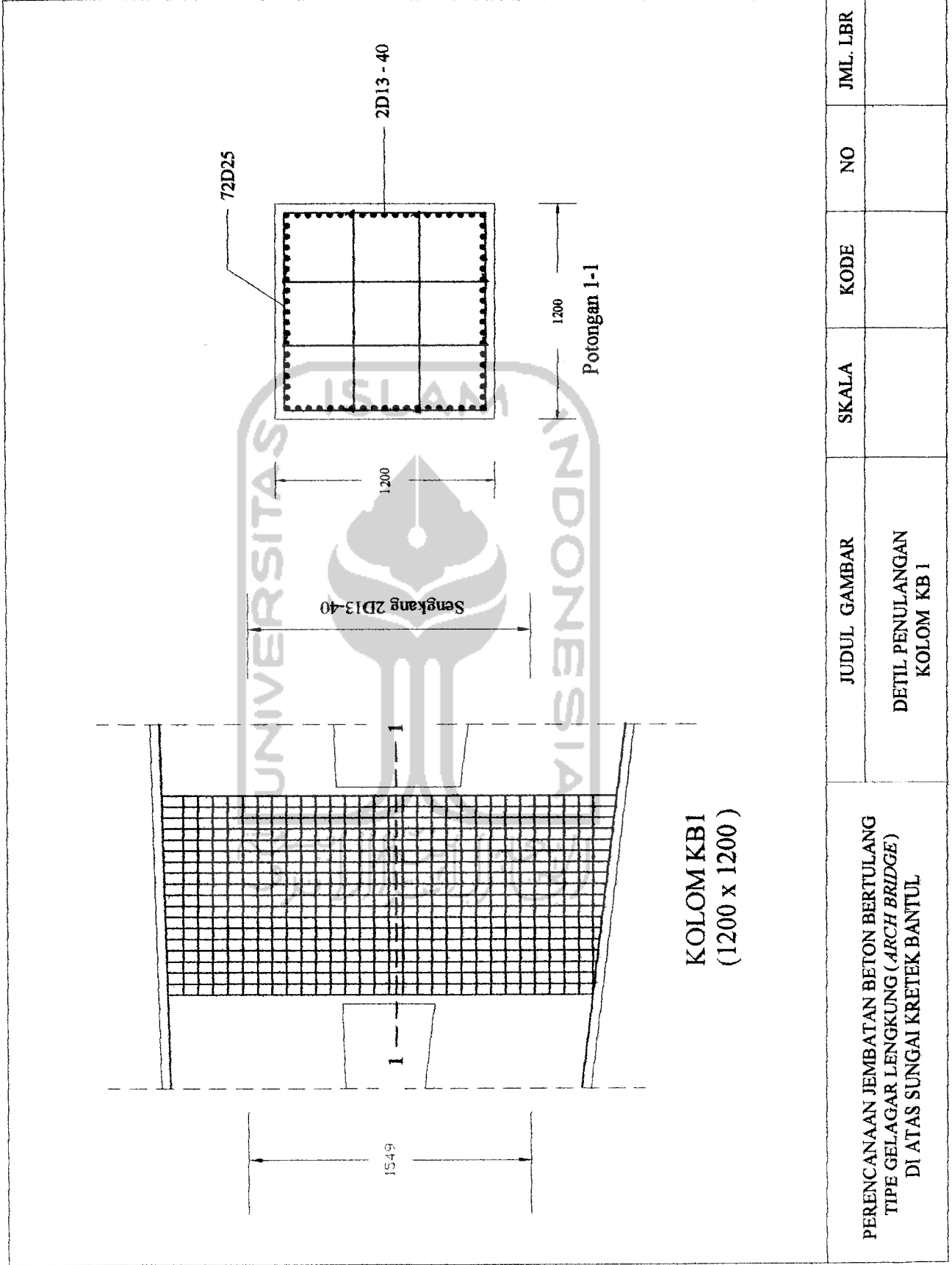
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KA 21 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



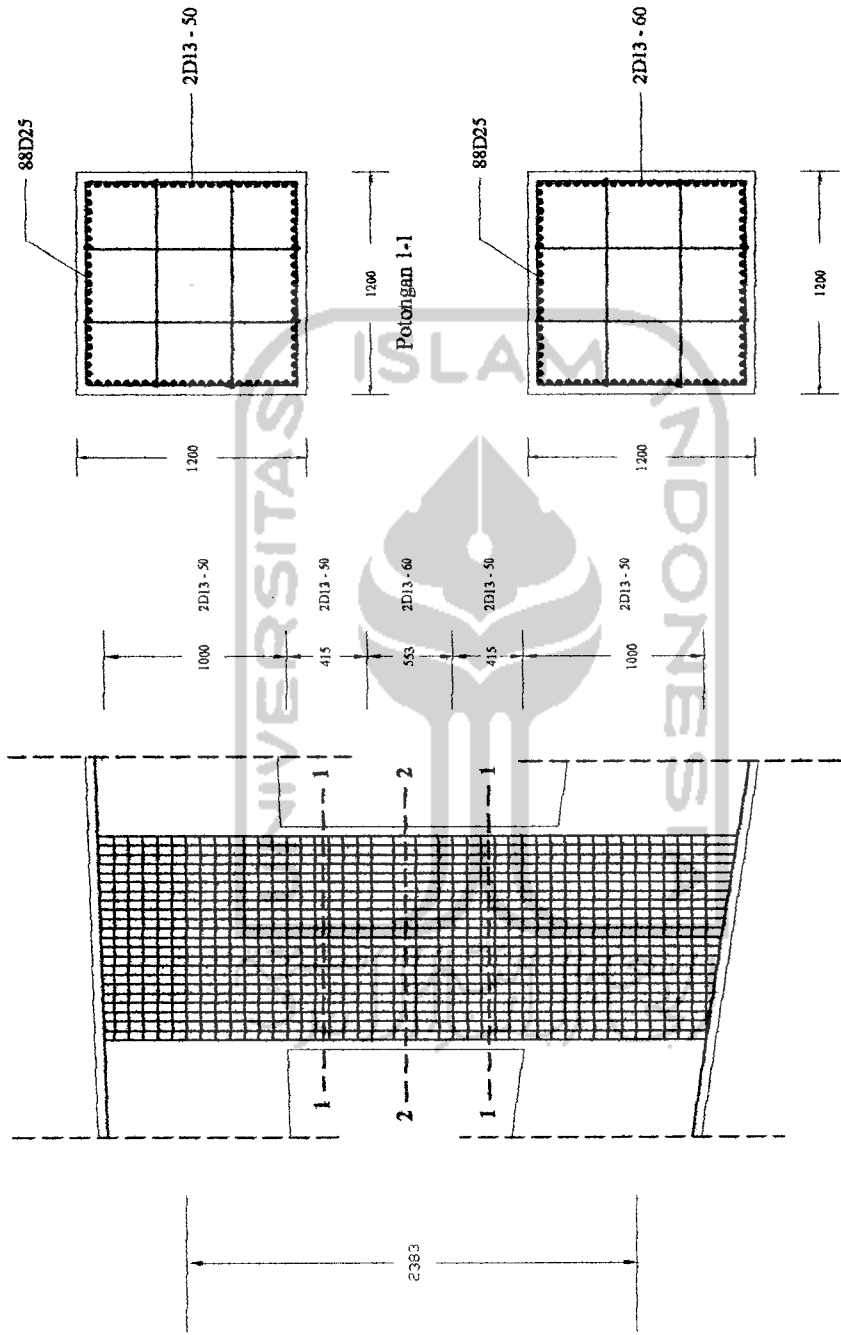
KOLOM KA22
(400 x 1400)

PERENCANAAN JEMBATAN BETON BERTULANG
TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
DI ATAS SUNGAI KRETEK BANTUL

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---------------------------------|-------|------|----|----------|
| DETIL PENULANGAN KOLOM KA 22 | | | | |

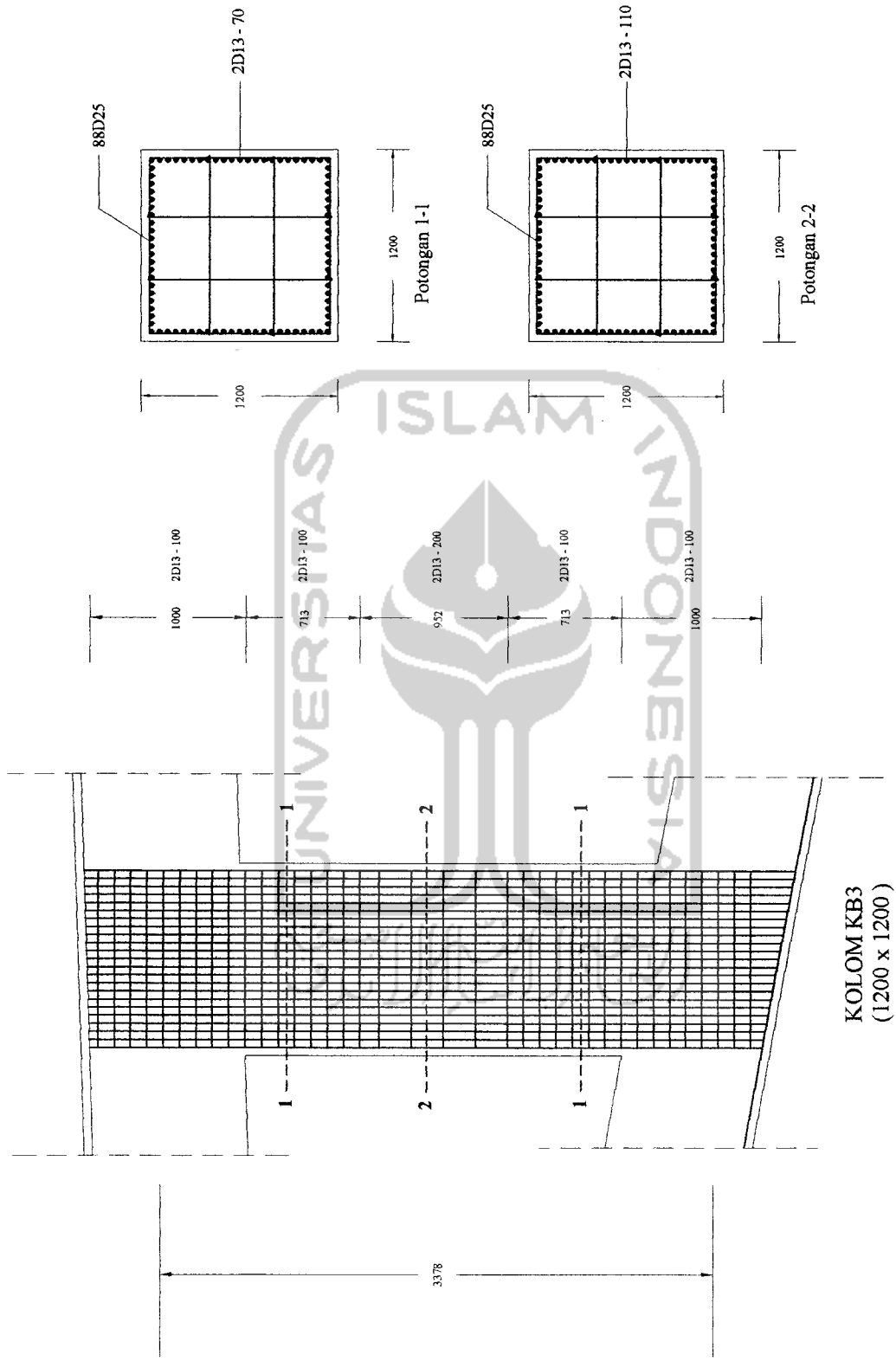


| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| DETIL PENULANGAN KOLOM KB 1 | | | | |
| PERENCANAAN JEMBATAN BETON BERTULANG TIBE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |



KOLOM KB2
(1200 x 1200)

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KB 2 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |



PERENCANAAN JEMBATAN BETON BERTULANG
 TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
 DI ATAS SUNGAI KRETEK BANTUL

JUDUL GAMBAR

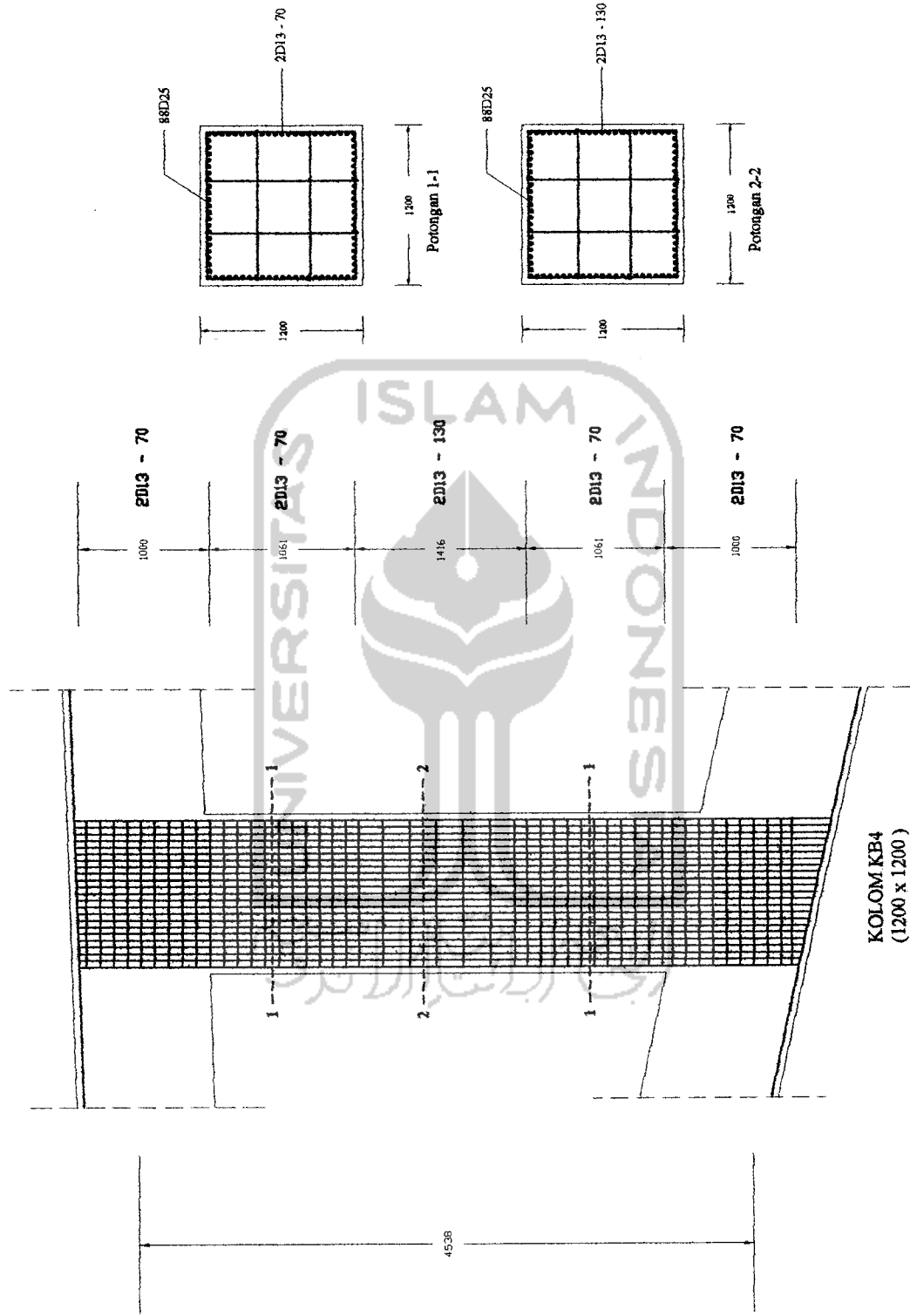
DETIL PENULANGAN
 KOLOM KB 3

SKALA

KODE

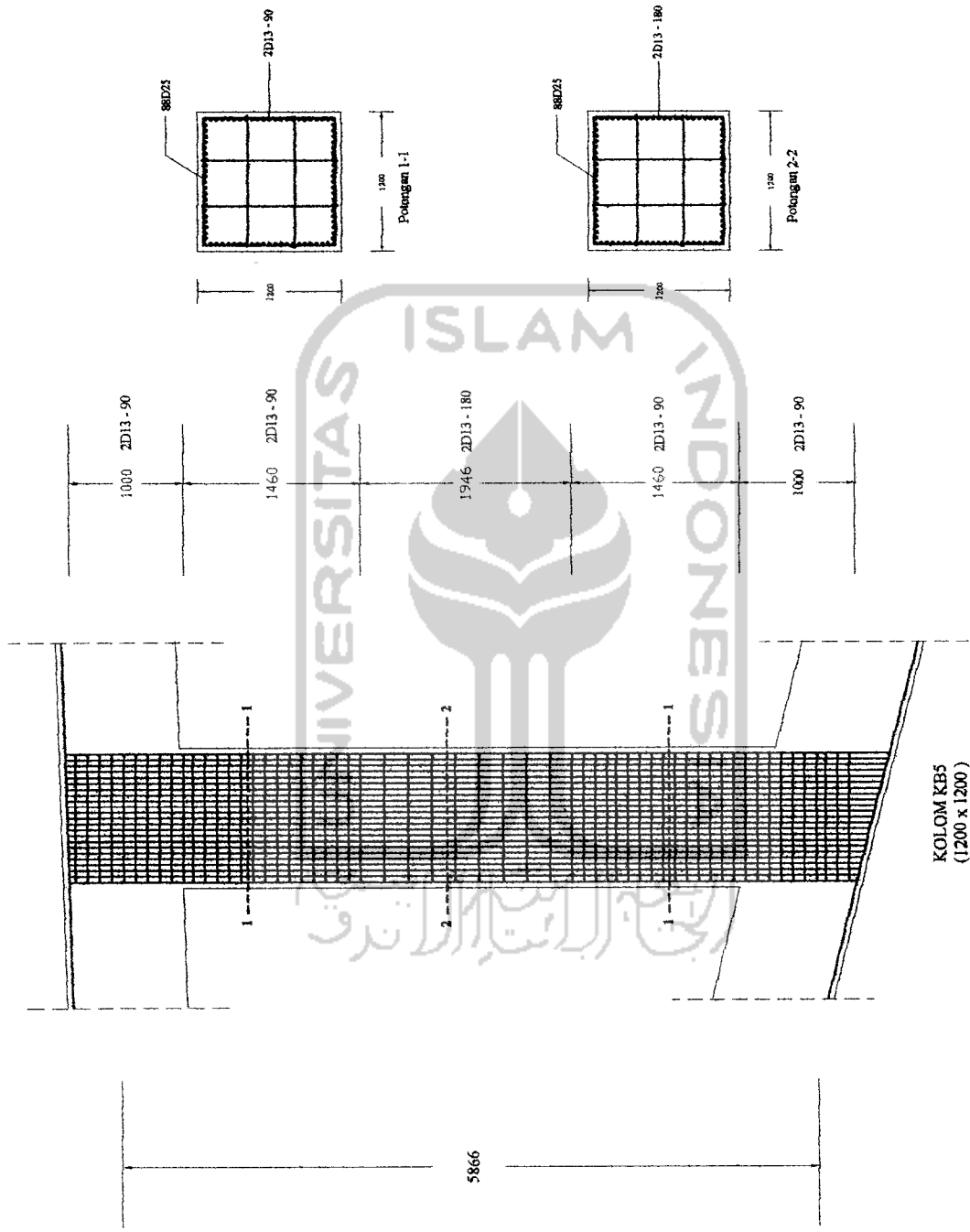
NO

JML. LBR

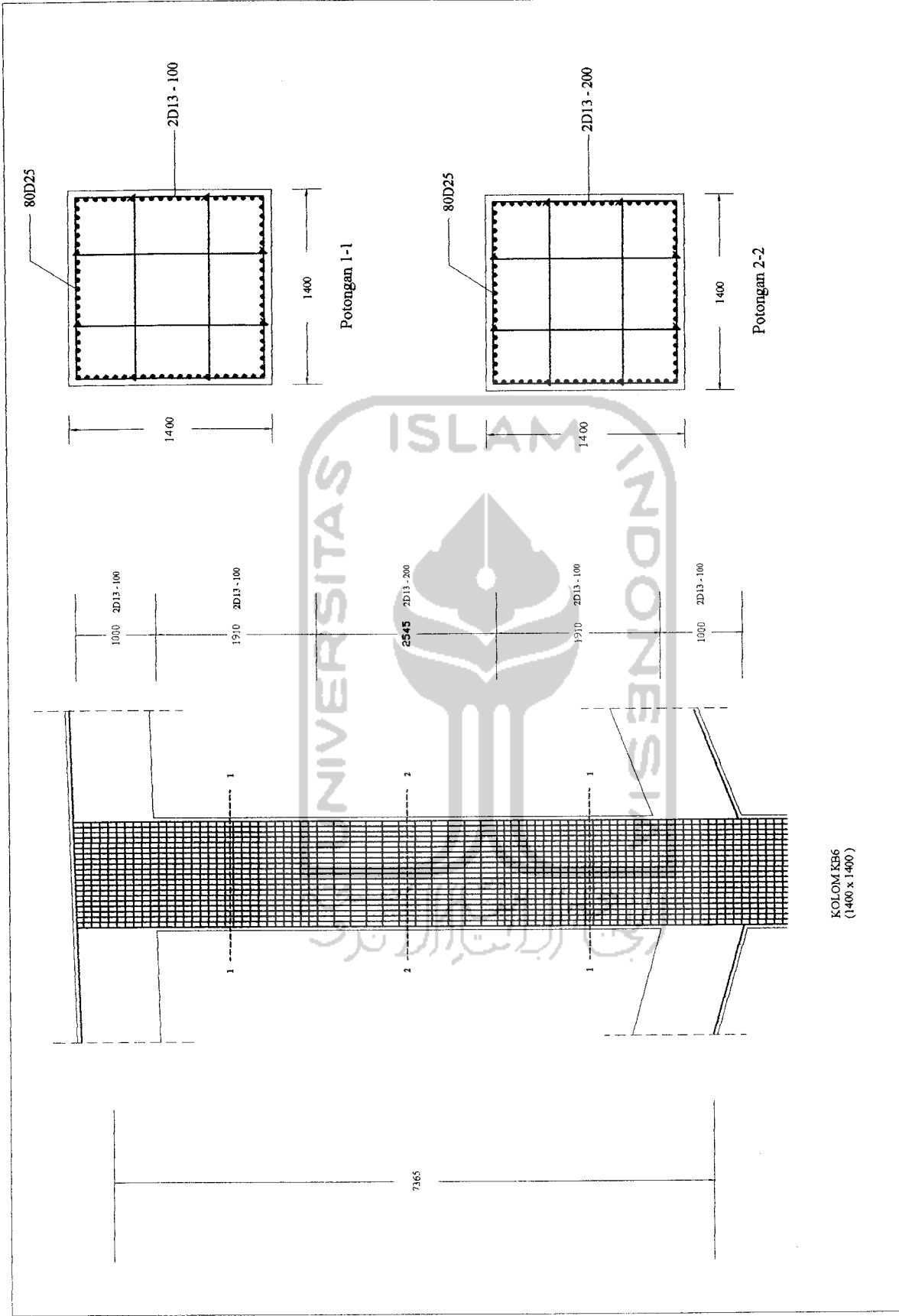


KOLOM KB4
(1200 x 1200)

| | | | | | |
|---|--------------------------------|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
| | DETIL PENULANGAN KOLOM KB 4 | | | | |

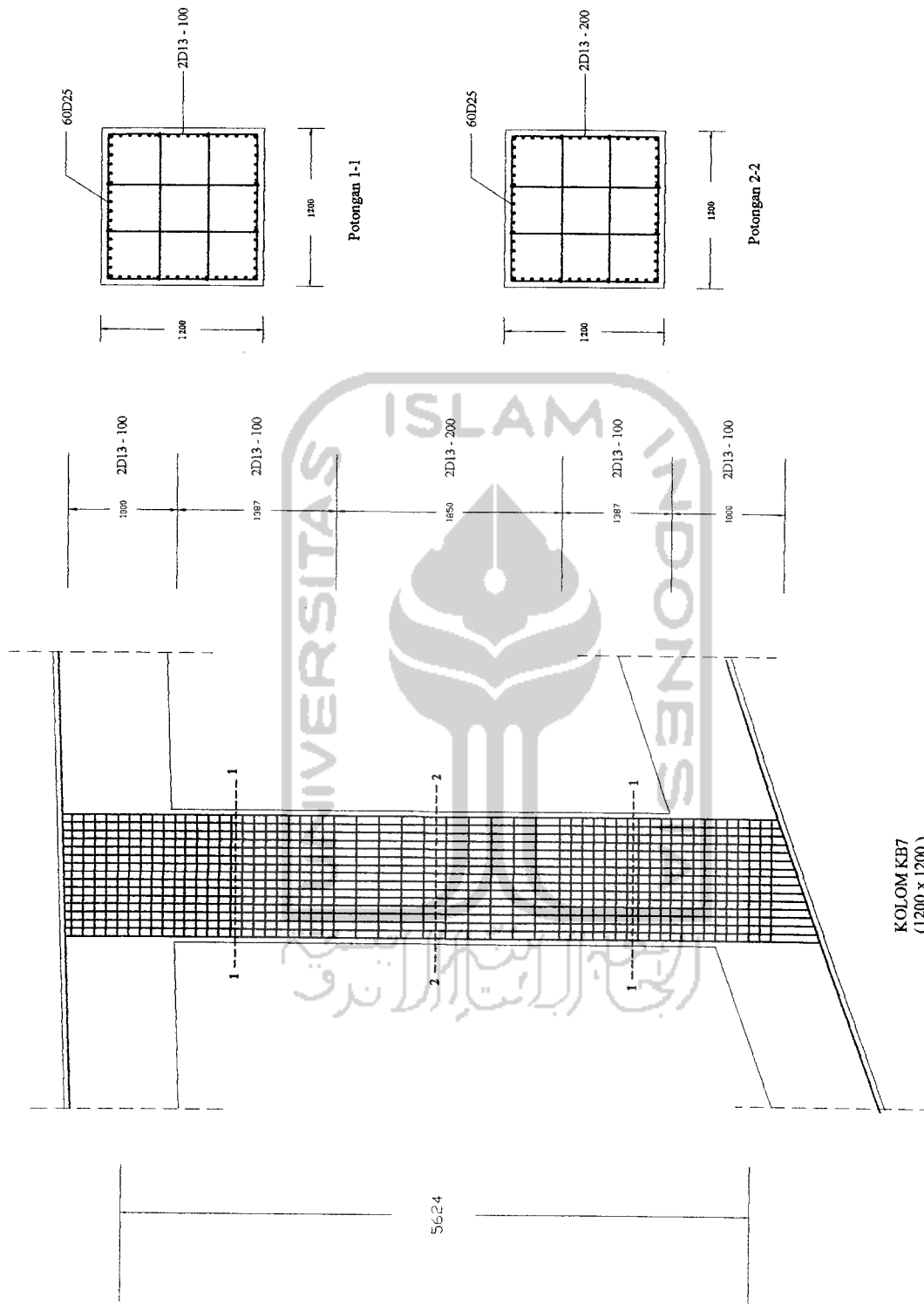


| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KB 5 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |

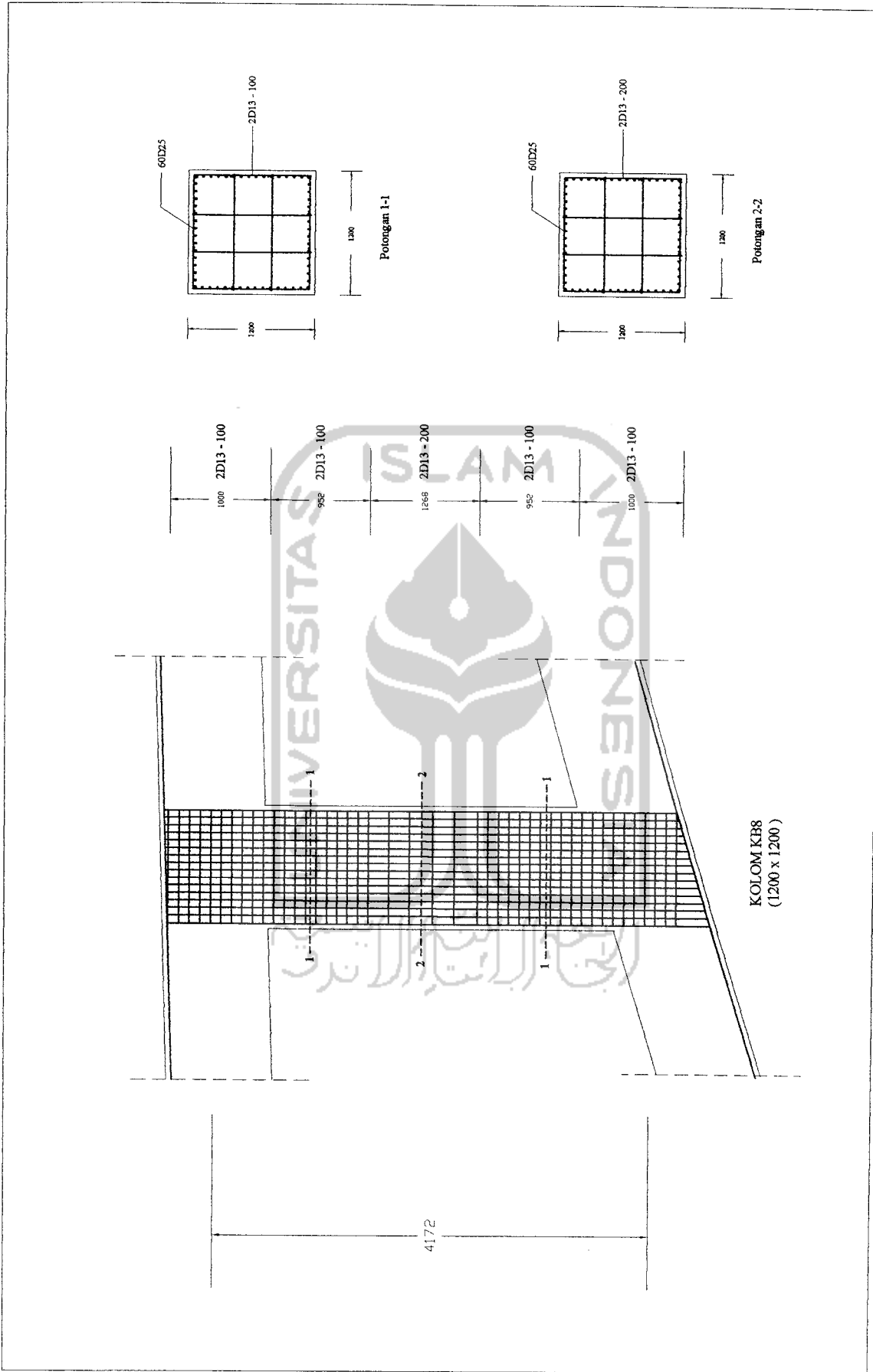


KOLOM KB6
(1400 x 1400)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|--------------------------------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | DETIL PENULANGAN KOLOM KB 6 | | | |

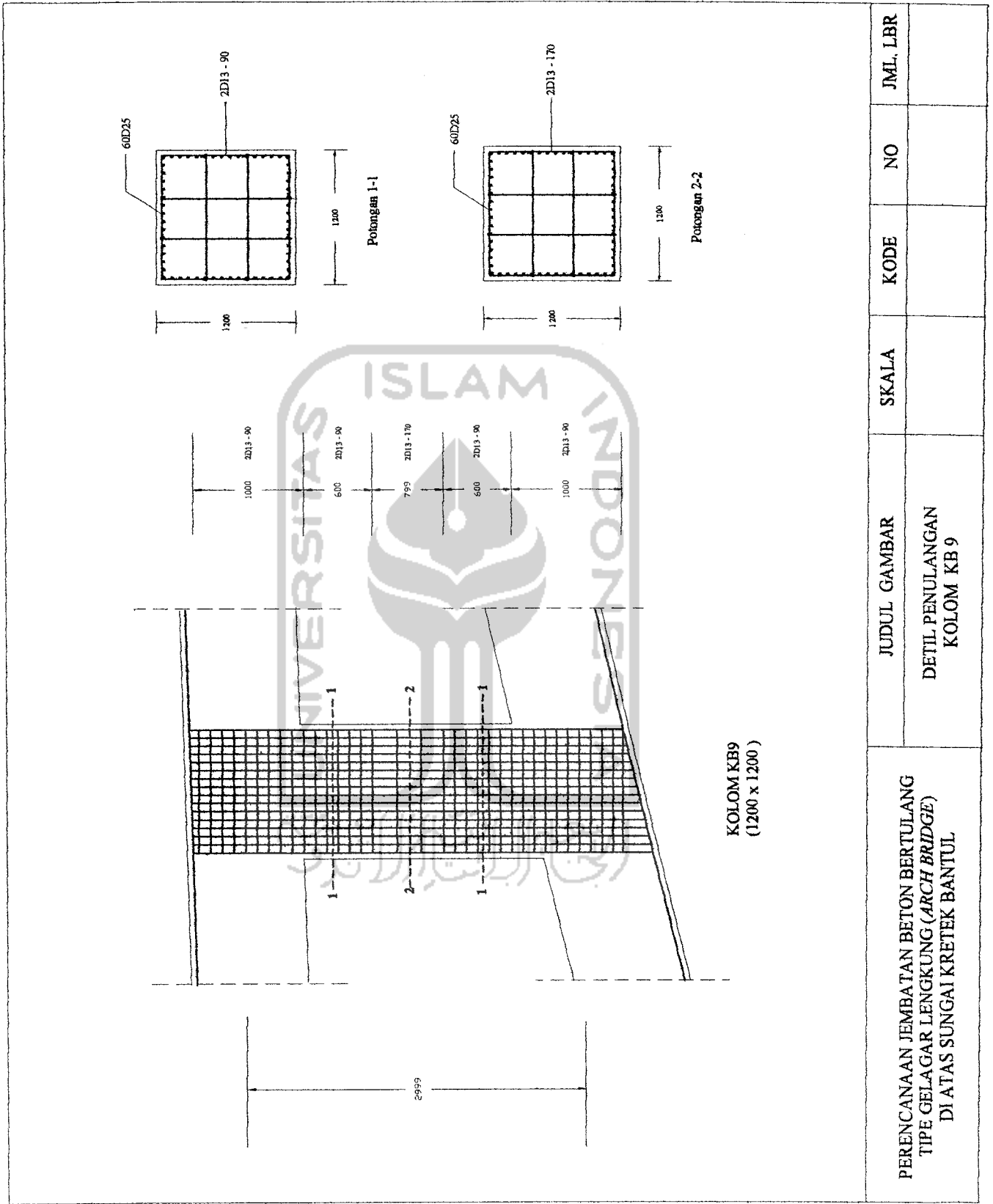


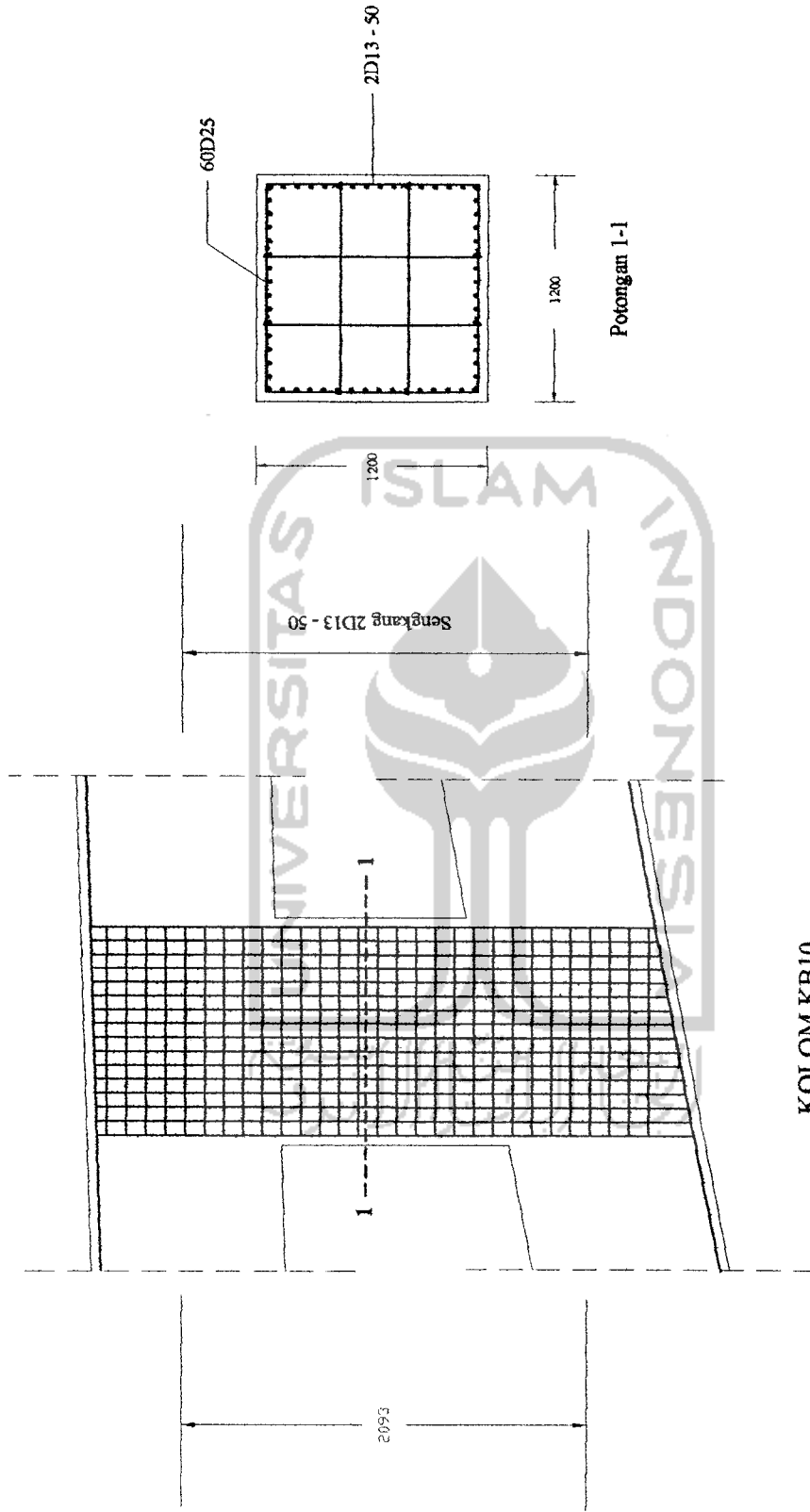
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KB 7 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |



KOLOM KB8
(1200 x 1200)

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KB 8 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |





KOLOM KB10
(1200 x 1200)

PERENCANAAN JEMBATAN BETON BERTULANG
TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
DI ATAS SUNGAI KRETEK BANTUL

JUDUL GAMBAR

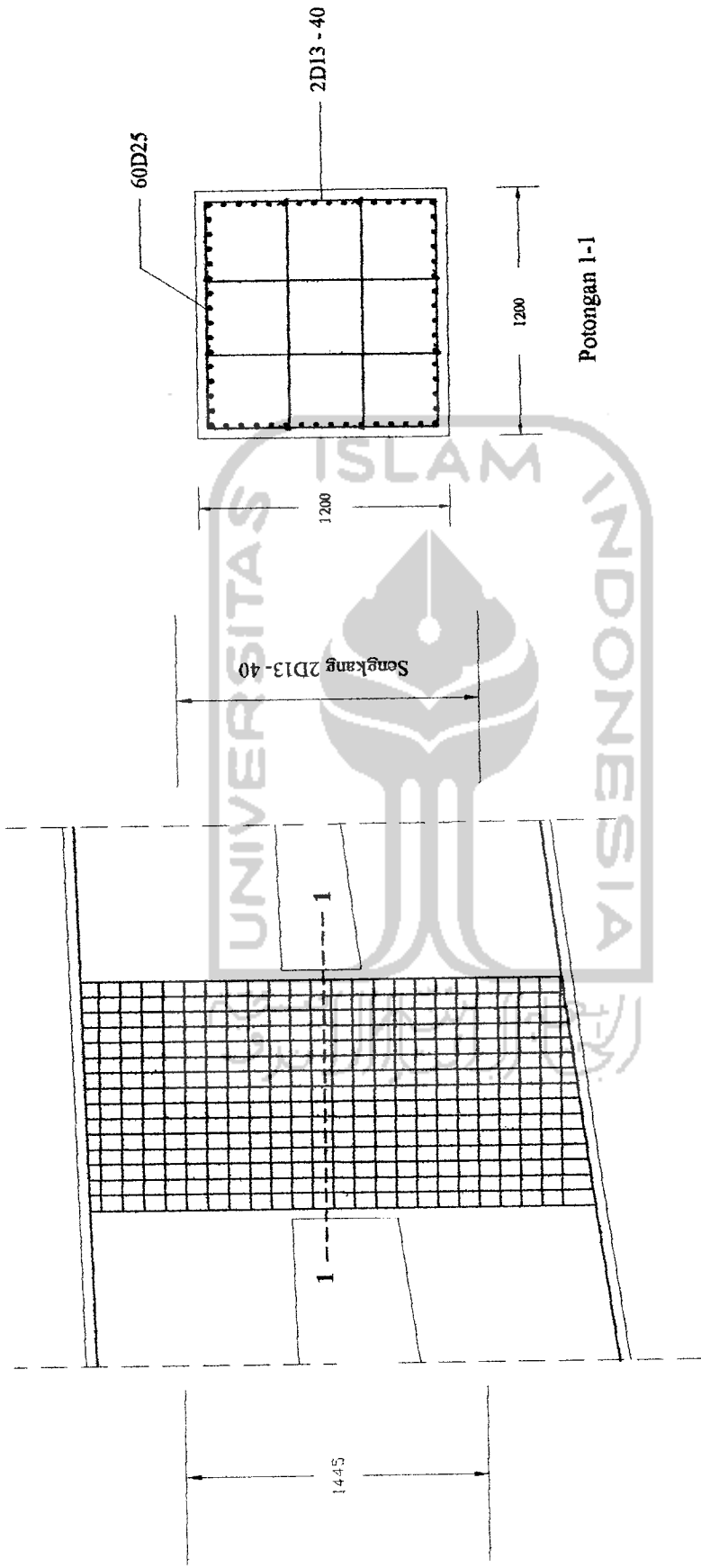
DETIL PENULANGAN
KOLOM KB 10

SKALA

KODE

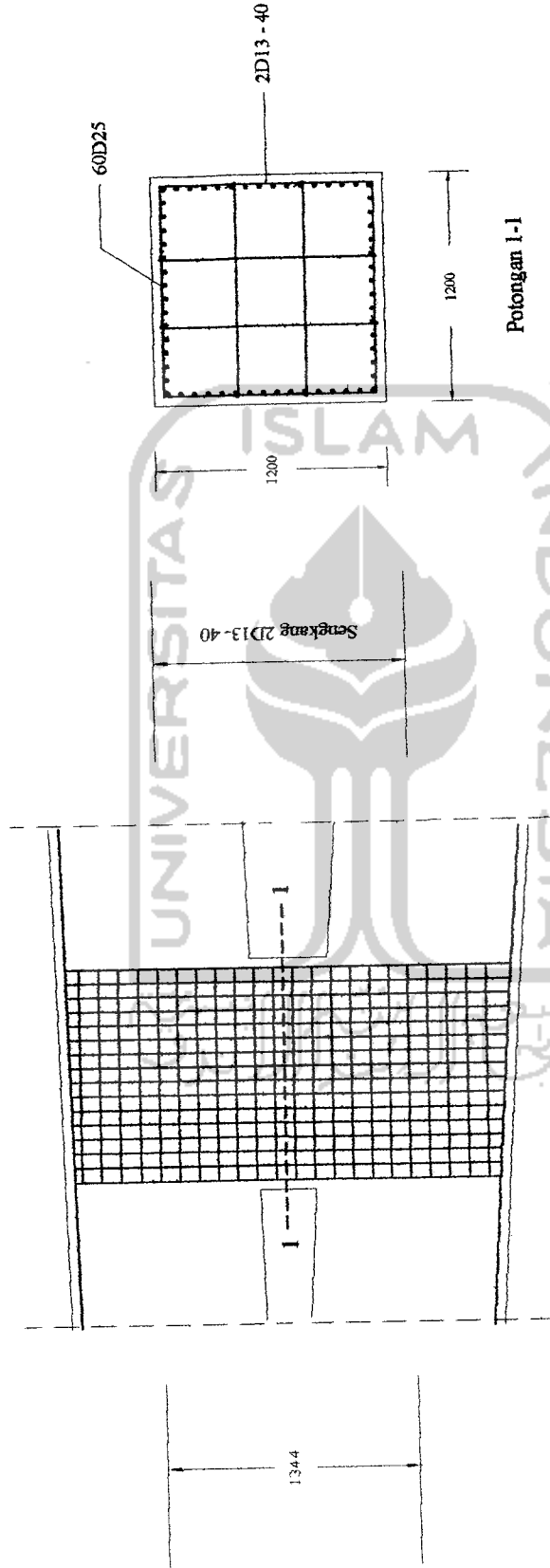
NO

JML. LBR



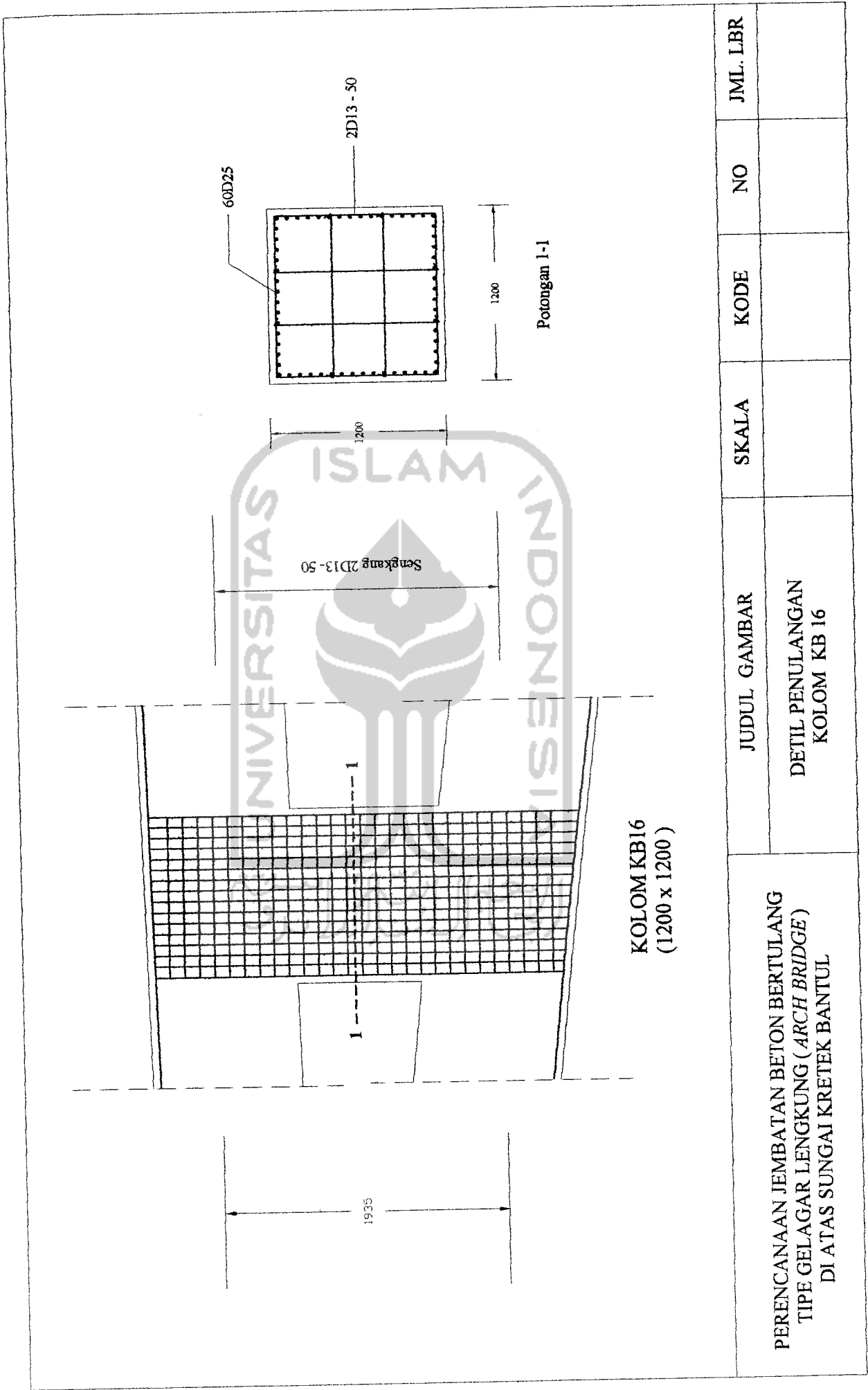
KOLOM KB11
(1200 x 1200)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN KOLOM KB 11 | | | | |



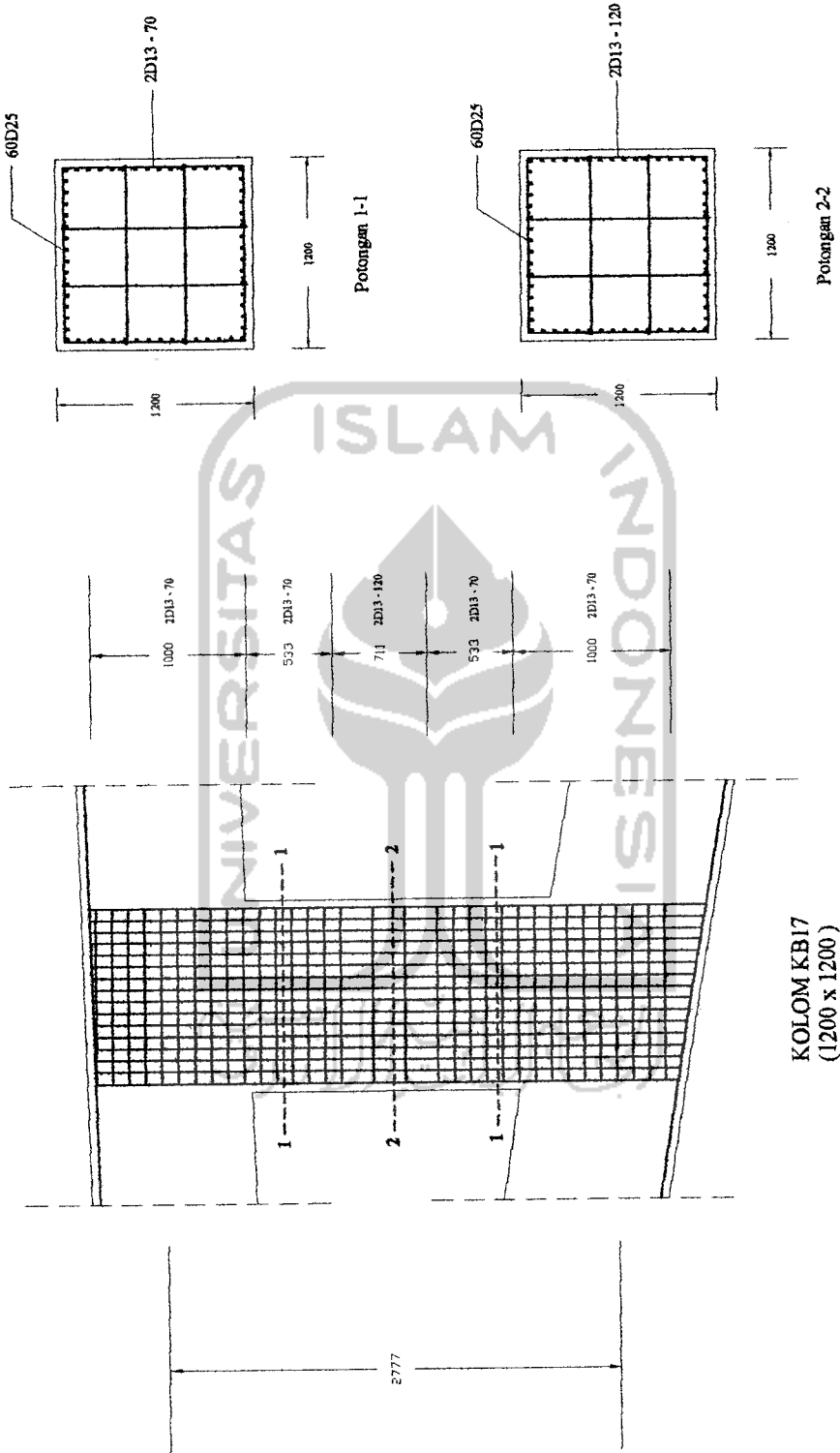
KOLOM KB15
(1200 x 1200)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN KOLOM KB 15 | | | | |

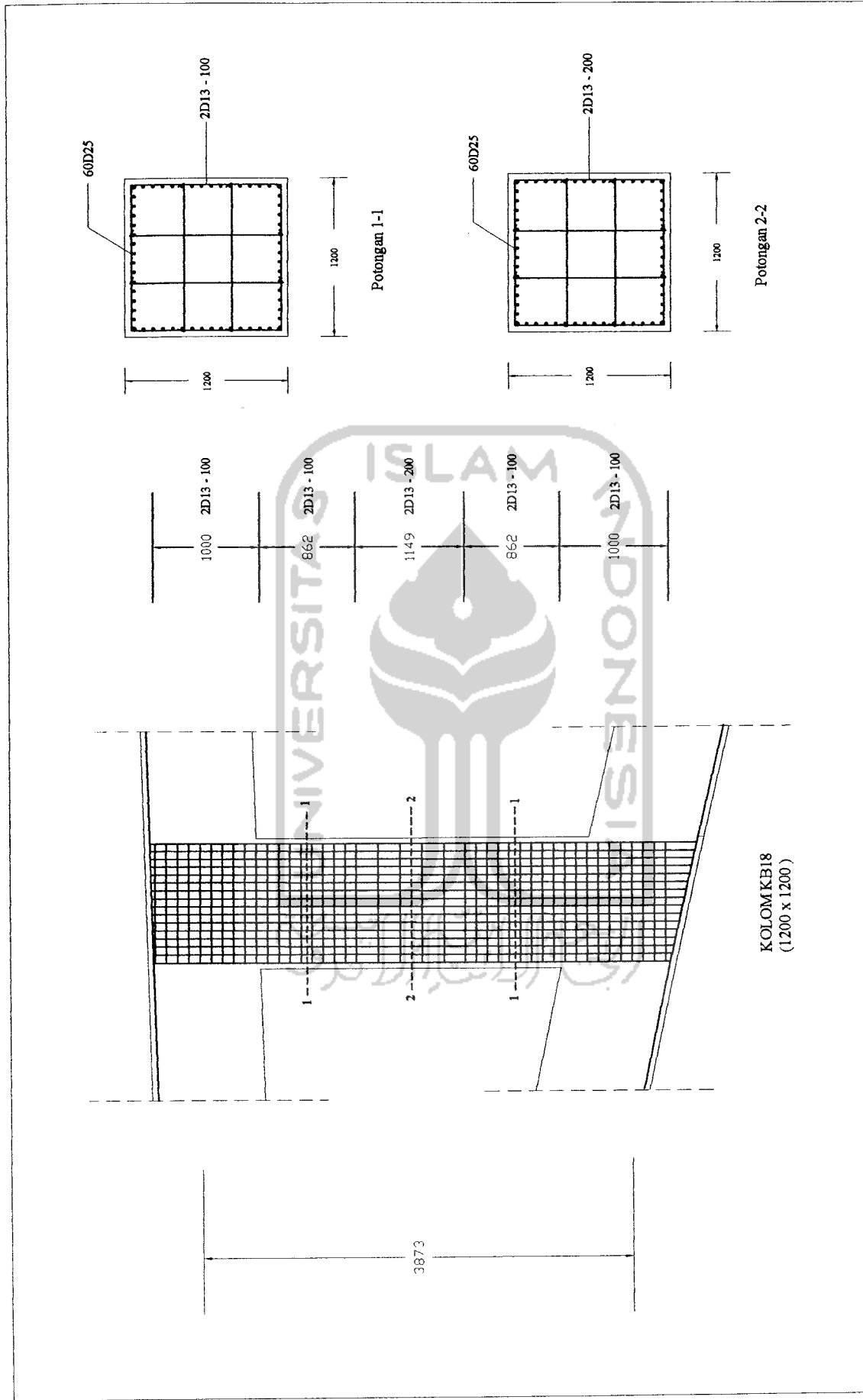


KOLOM KB16
(1200 x 1200)

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|---------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN KOLOM KB 16 | | | | |

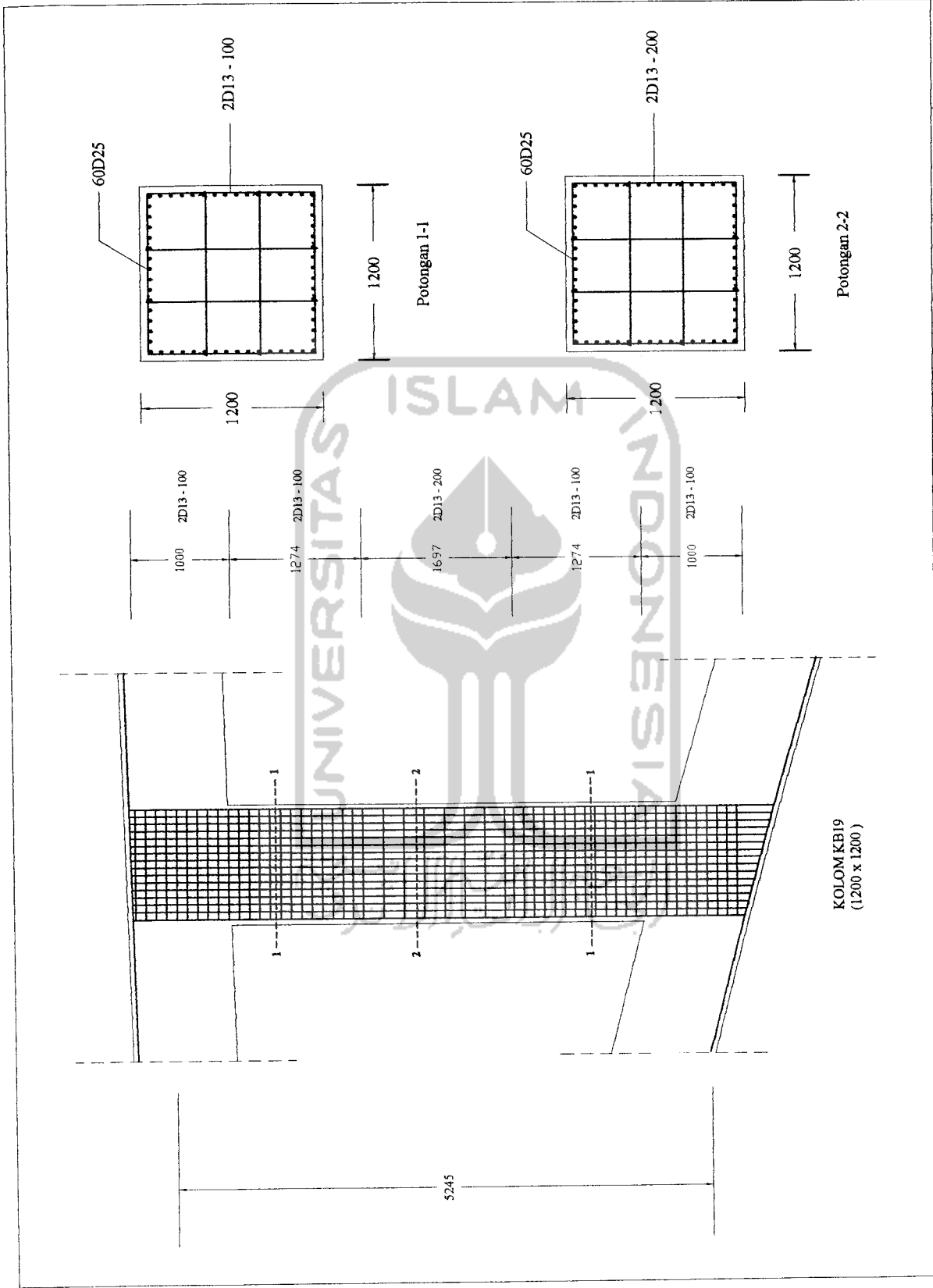


| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|--------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN KOLOM KB17 | | | | |

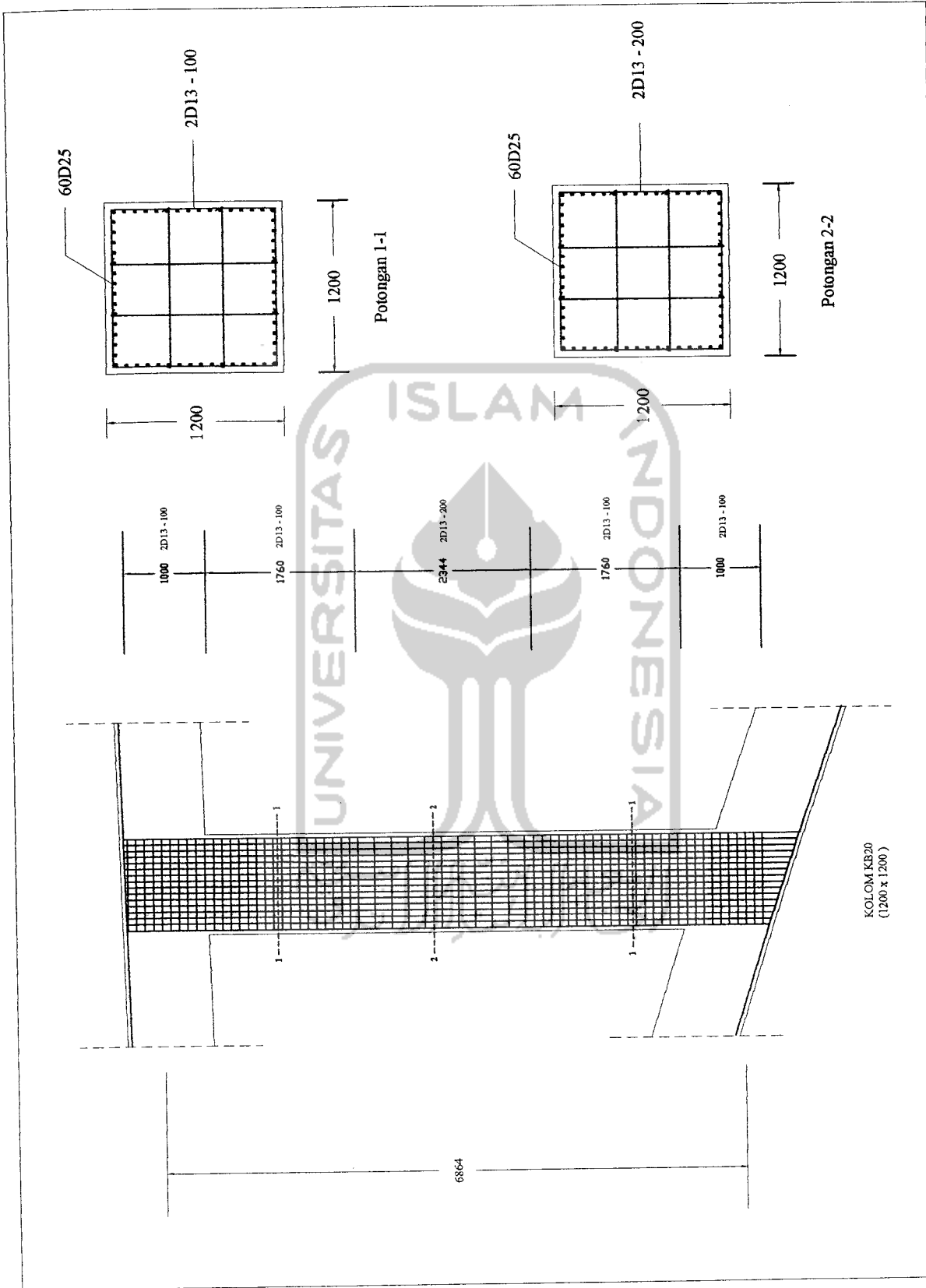


KOLOMKB18
(1200 x 1200)

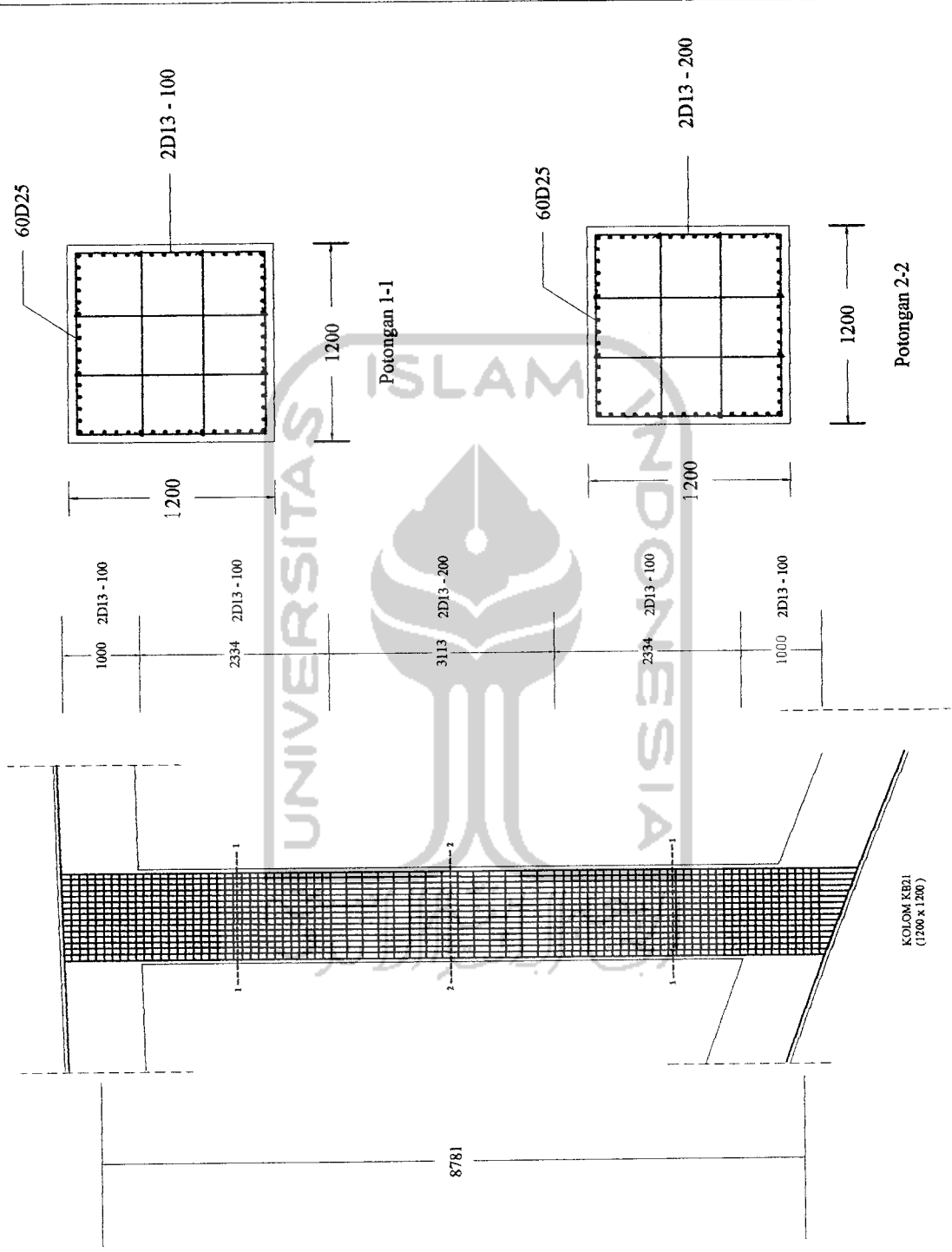
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|---------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN KOLOM KB 18 | | | | |



| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN KOLOM KB 7 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |

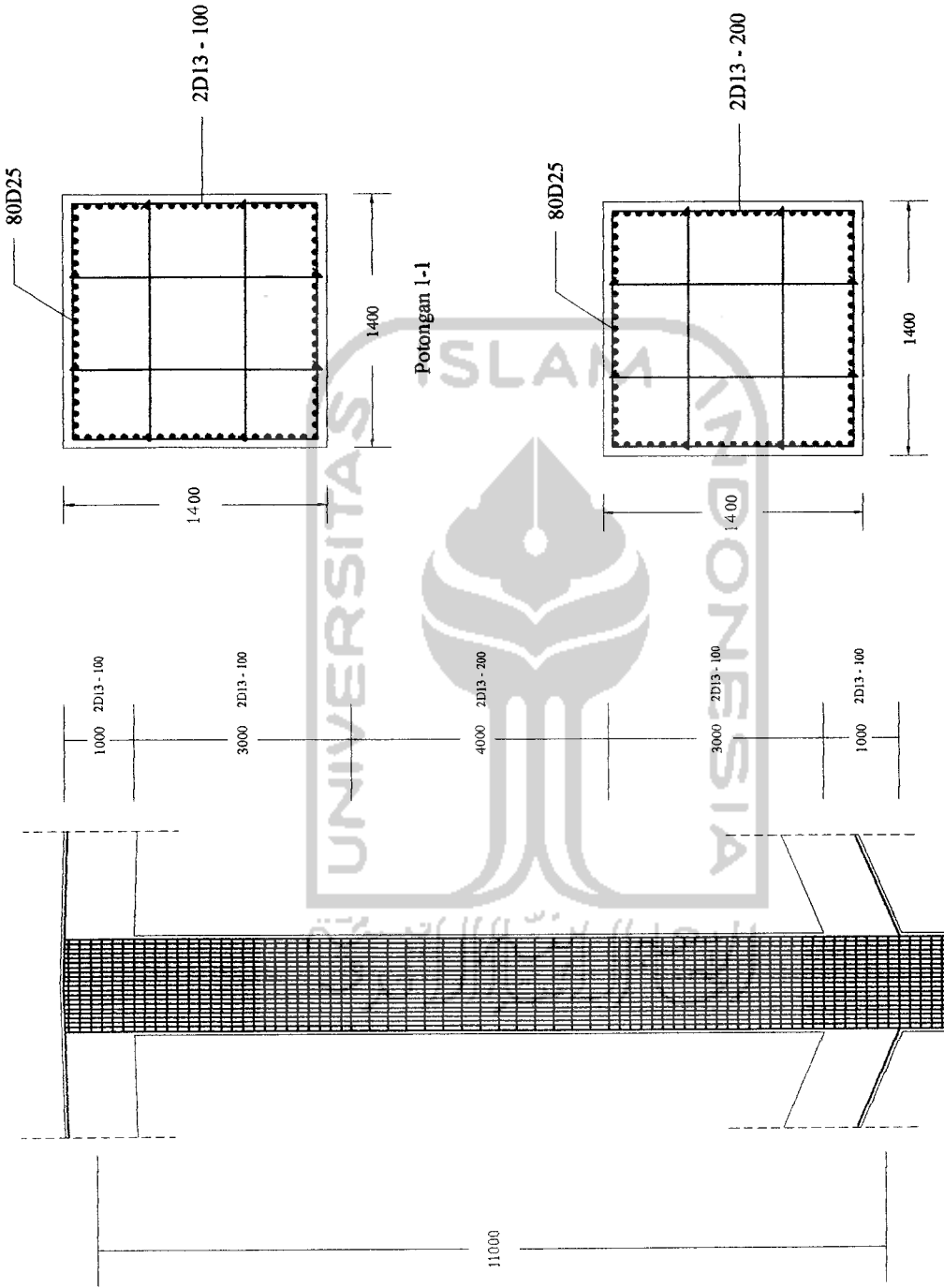


| JML. LBR | NO | KODE | SKALA | JUDUL GAMBAR | PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL |
|----------|----|------|-------|---------------------------------|---|
| | | | | DETIL PENULANGAN KOLOM KB 20 | |



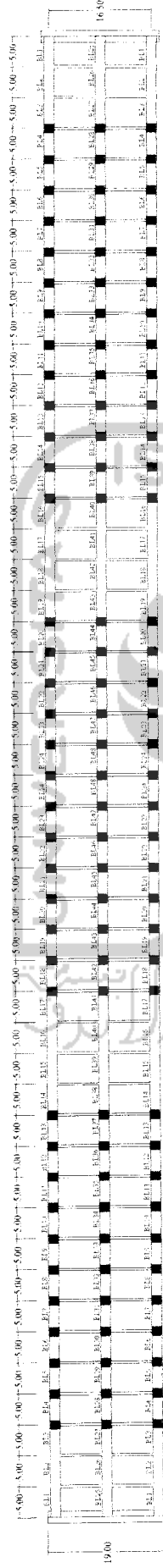
KOLOM KB21
(1200 x 1200)

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|---------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN KOLOM KB 21 | | | | |

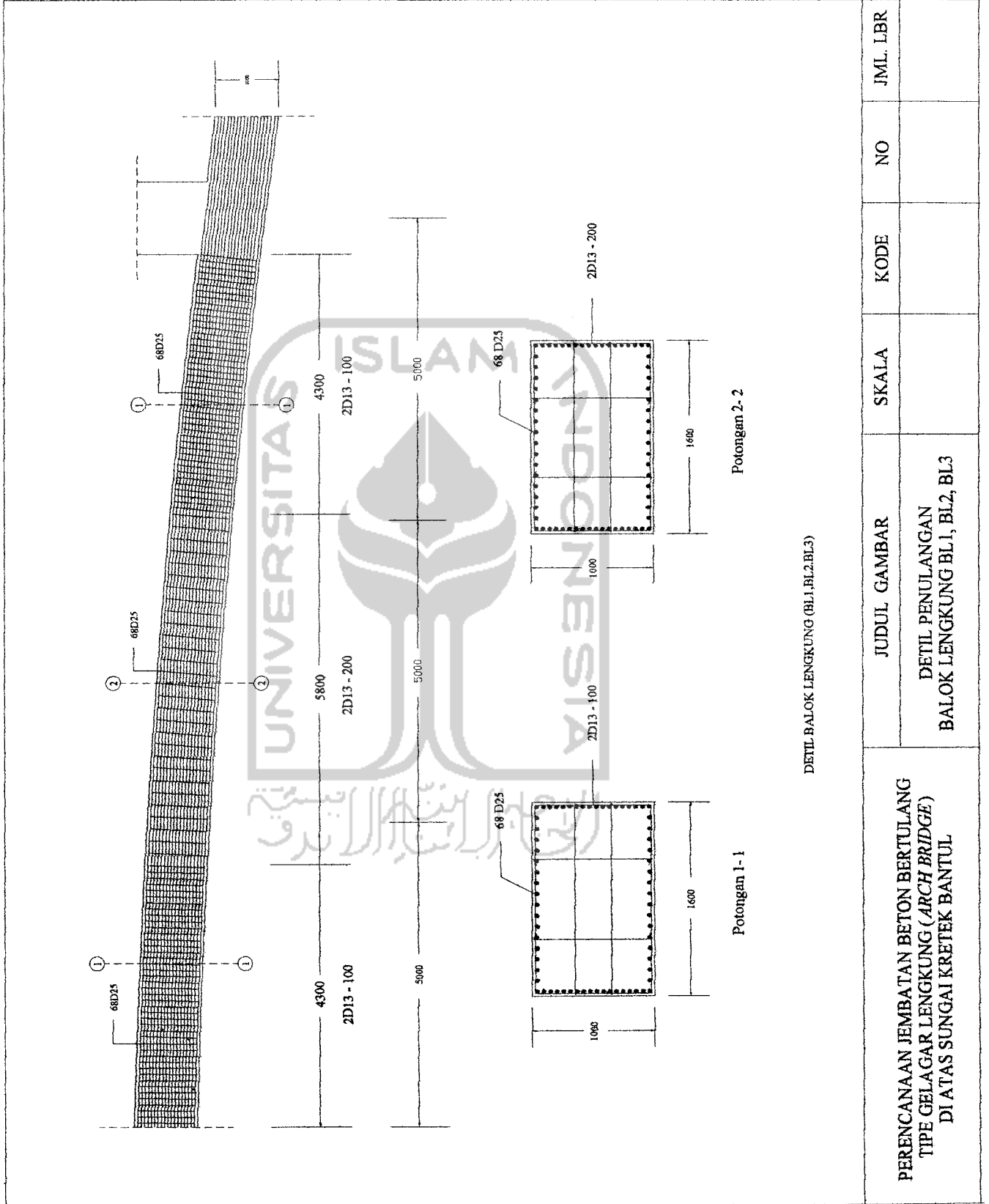


KOLOM KB22
(1400 x 1400)

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|---------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN KOLOM KB 22 | | | | |

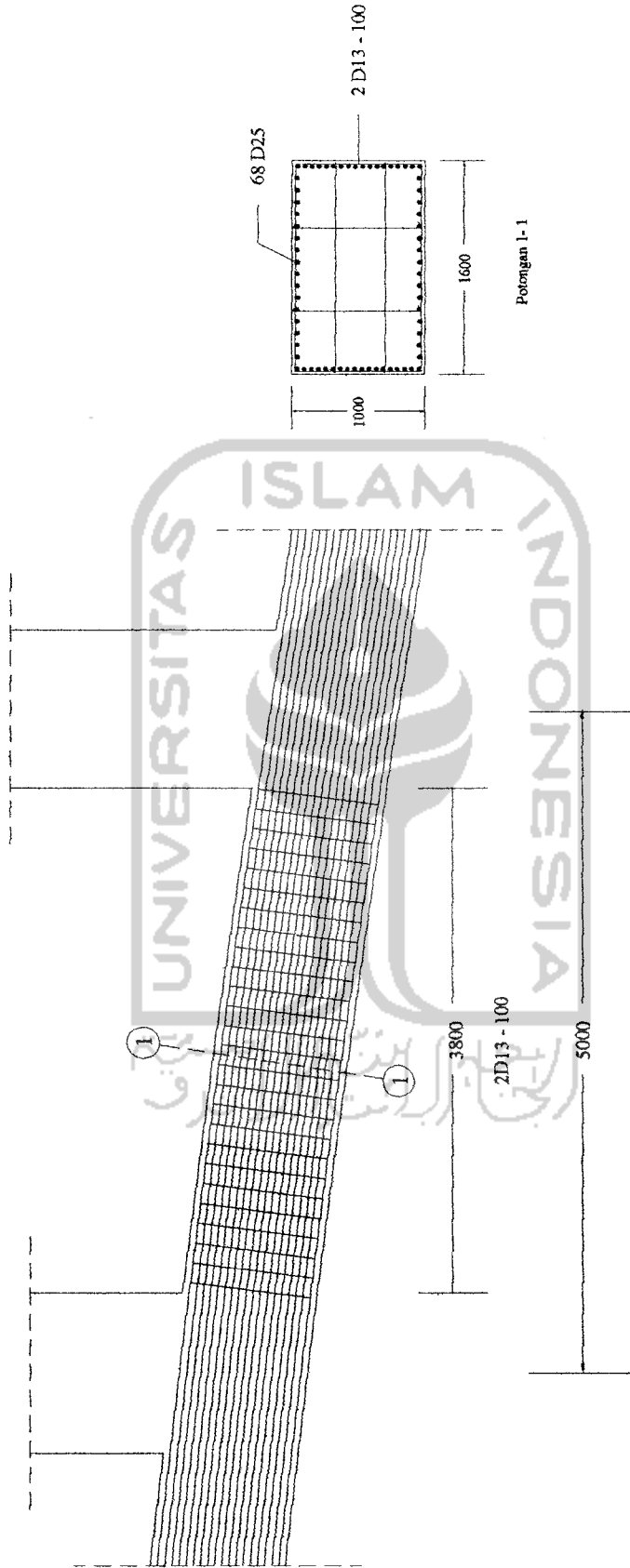


| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|--|-------|------|----|-----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (<i>ARCH BRIDGE</i>) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| RENCANA BALOK LINGKUNG | | | | |



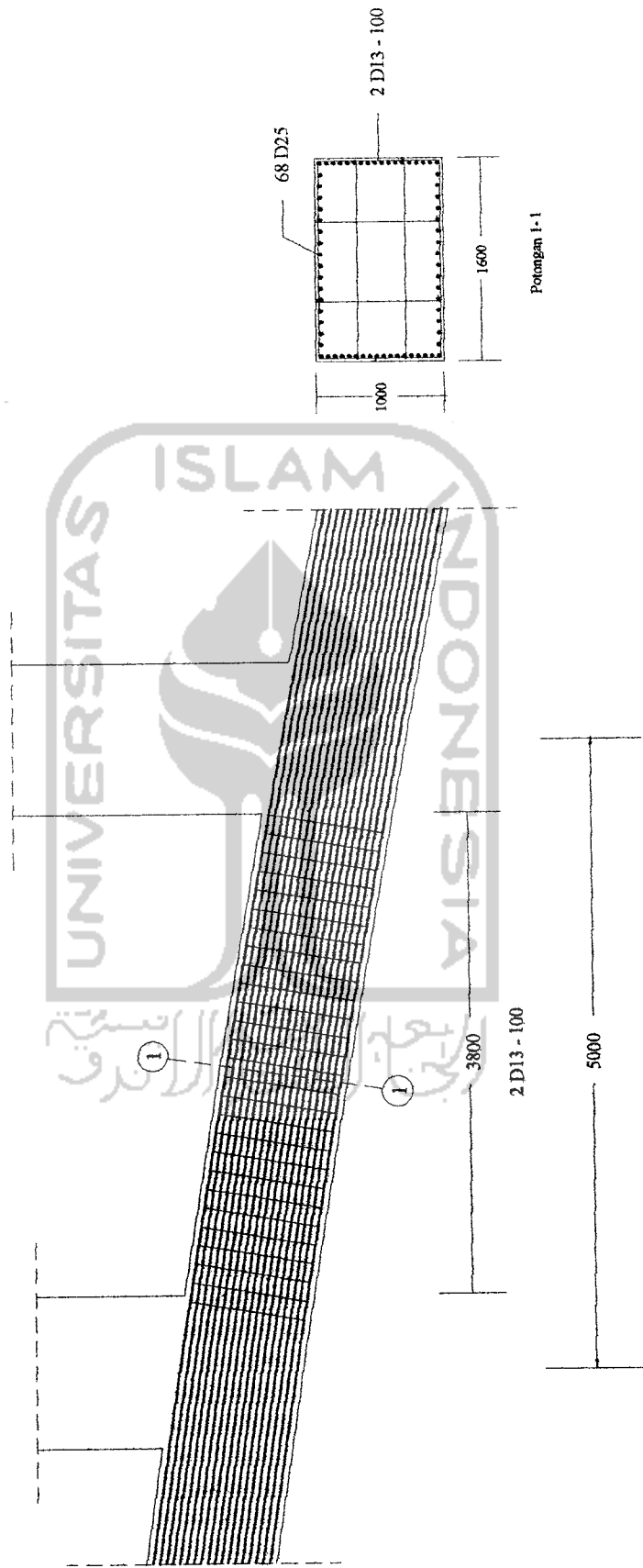
DETIL BALOK LINGKUNG (BL1,BL2,BL3)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|--|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | DETIL PENULANGAN BALOK LINGKUNG BL1, BL2, BL3 | | | |



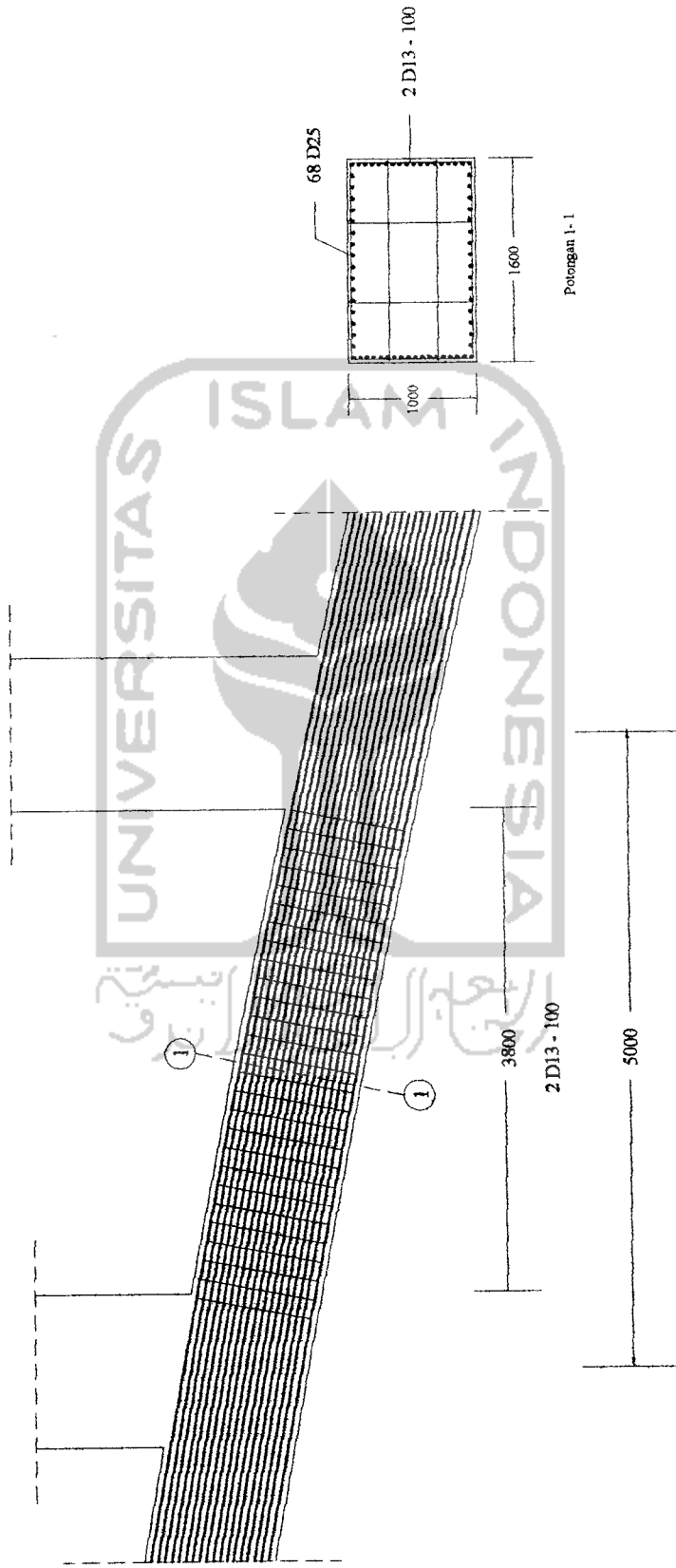
DETIL BALOK LENGKUNG BL4

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LENGKUNG BL4 | | | | |



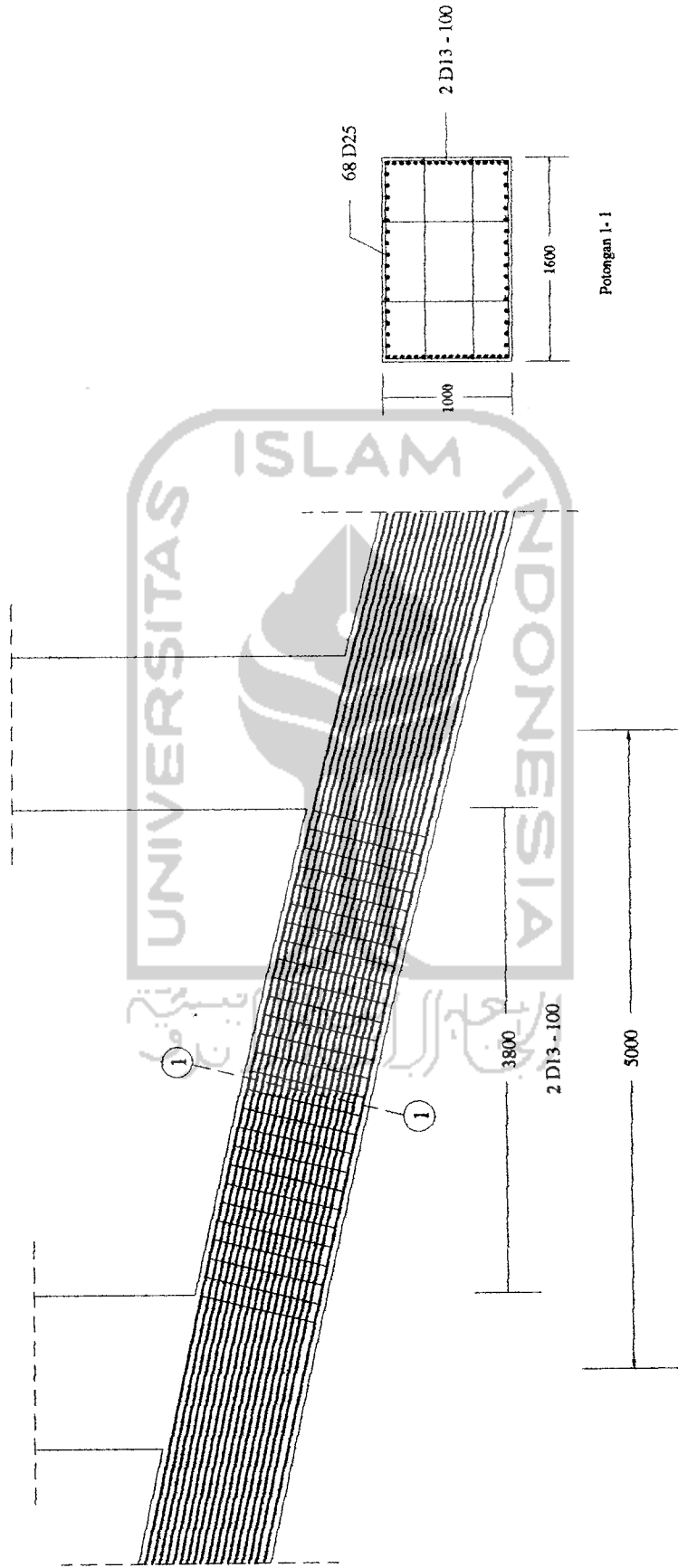
DETIL BALOK LENGKUNG BL5

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |



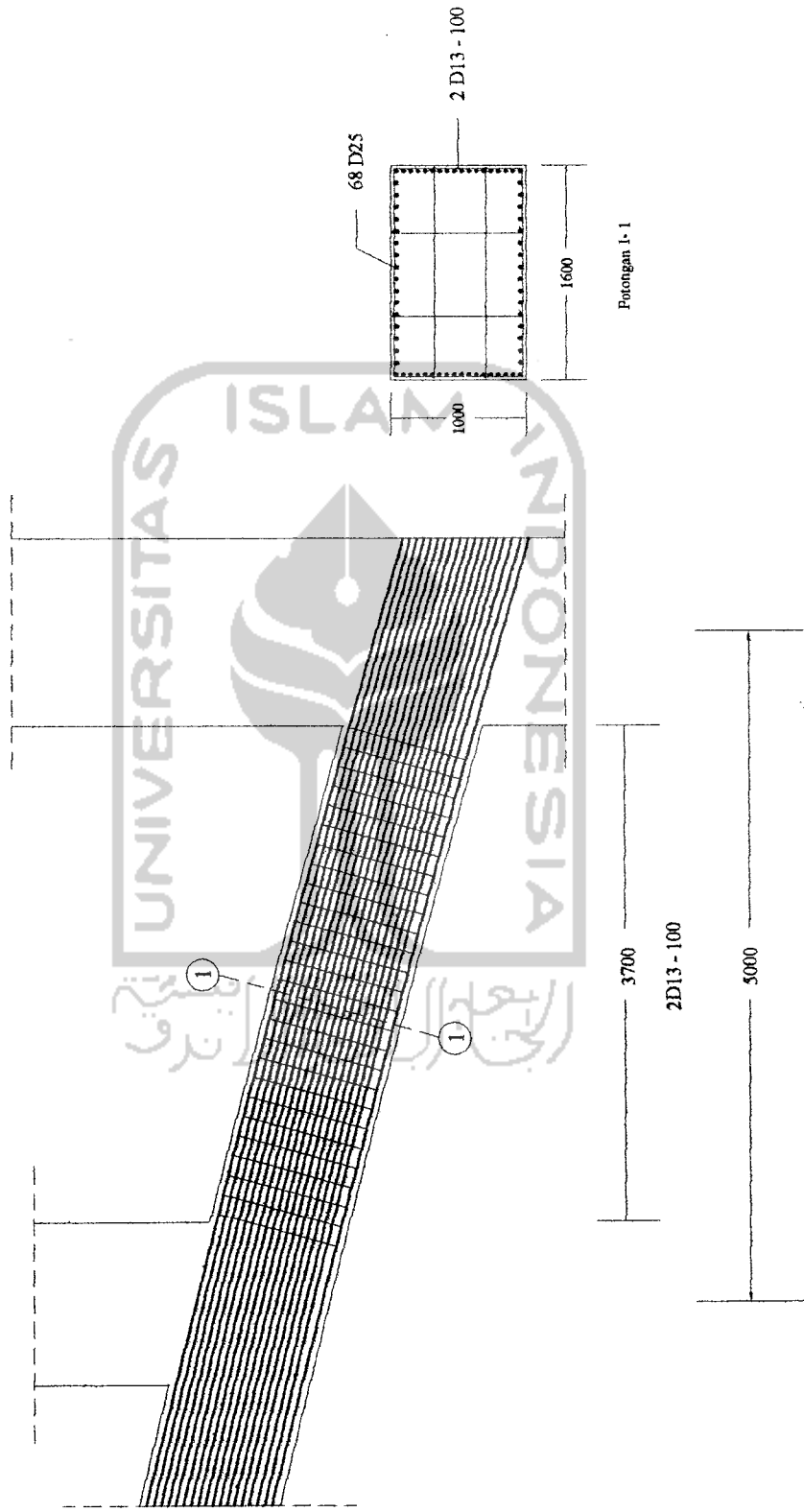
DETIL BALOK LENGKUNG BL6

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL6 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |



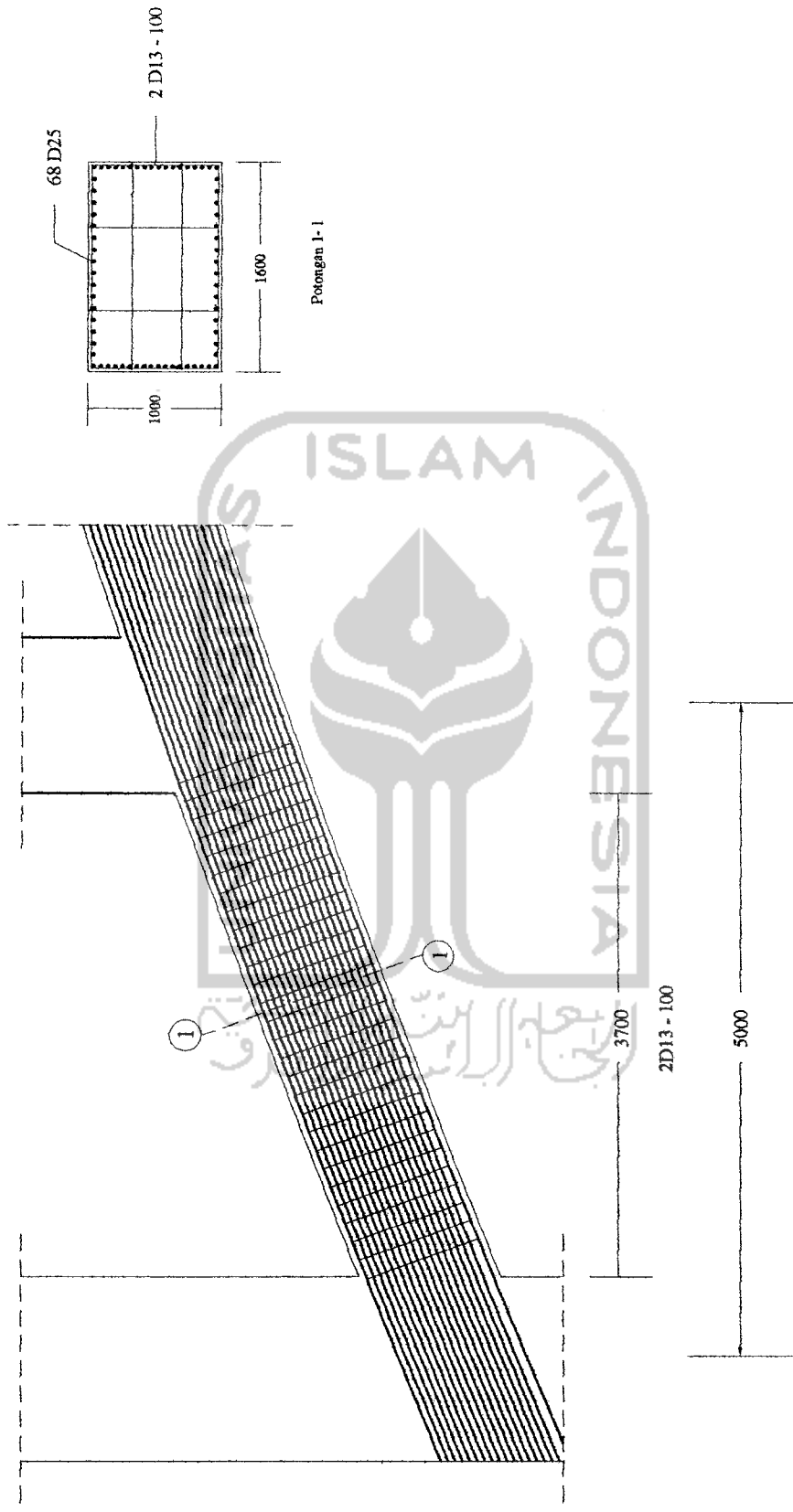
DETIL BALOK LENGKUNG BL7

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL7 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |



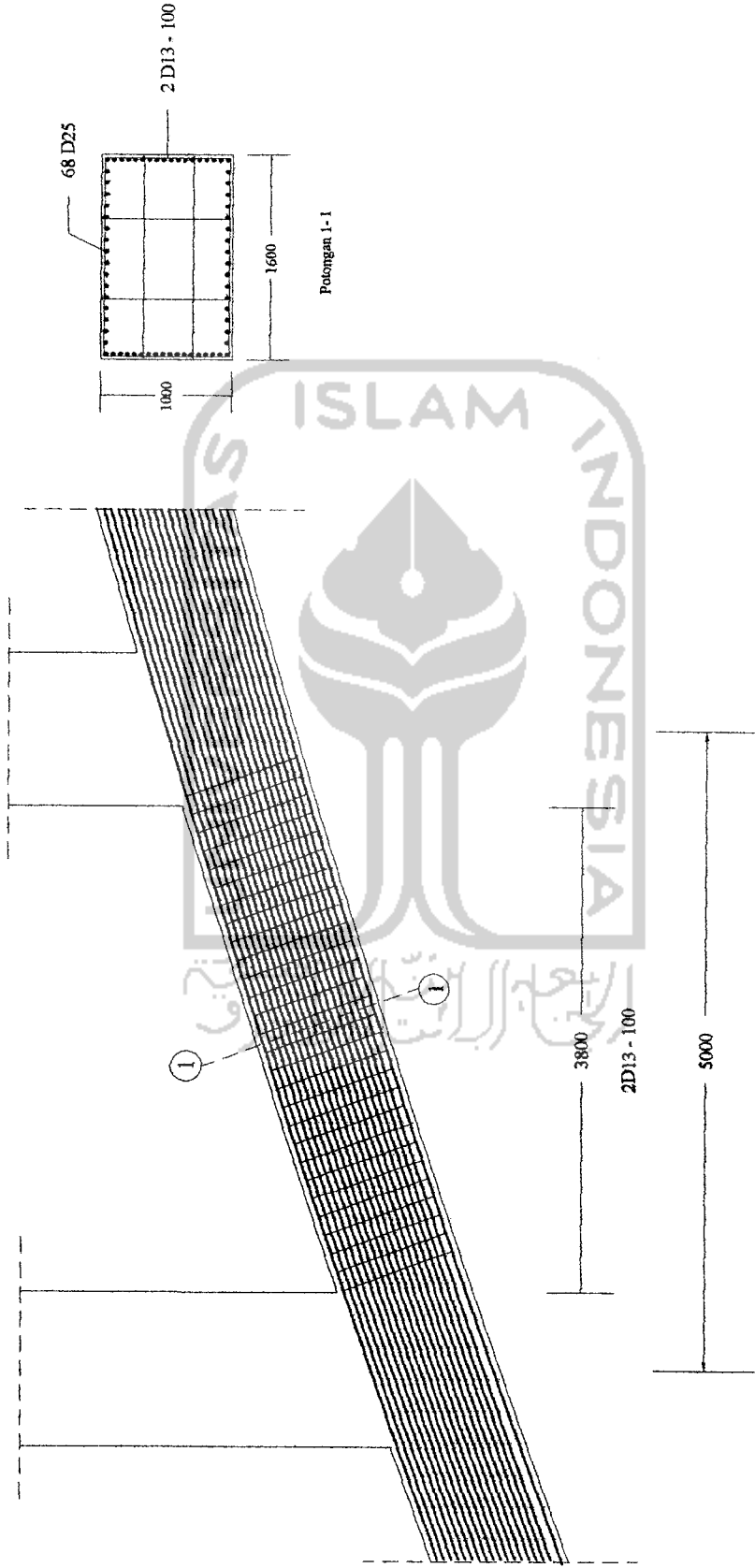
DETIL BALOK LINGKUNG BL8

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LINGKUNG BL8 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |



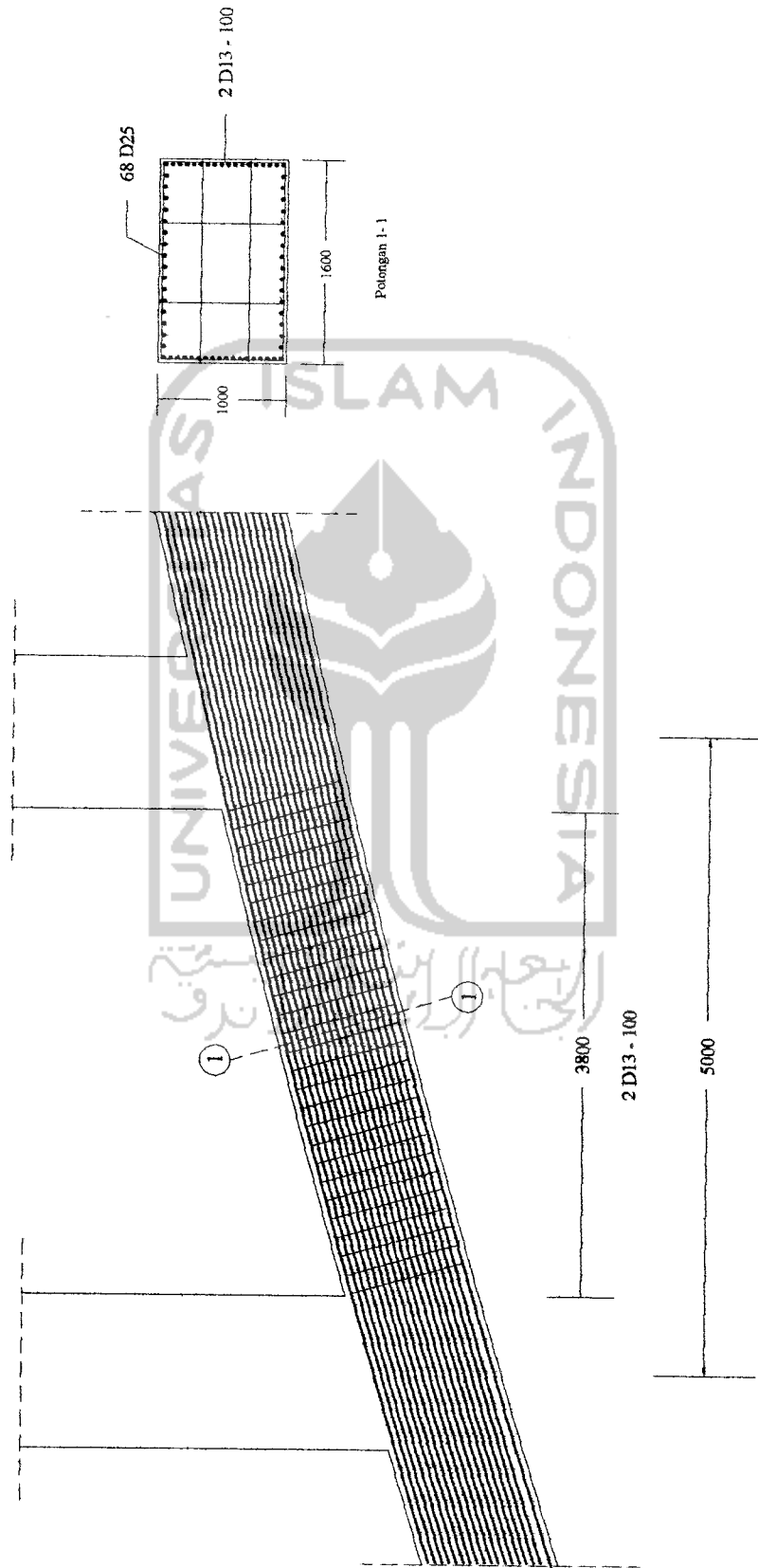
DETIL BALOK LENGKUNG BL9

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL9 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |



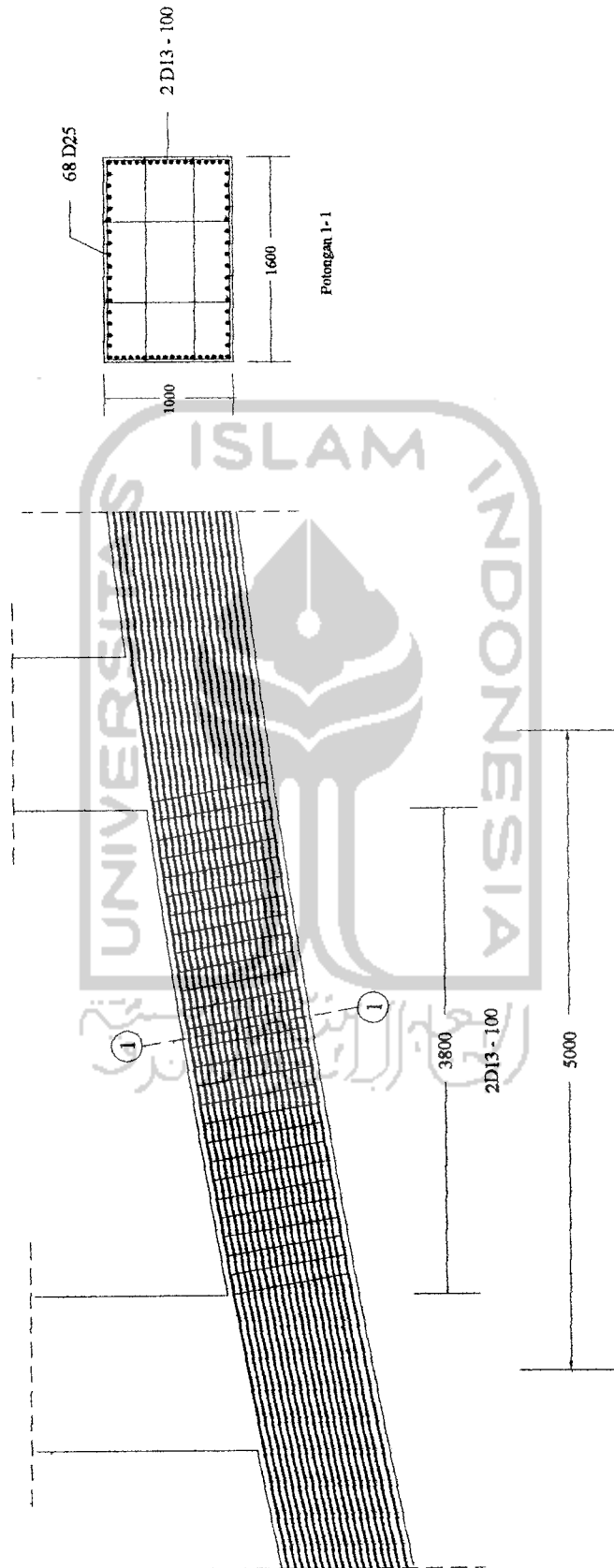
DETIL BALOK LENGKUNG BL10

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe Gelagar Lengkung (Arch Bridge) di Atas Sungai Kretek Bantul | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LENGKUNG BL10 | | | | |



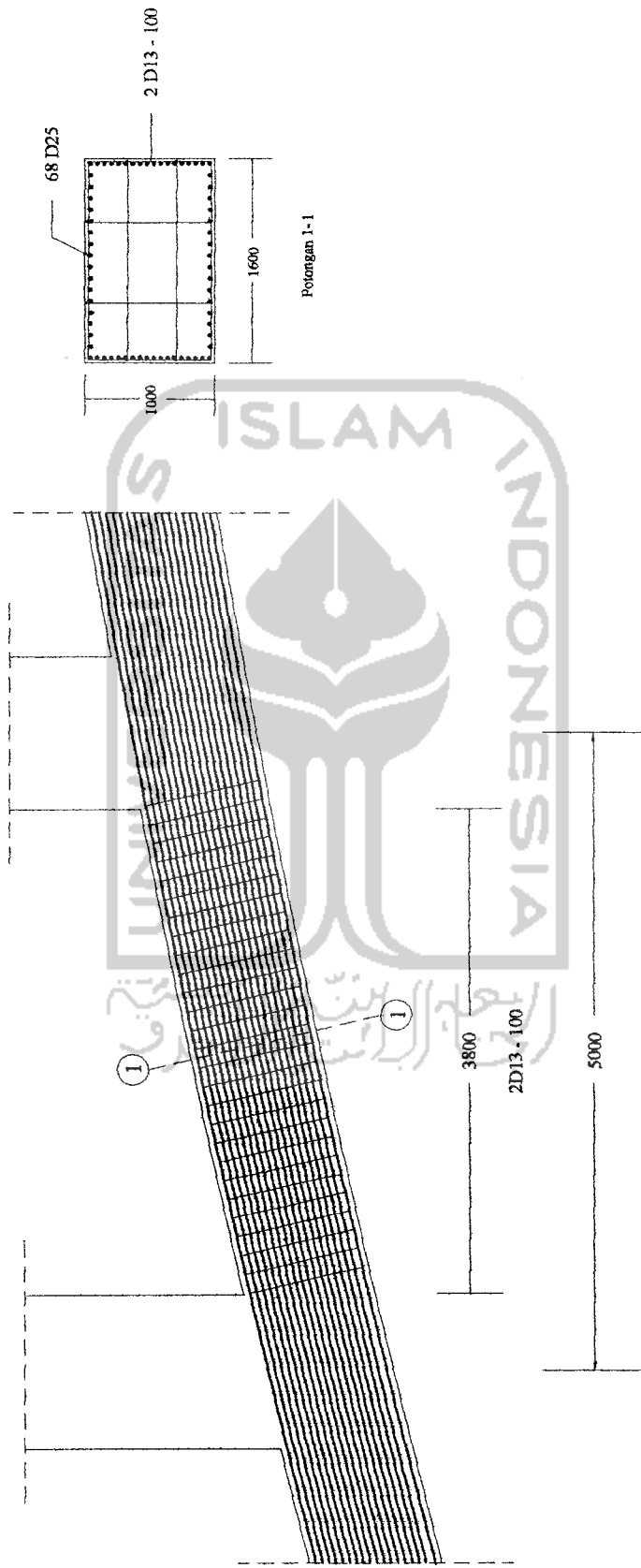
DETIL BALOK LINGKUNG BL11

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LINGKUNG BL11 | | | | |



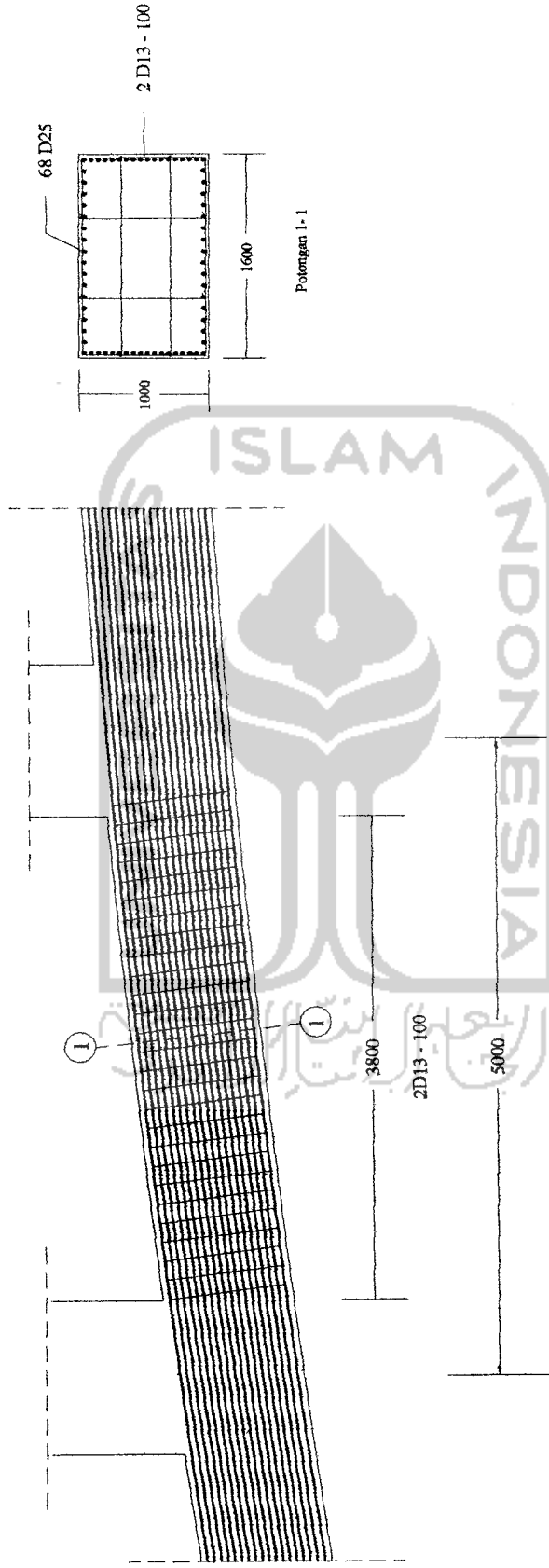
DETIL BALOK LINGKUNG BL13

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LINGKUNG BL13 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



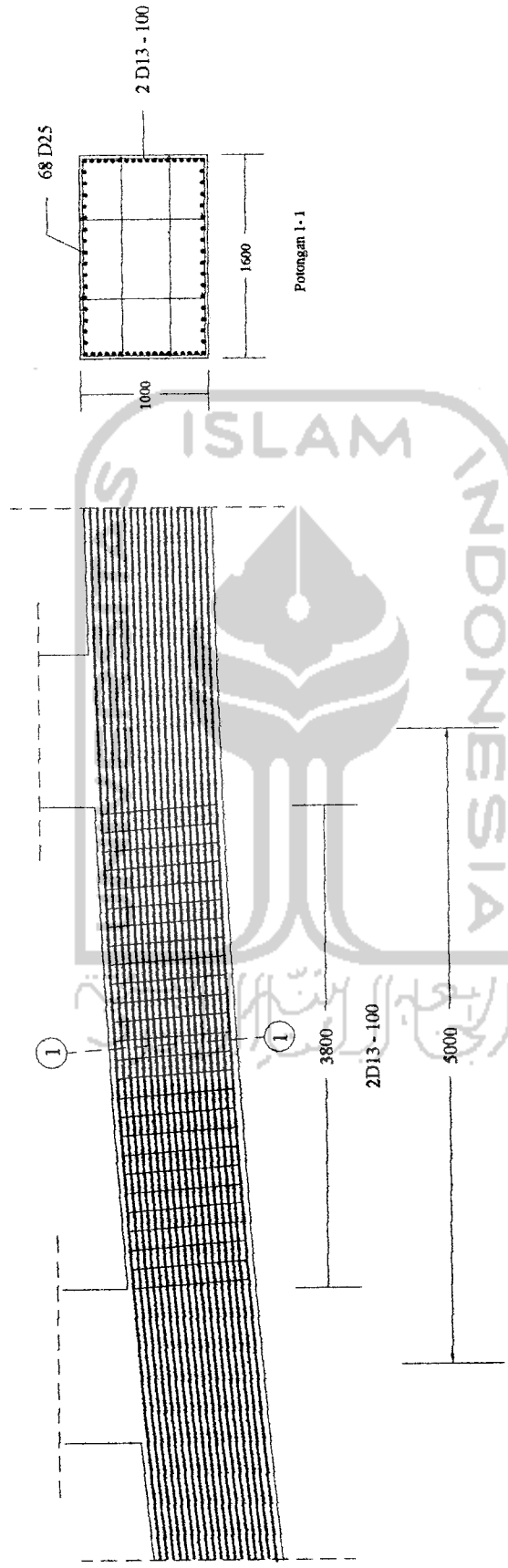
DETIL BALOK LINGKUNG BL12

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LINGKUNG BL12 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



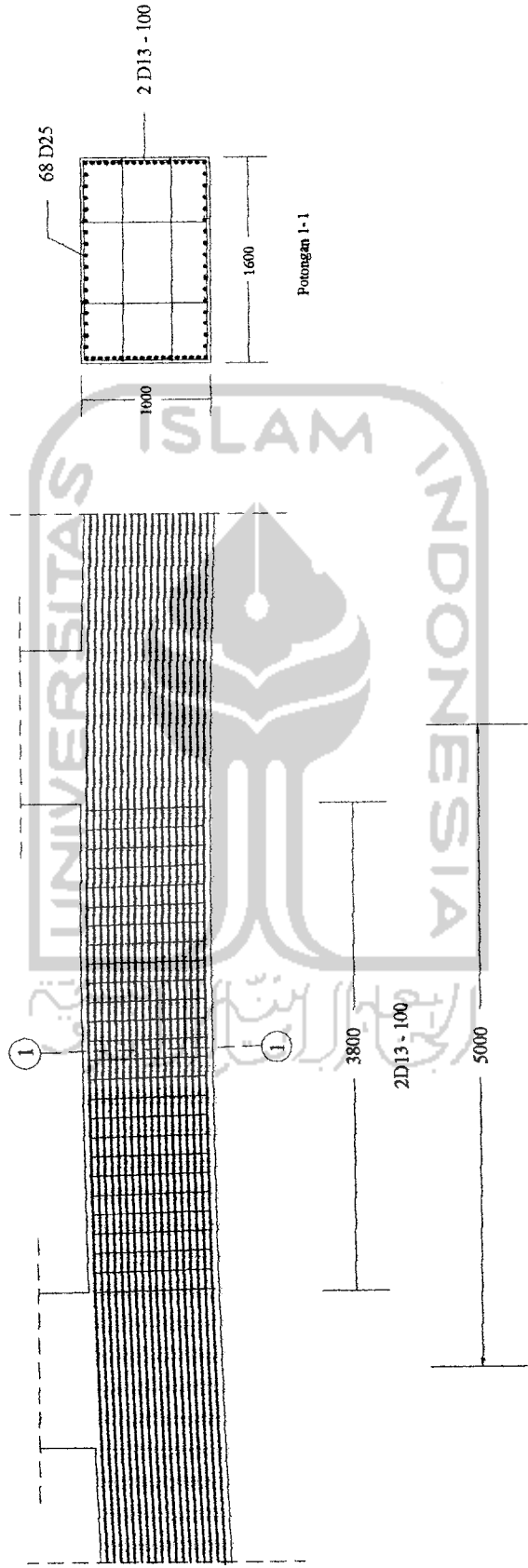
DETIL BALOK LENGKUNG BL14

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|------------------------------------|-------|------|----|----------|
| | DETIL PENJULANGAN LENGKUNG BL14 | | | | |



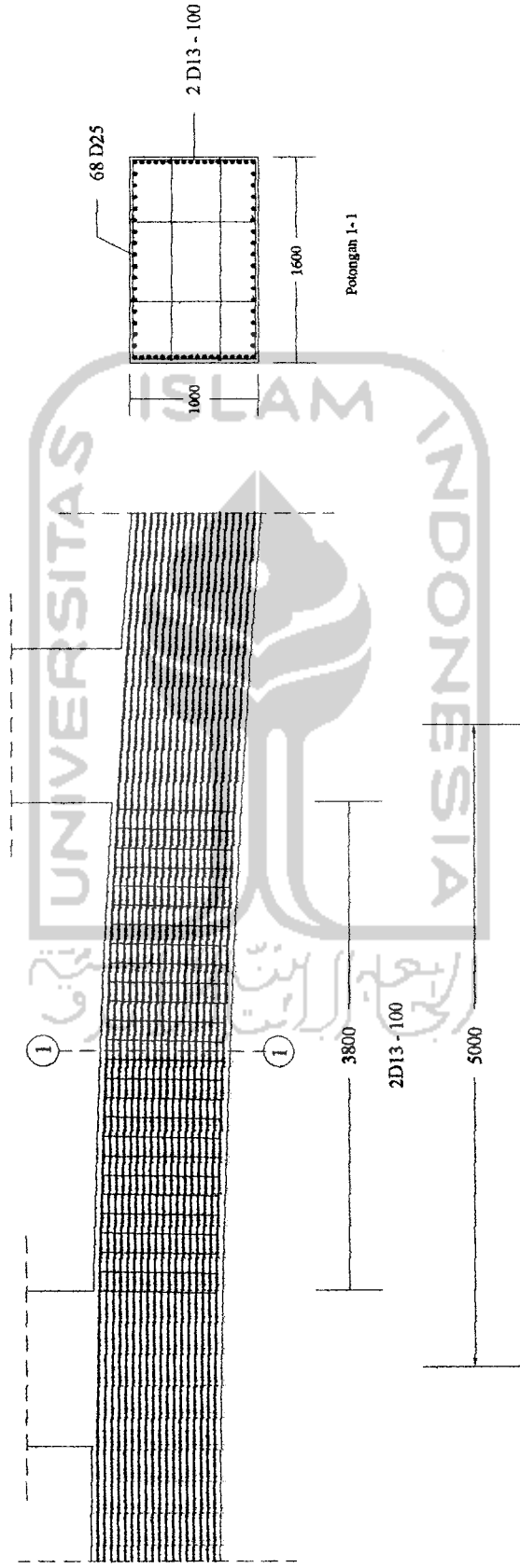
DETIL BALOK LENGKUNG BL15

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN LENGKUNG BL15 | | | | |



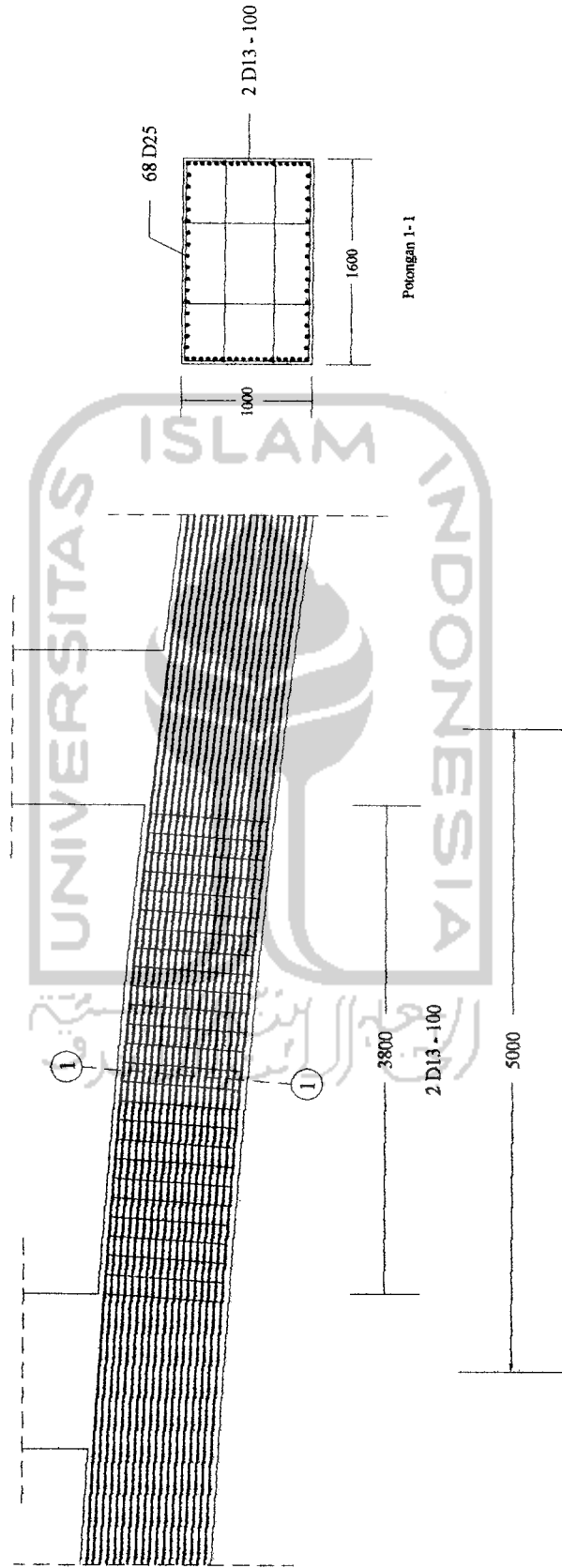
DETIL BALOK LINGKUNG BL16

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LINGKUNG BL16 | | | | |



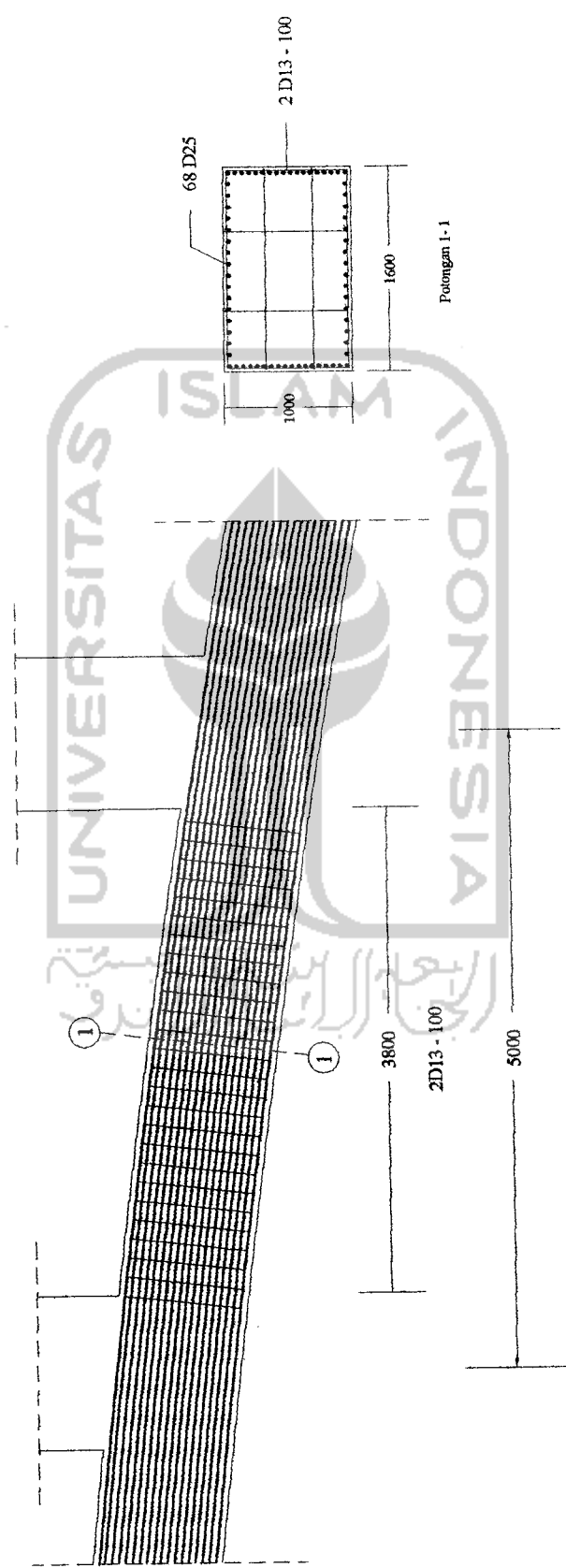
DETIL BALOK LENGKUNG BL17

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LENGKUNG BL17 | | | | |



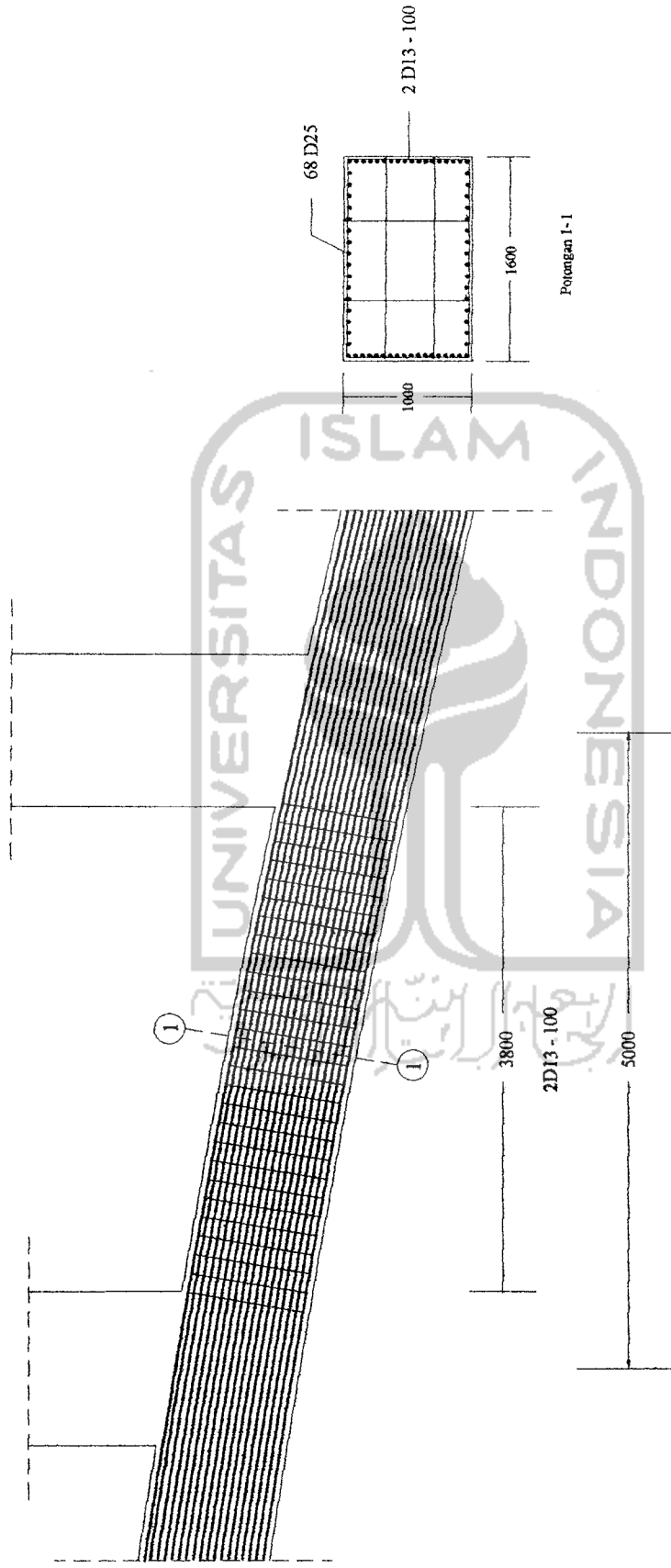
DETIL BALOK LENGKUNG BL18

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe Gelagar Lengkung (ARCH BRIDGE) di Atas Sungai Kretek Bantul | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LENGKUNG BL18 | | | | |



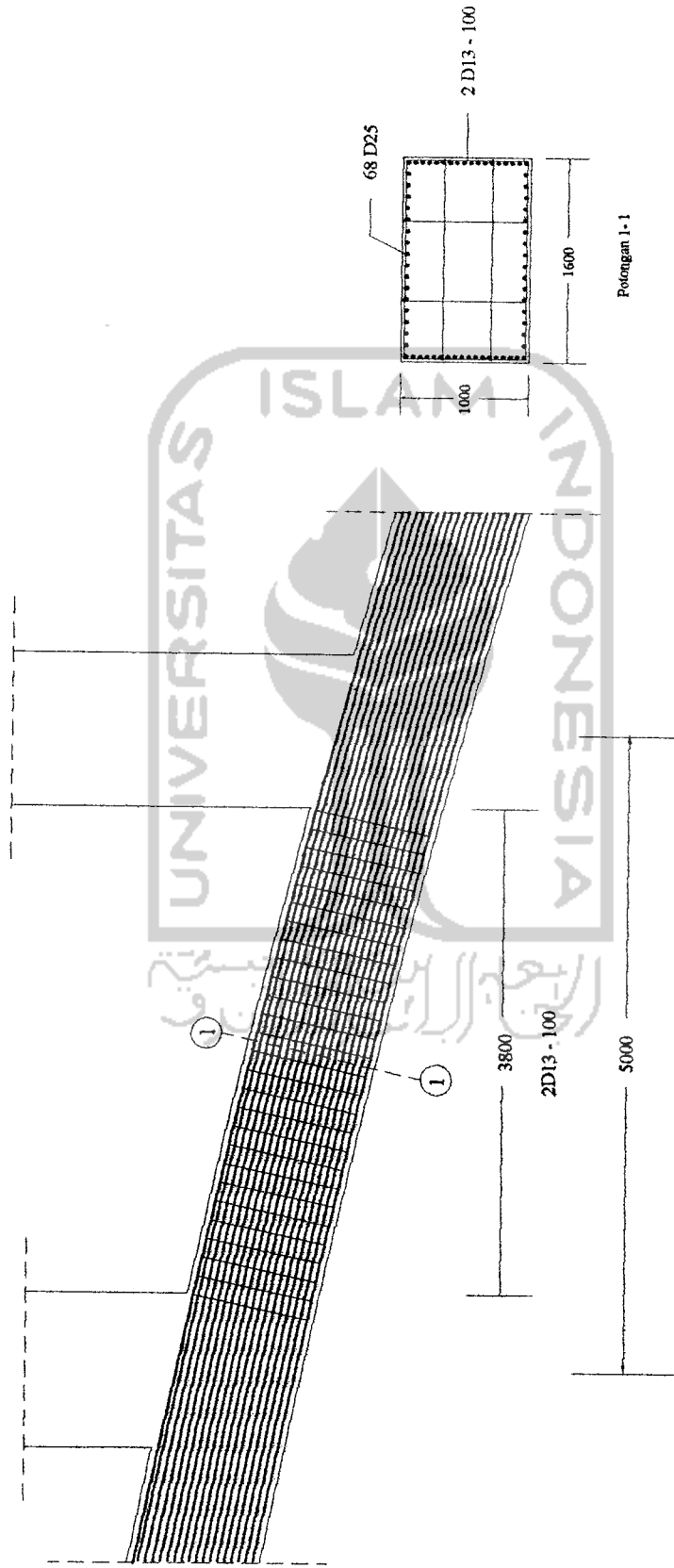
DETIL BALOK LENGKUNG BL19

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN LENGKUNG BL19 | | | | |



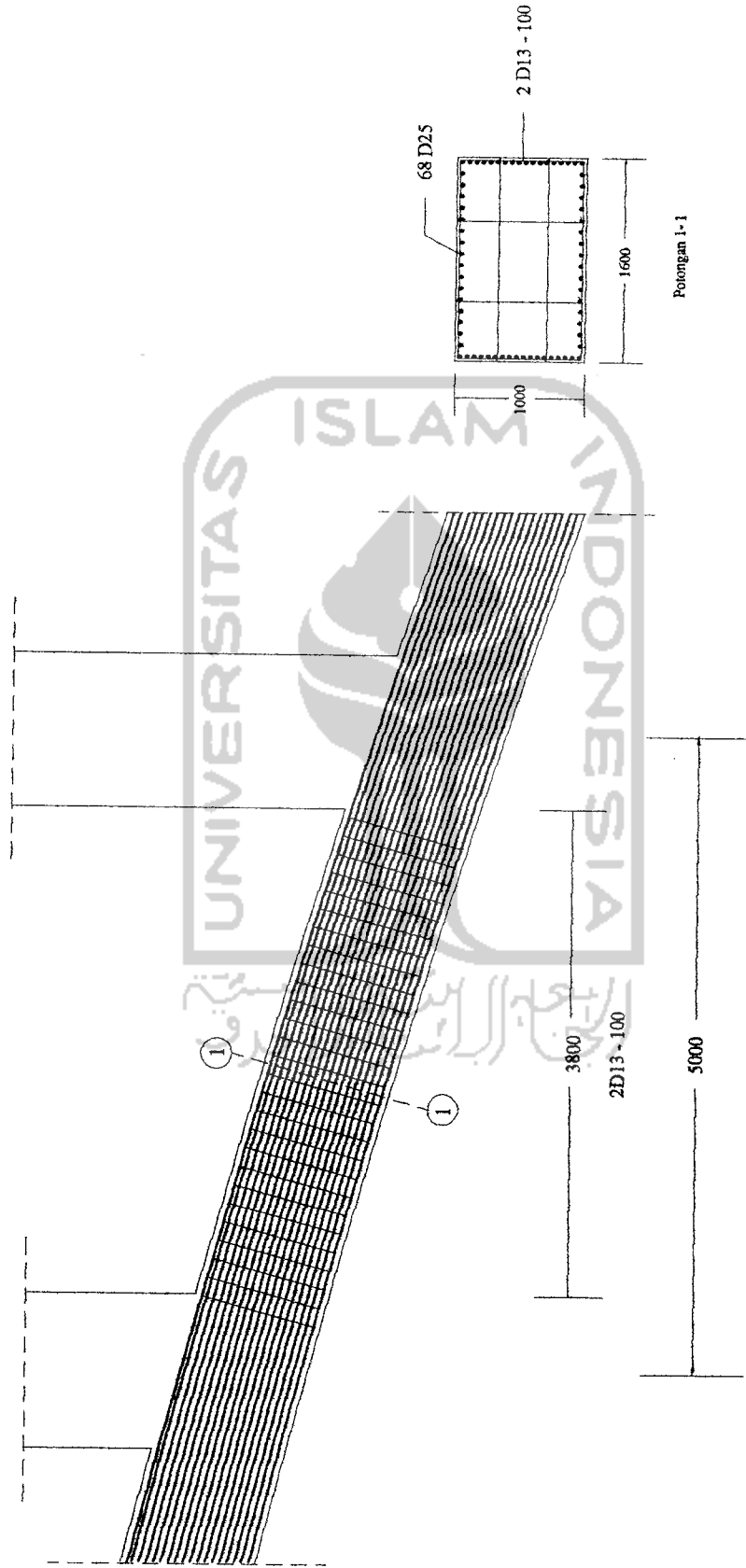
DETIL BALOK LENGKUNG BL20

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL20 | SKALA | KODE | NO | JML, LBR |
|---|---|-------|------|----|----------|
| | | | | | |



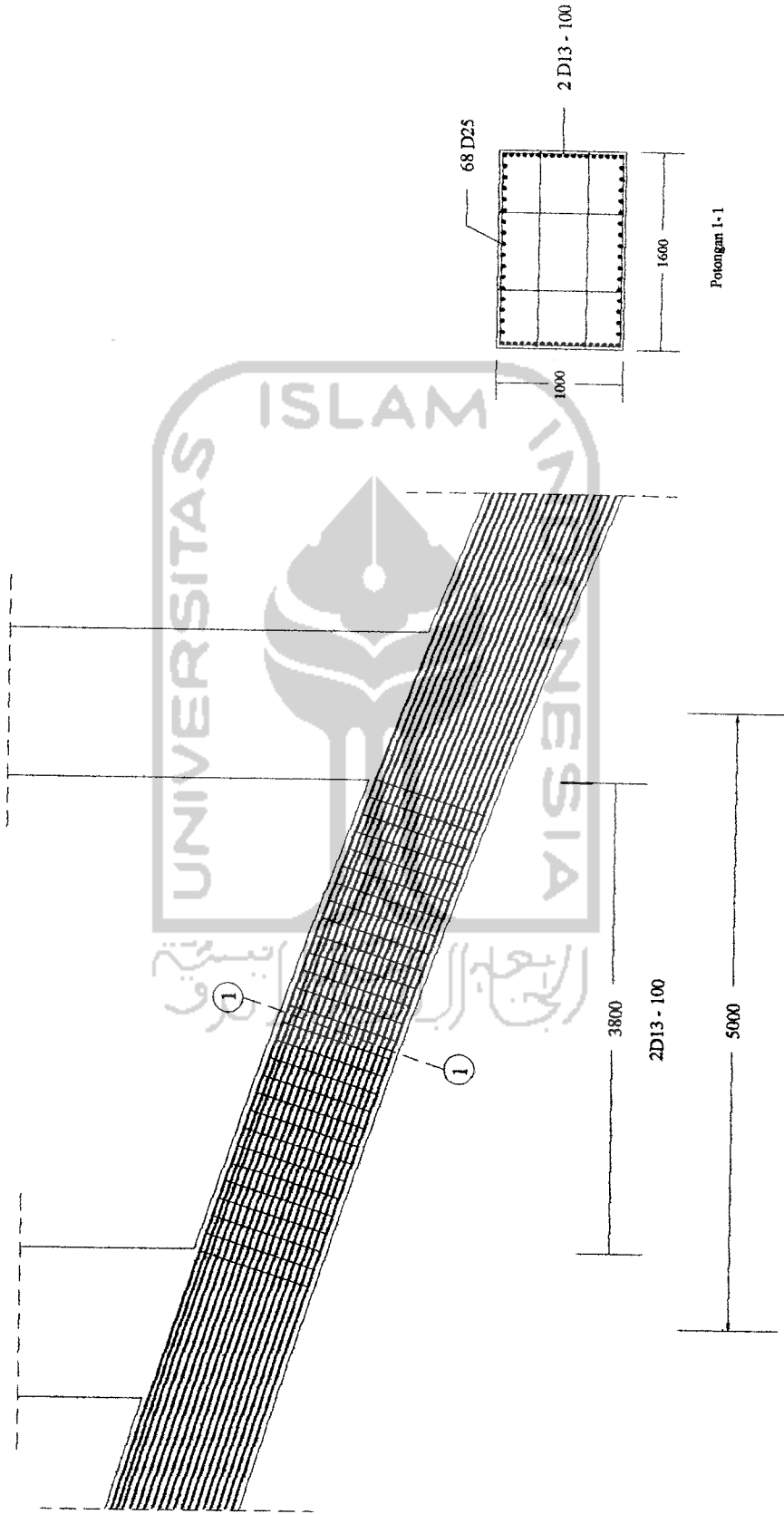
DETIL BALOK LENGGUNG BL21

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGGUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL21 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



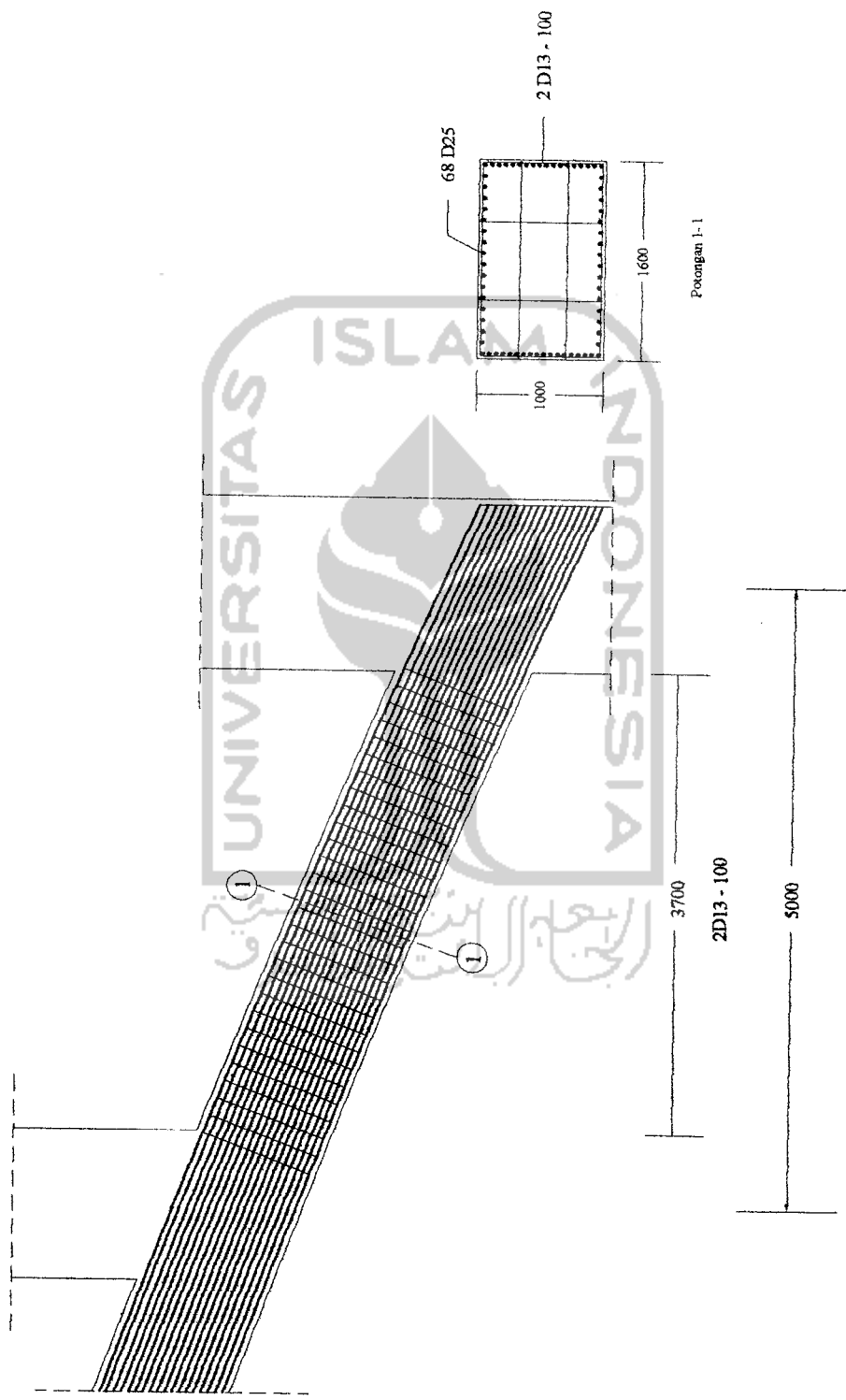
DETIL BALOK LINGKUNG BL22

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LINGKUNG BL22 | | | | |



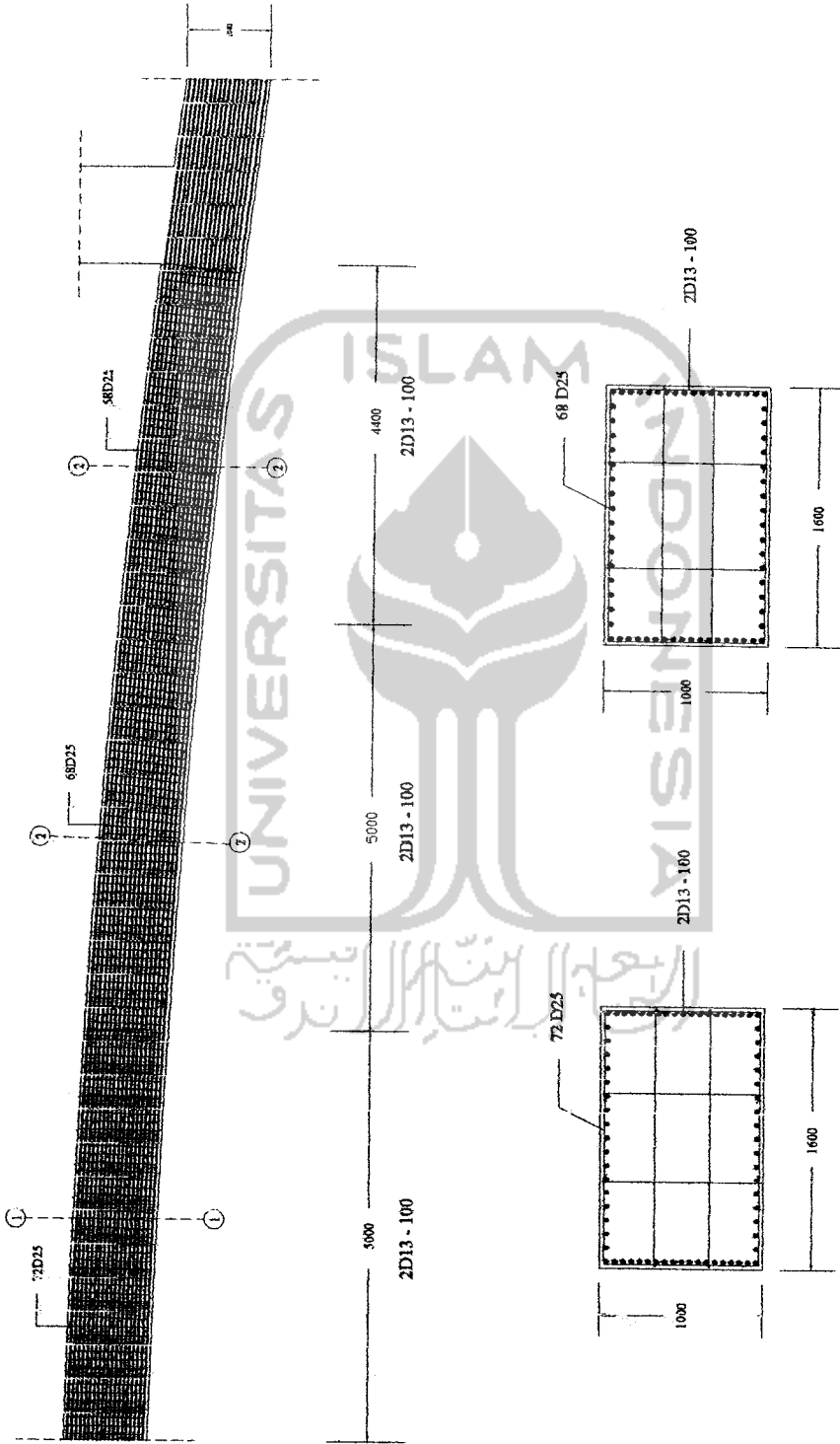
DETIL BALOK LENGKUNG BL23

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LENGKUNG BL23 | | | | |



DETIL BALOK LENGGUNG BL.24

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGGUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN BALOK LENGGUNG BL.24 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |

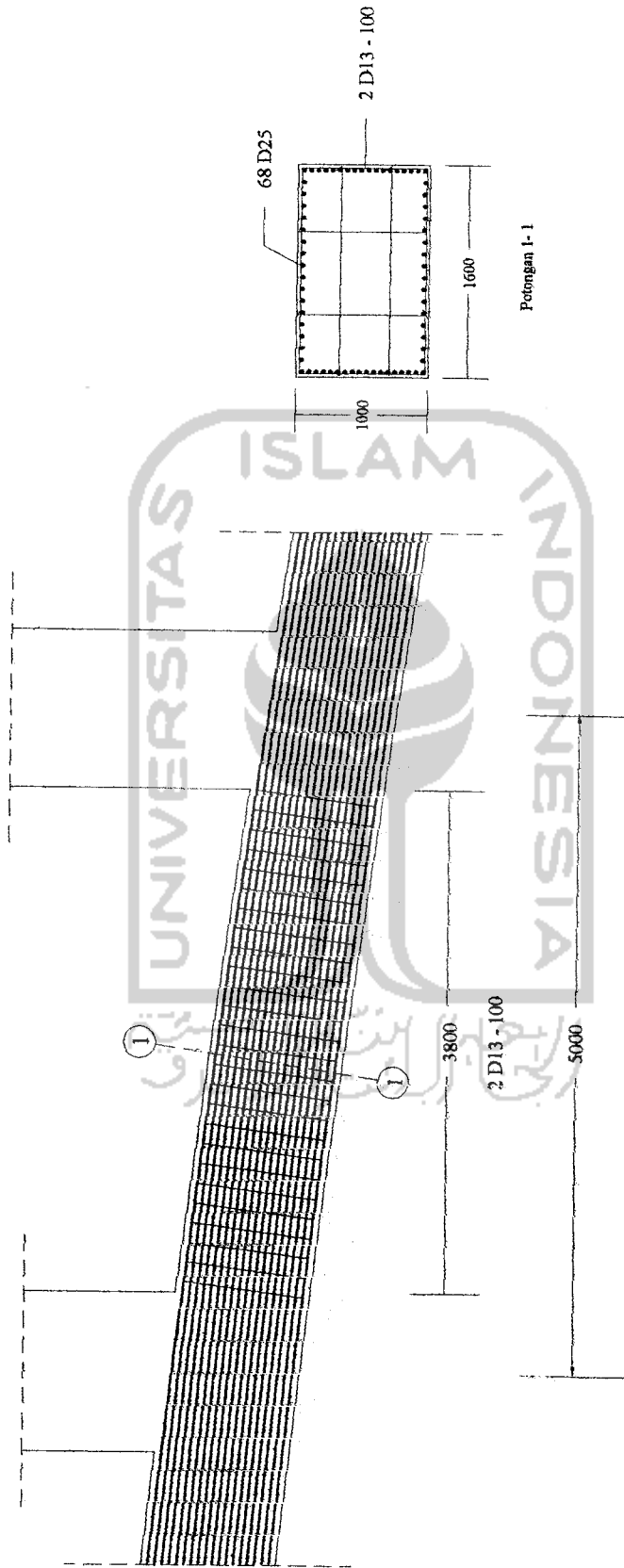


Potongan 1-1

Potongan 2-2

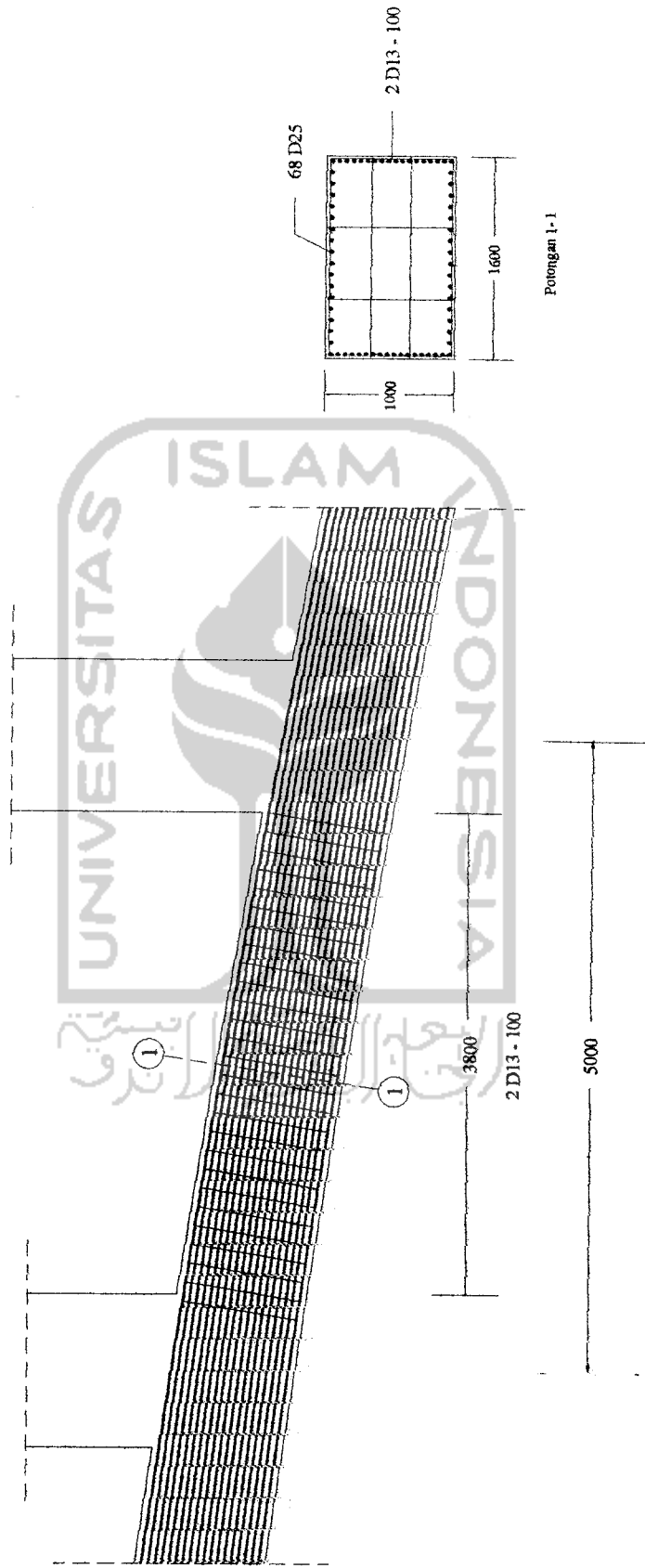
DETL BALOK LINGKUNG (BL25,BL26,BL27)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETL PENULANGAN BALOK LINGKUNG BL25, BL26, BL27 | | | | |



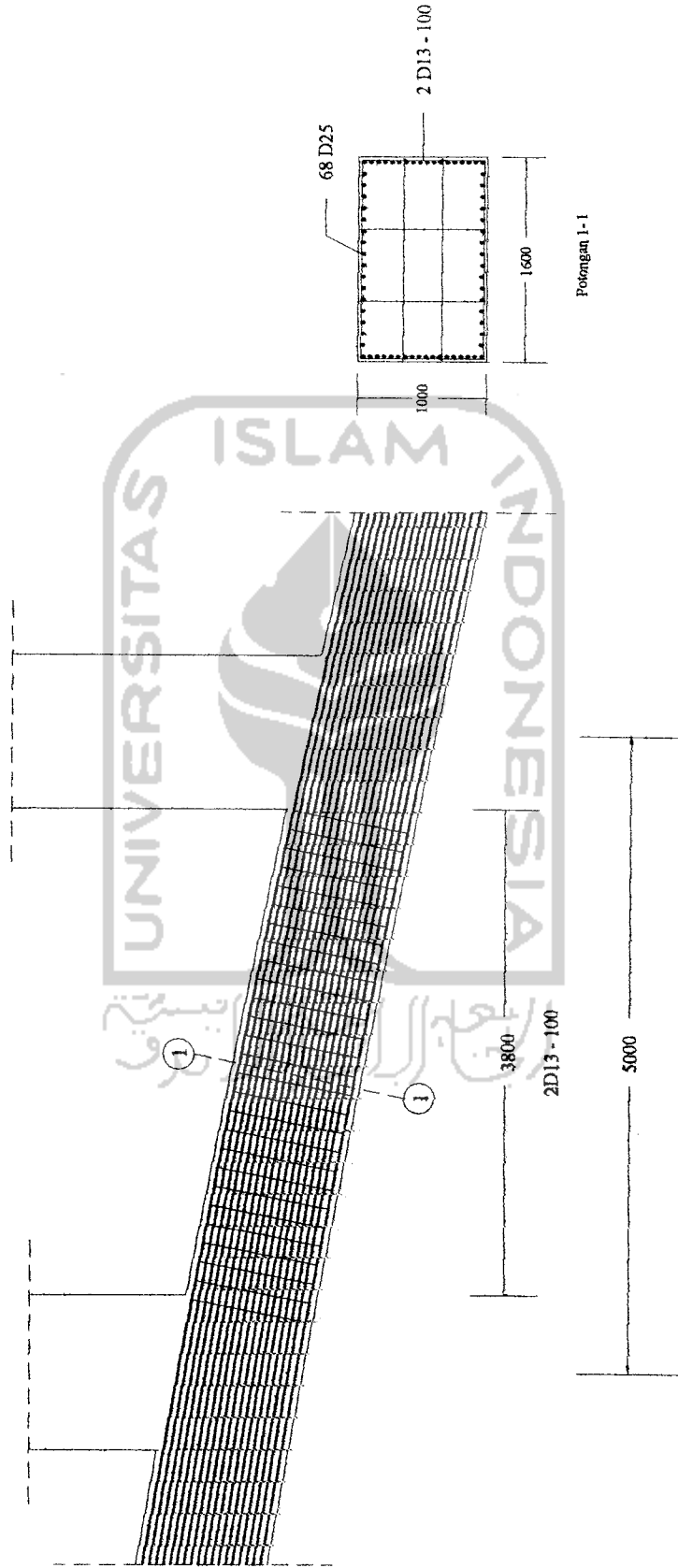
DETIL BALOK LENGKUNG BL28

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL28 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



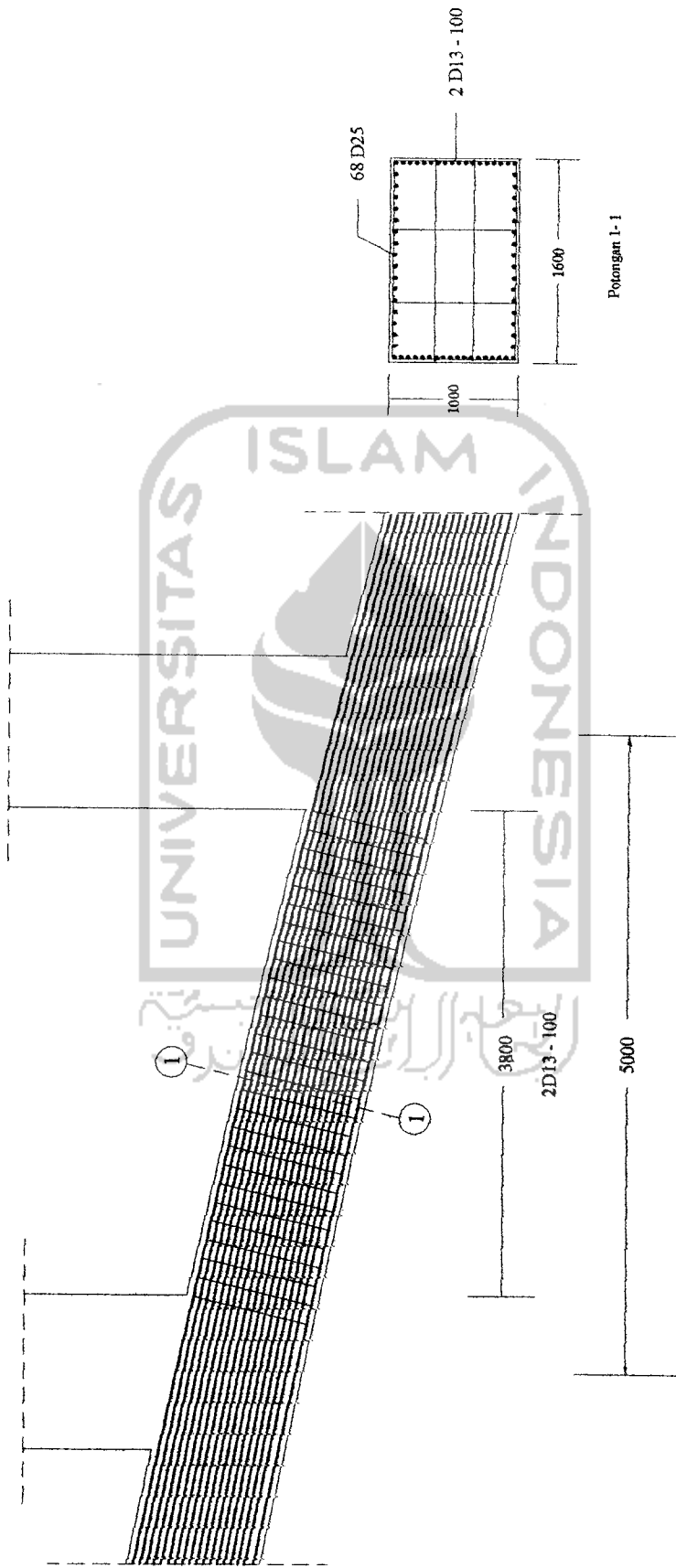
DETIL BALOK LINGKUNG BL29

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LINGKUNG BL29 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



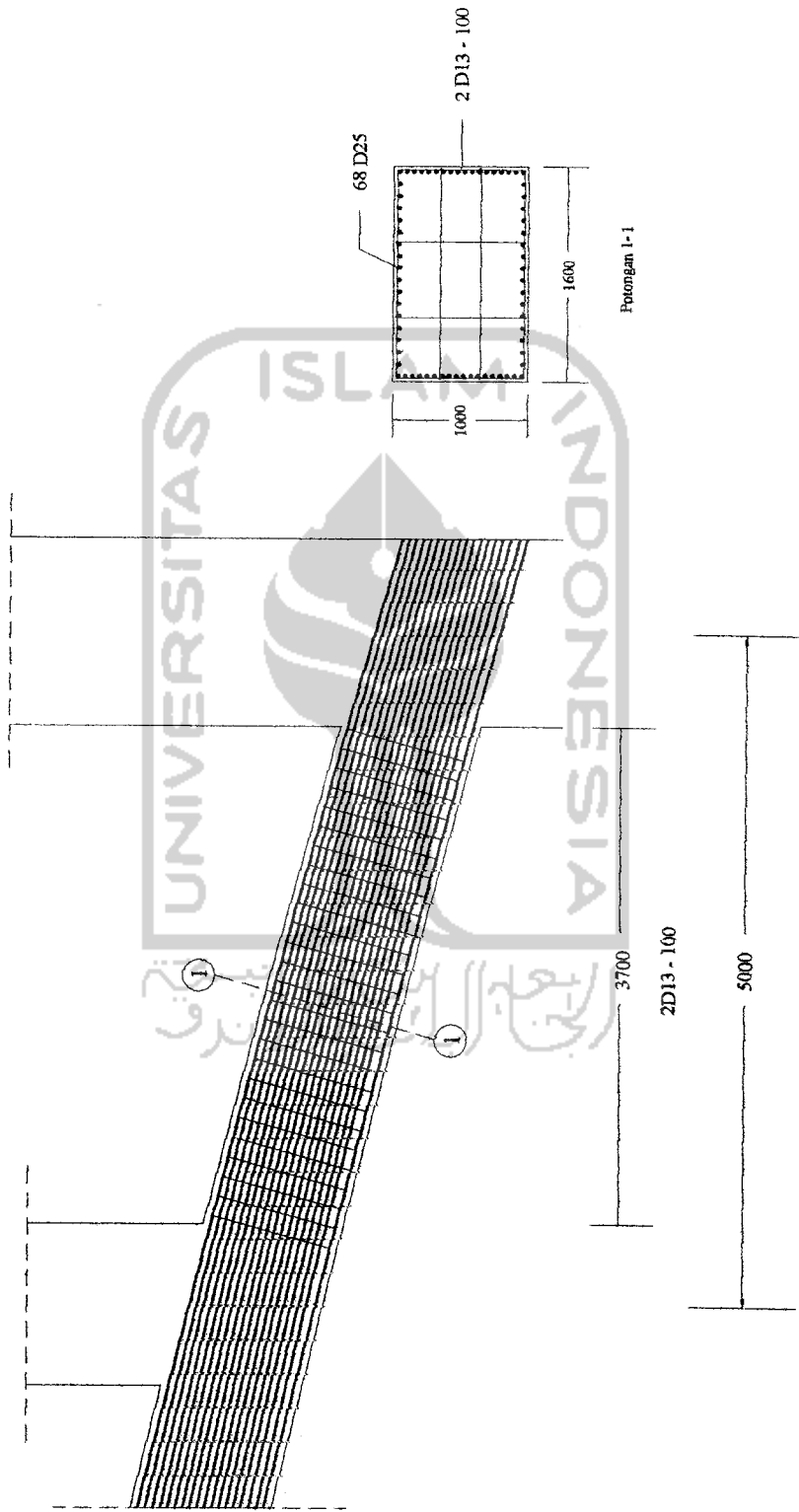
DETIL BALOK LINGKUNG BL30

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LINGKUNG BL30 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



DETIL BALOK LINGKUNG BL31

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LINGKUNG BL31 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



DETIL BALOK LINGKUNG BL32

PERENCANAAN JEMBATAN BETON BERTULANG
 TIPE GELAGAR LINGKUNG (ARCH BRIDGE)
 DI ATAS SUNGAI KRETEK BANTUL

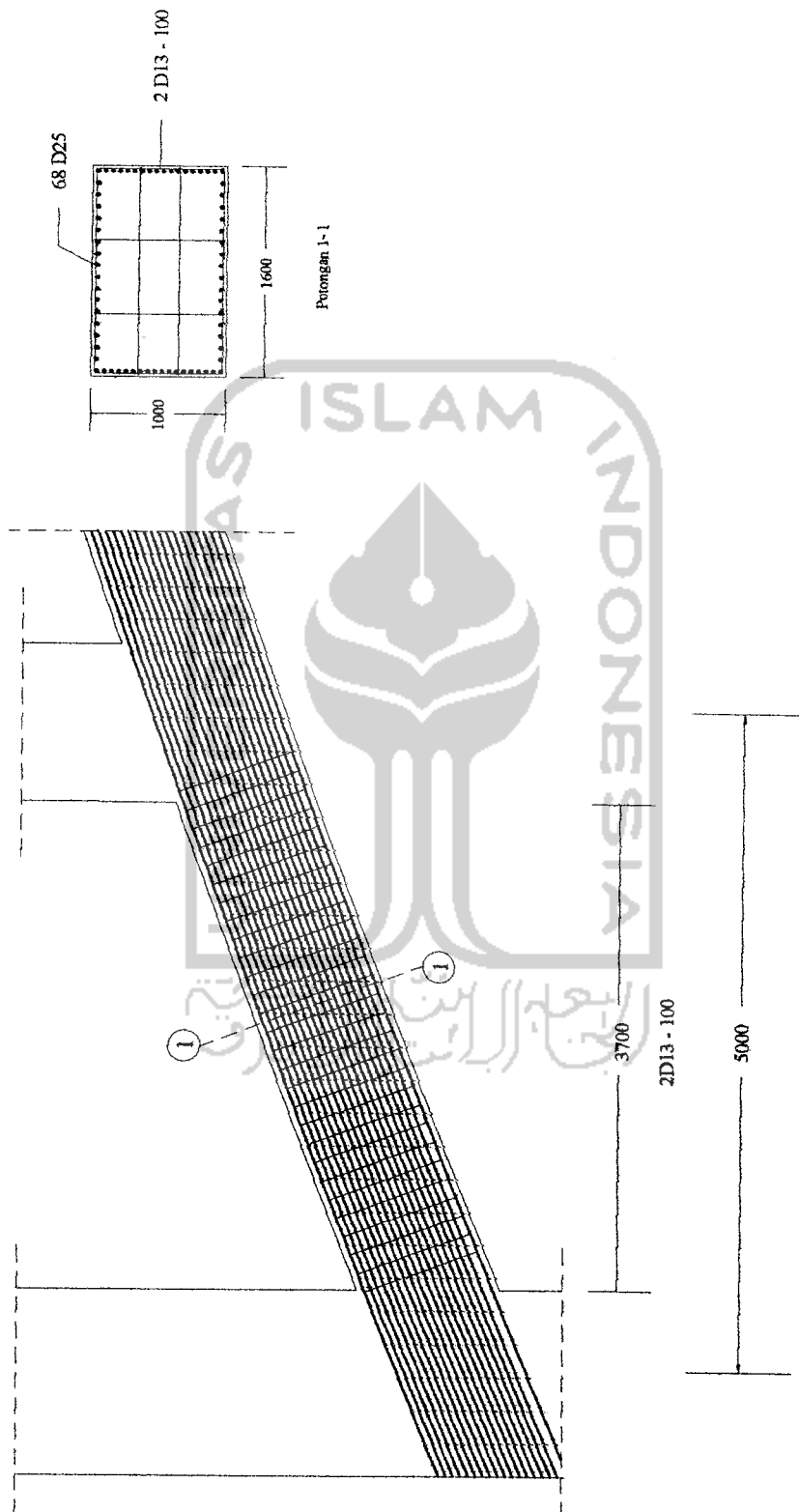
JUDUL GAMBAR
 DETIL PENULANGAN
 LINGKUNG BL32

SKALA

KODE

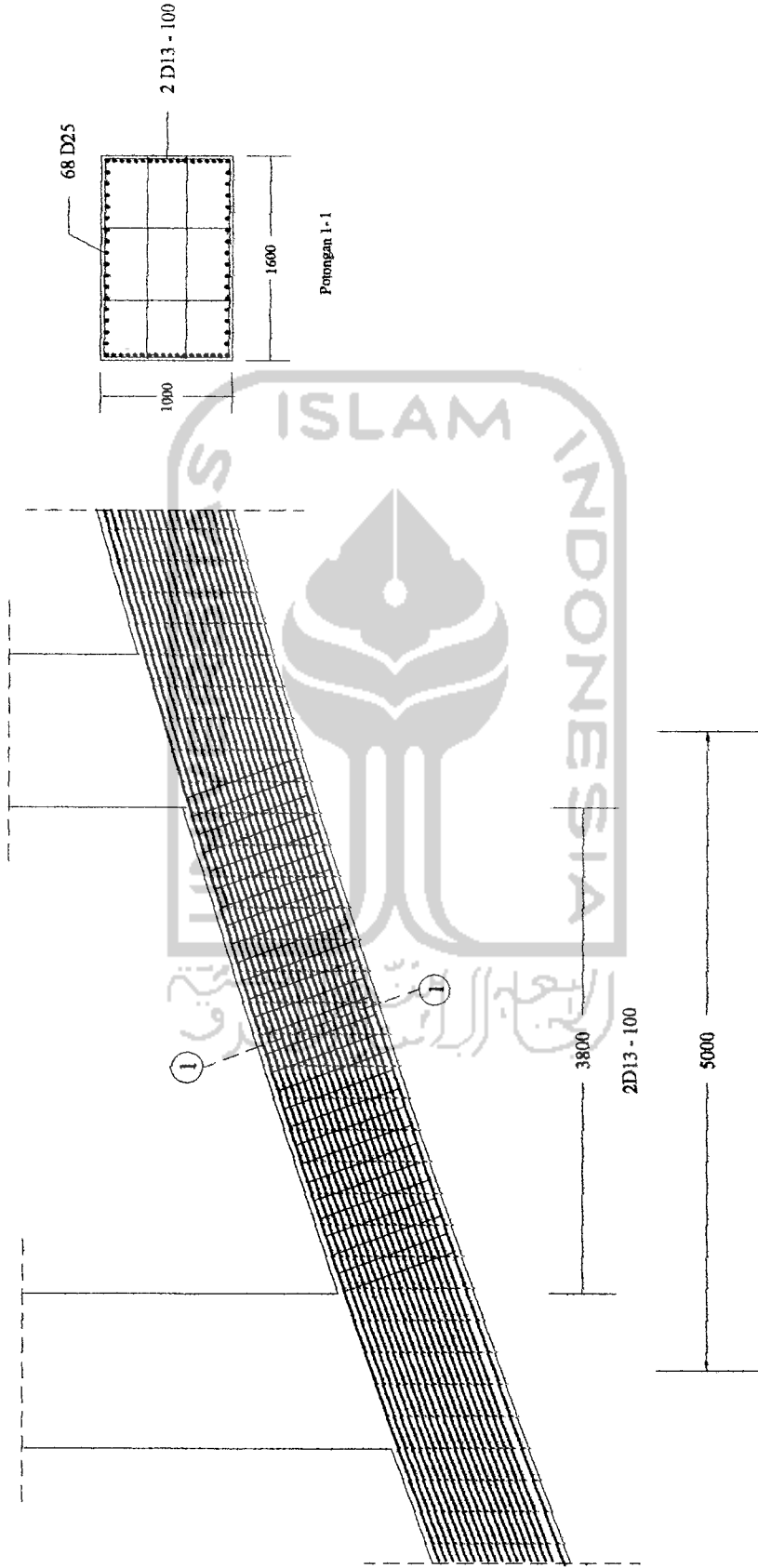
NO

JML. LBR



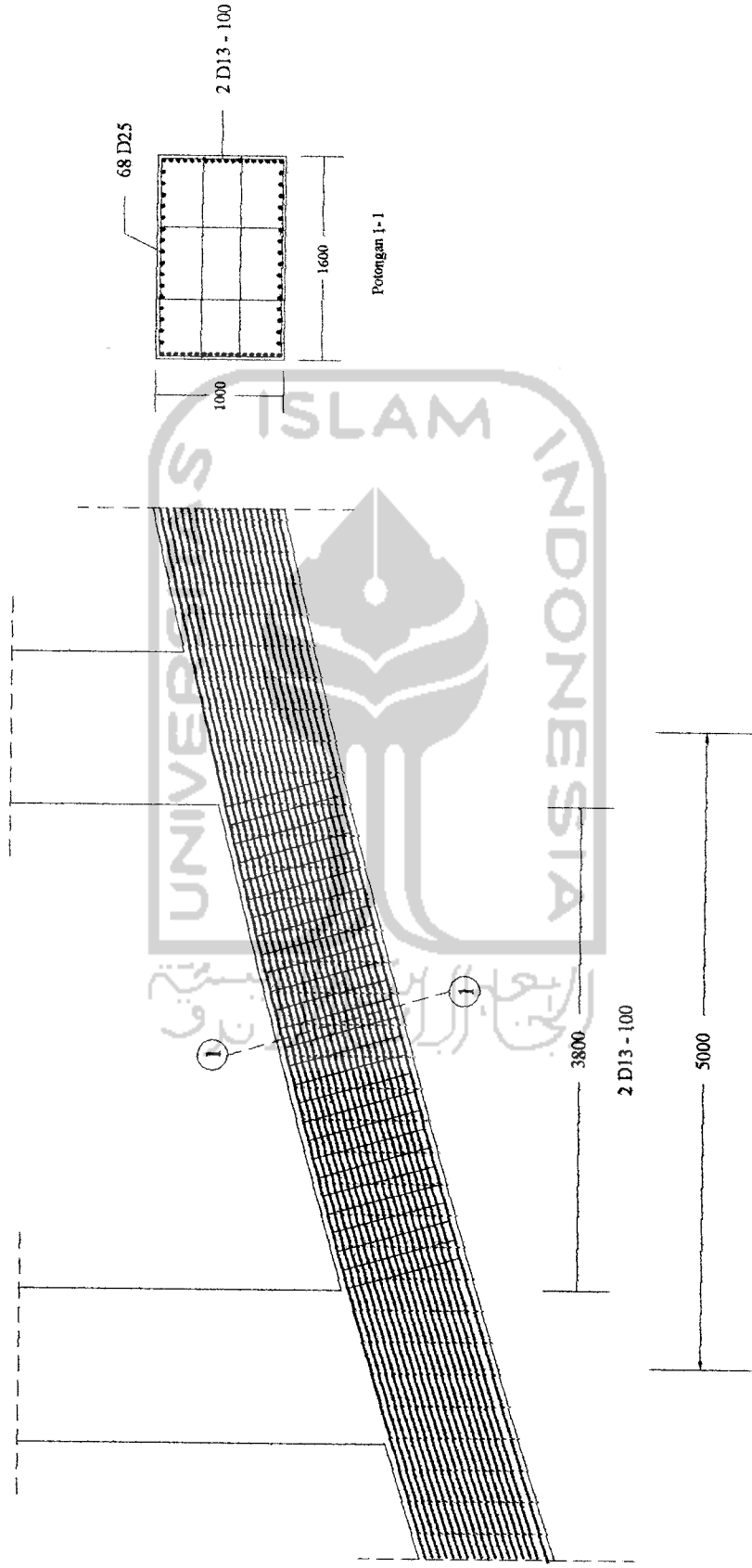
DETIL BALOK LENGKUNG BL33

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL33 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



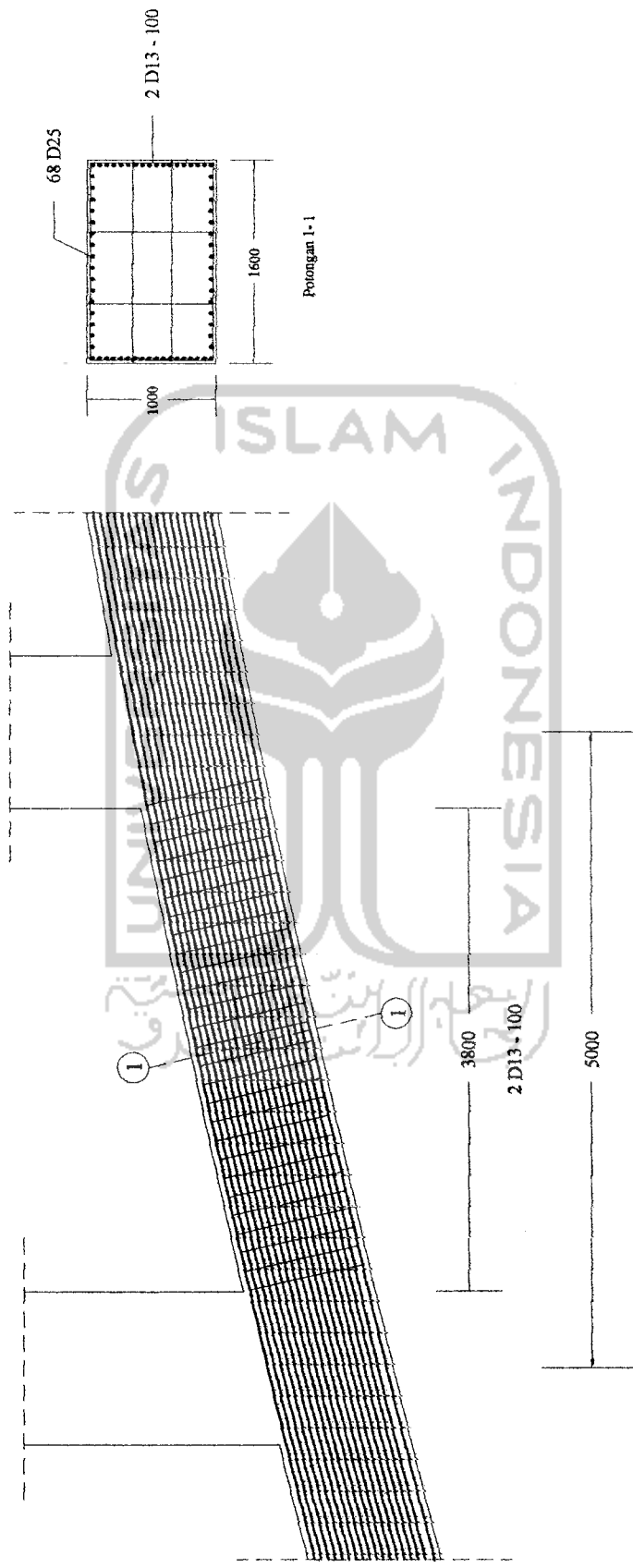
DETIL BALOK LINGKUNG BL34

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LINGKUNG BL34 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



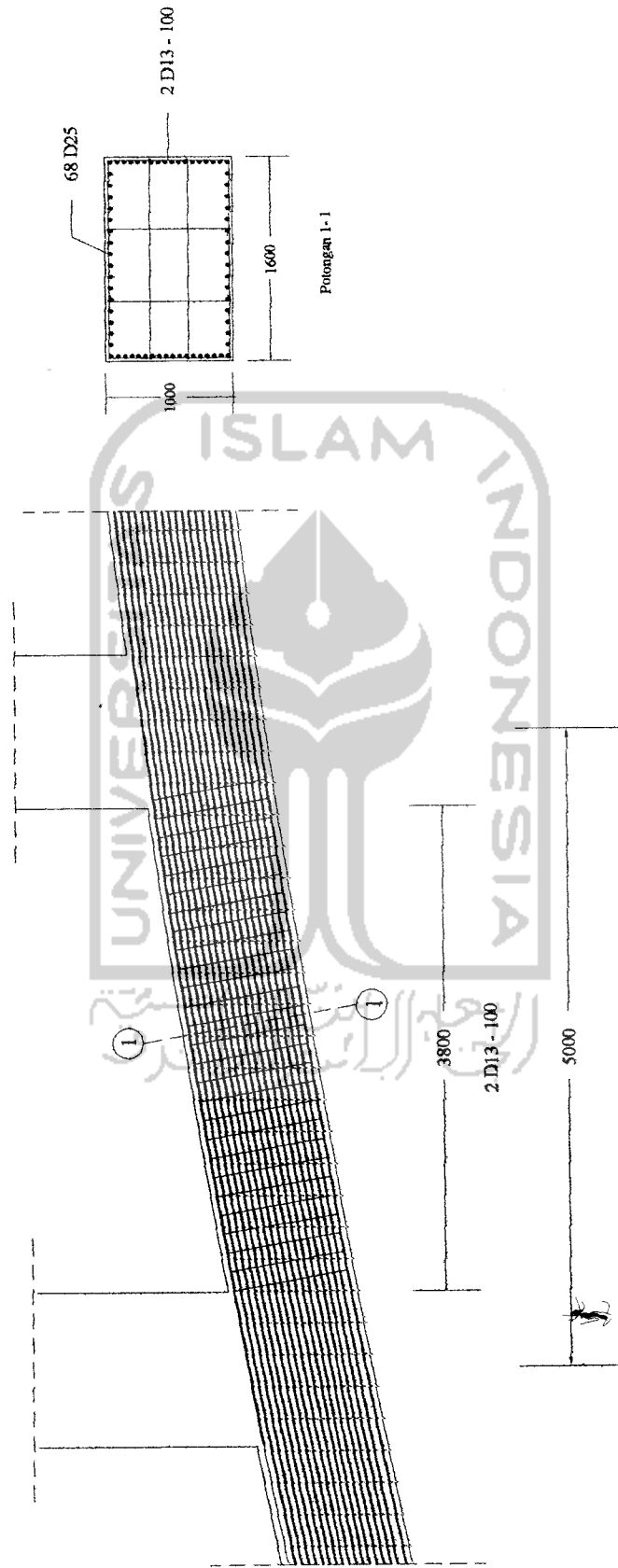
DETIL BALOK LENGKUNG BL35

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL35 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



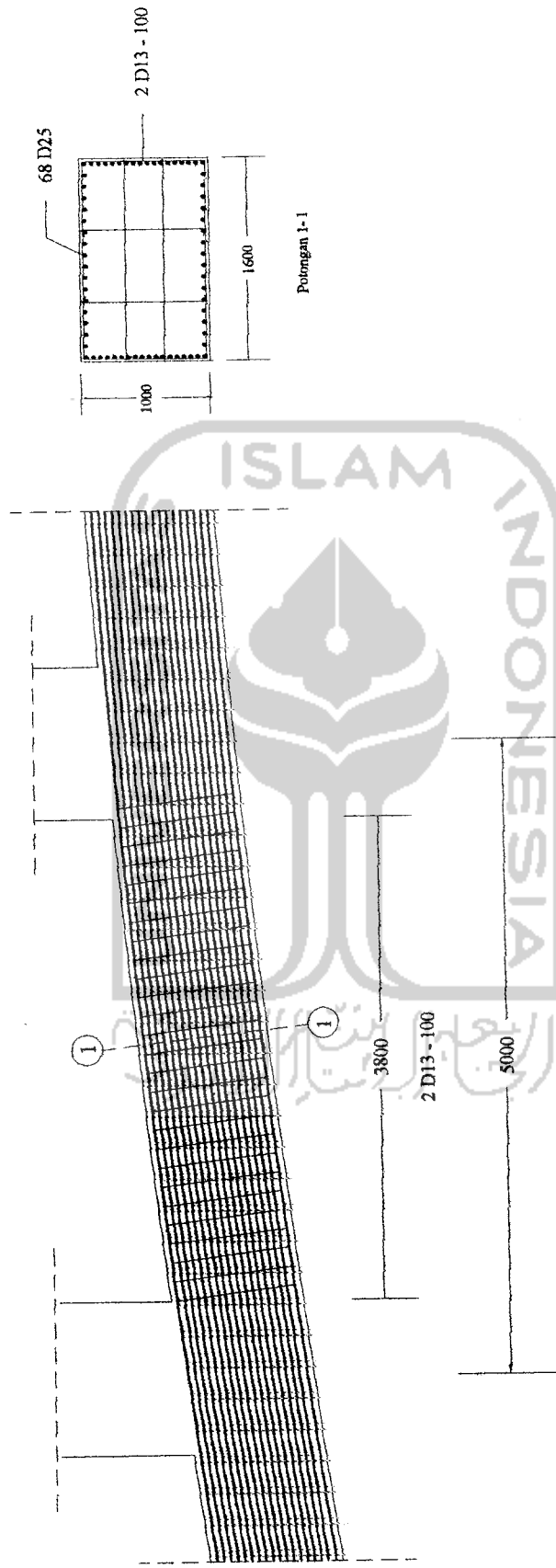
DETIL BALOK LINGKUNG BL36

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LINGKUNG BL36 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



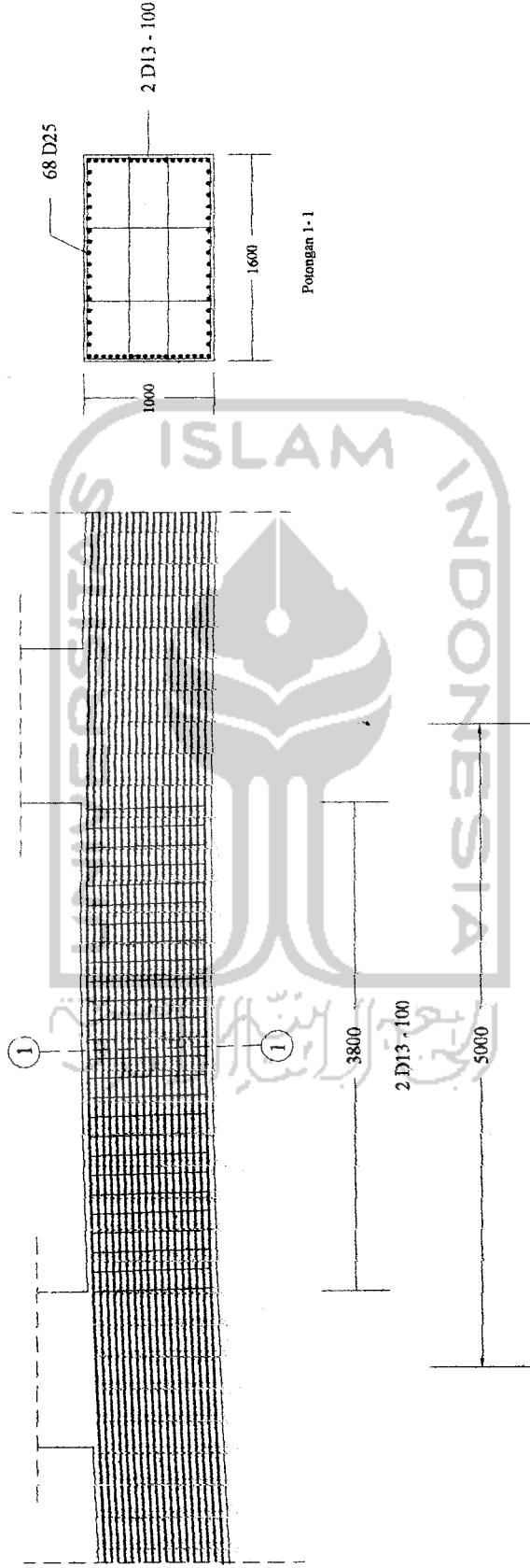
DETIL BALOK LENGKUNG BL37

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LENGKUNG BL37 | | | | |



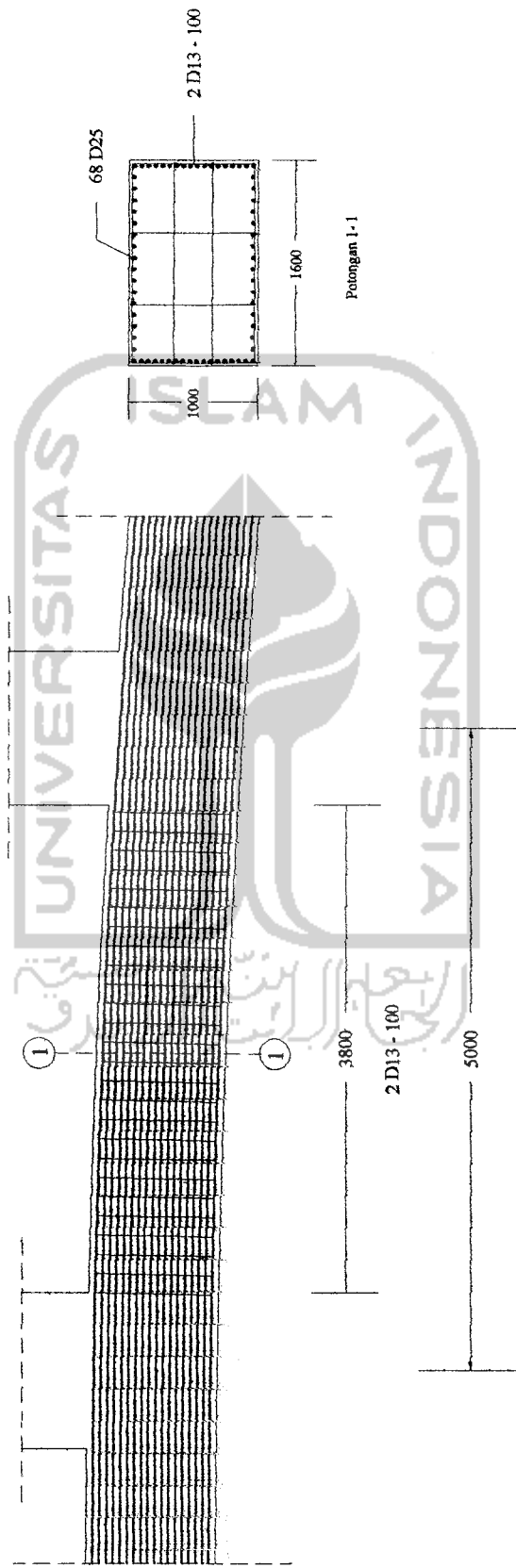
DETIL BALOK LENGKUNG BL38

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LENGKUNG BL38 | | | | |



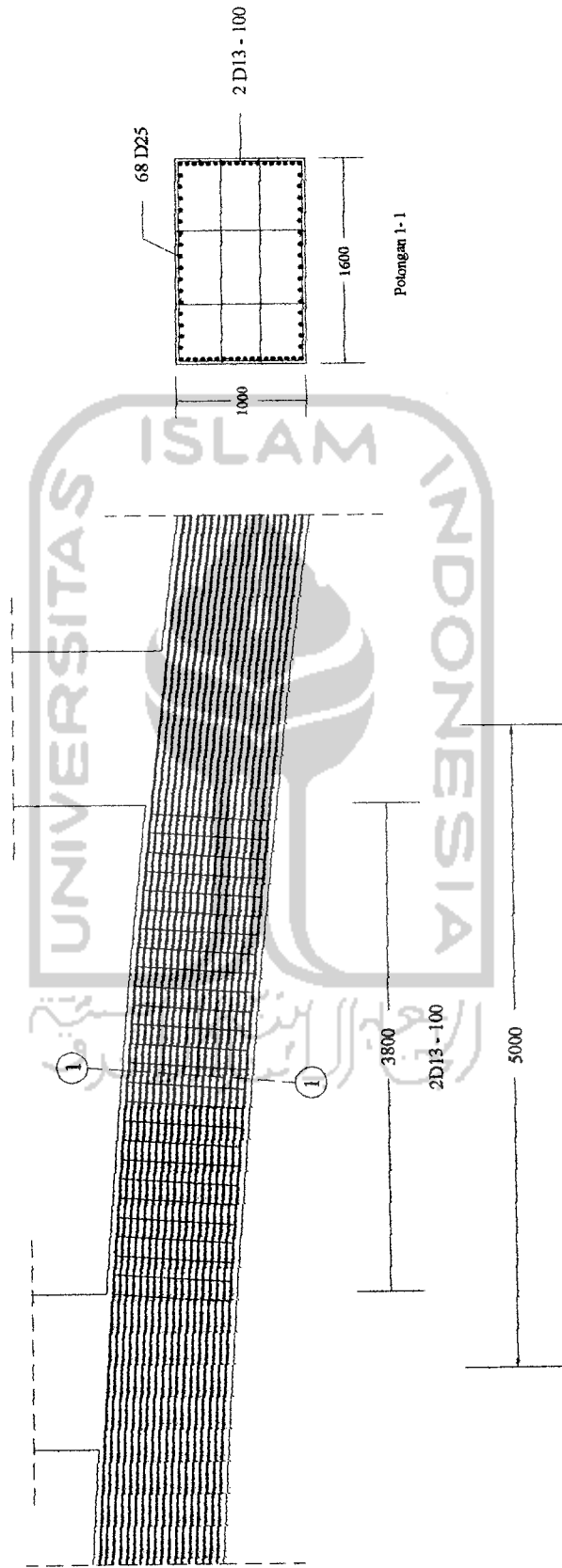
DETIL BALOK LENGKUNG BL40

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | DETIL PENULANGAN LENGKUNG BL40 | | | |



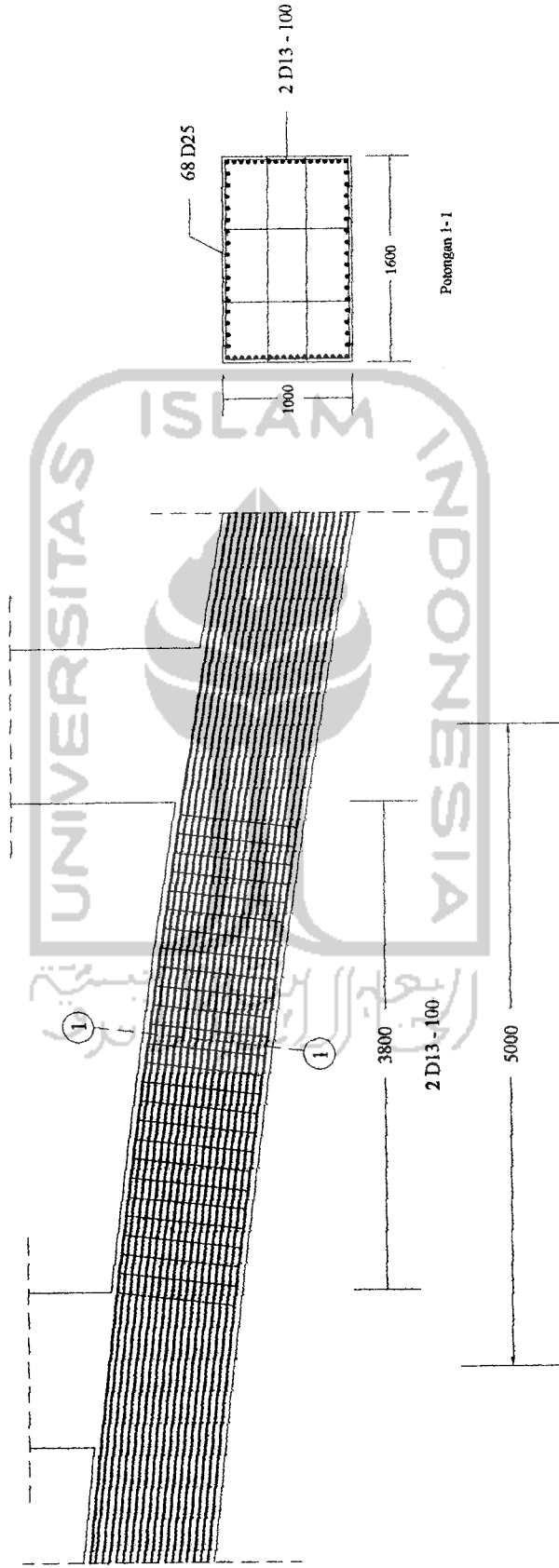
DETIL BALOK LENGKUNG BL41

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LENGKUNG BL41 | | | | |



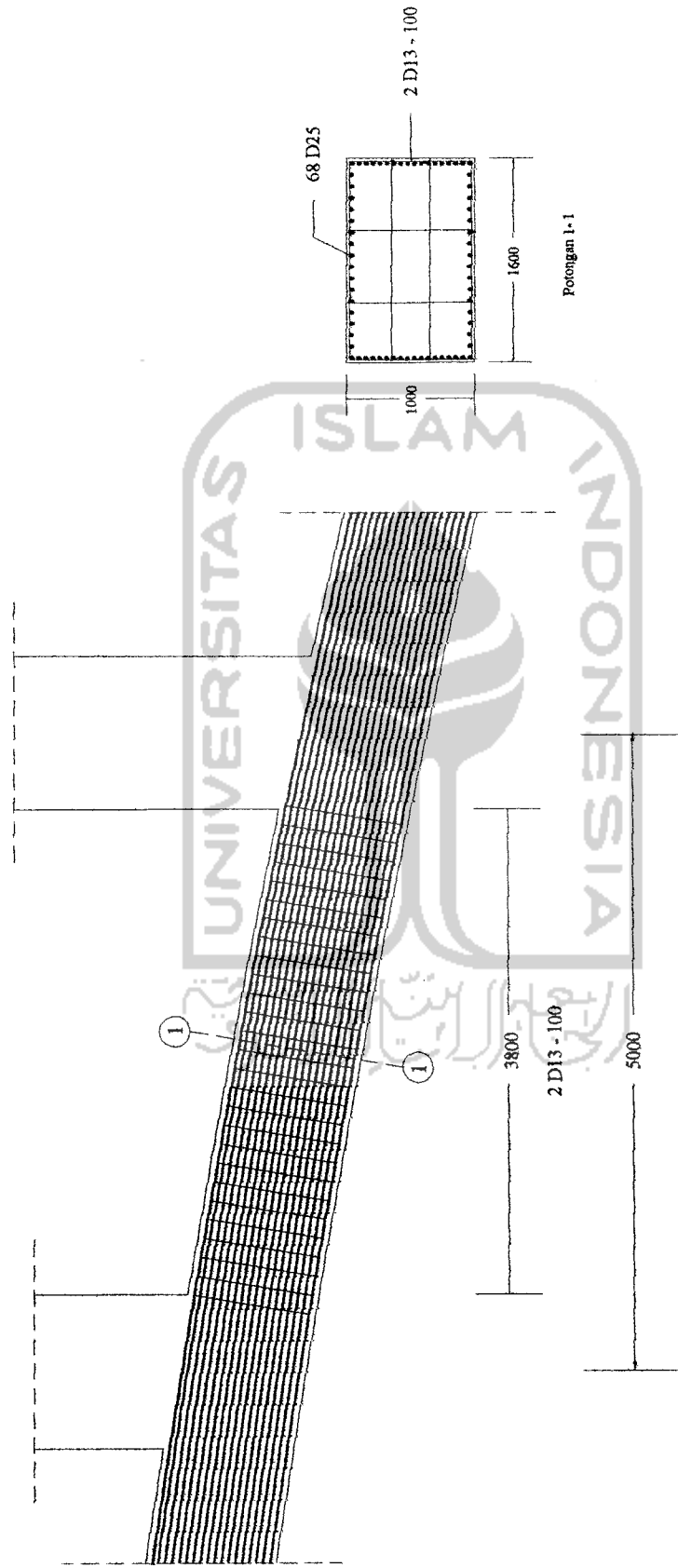
DETIL BALOK LENGKUNG BL42

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL42 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



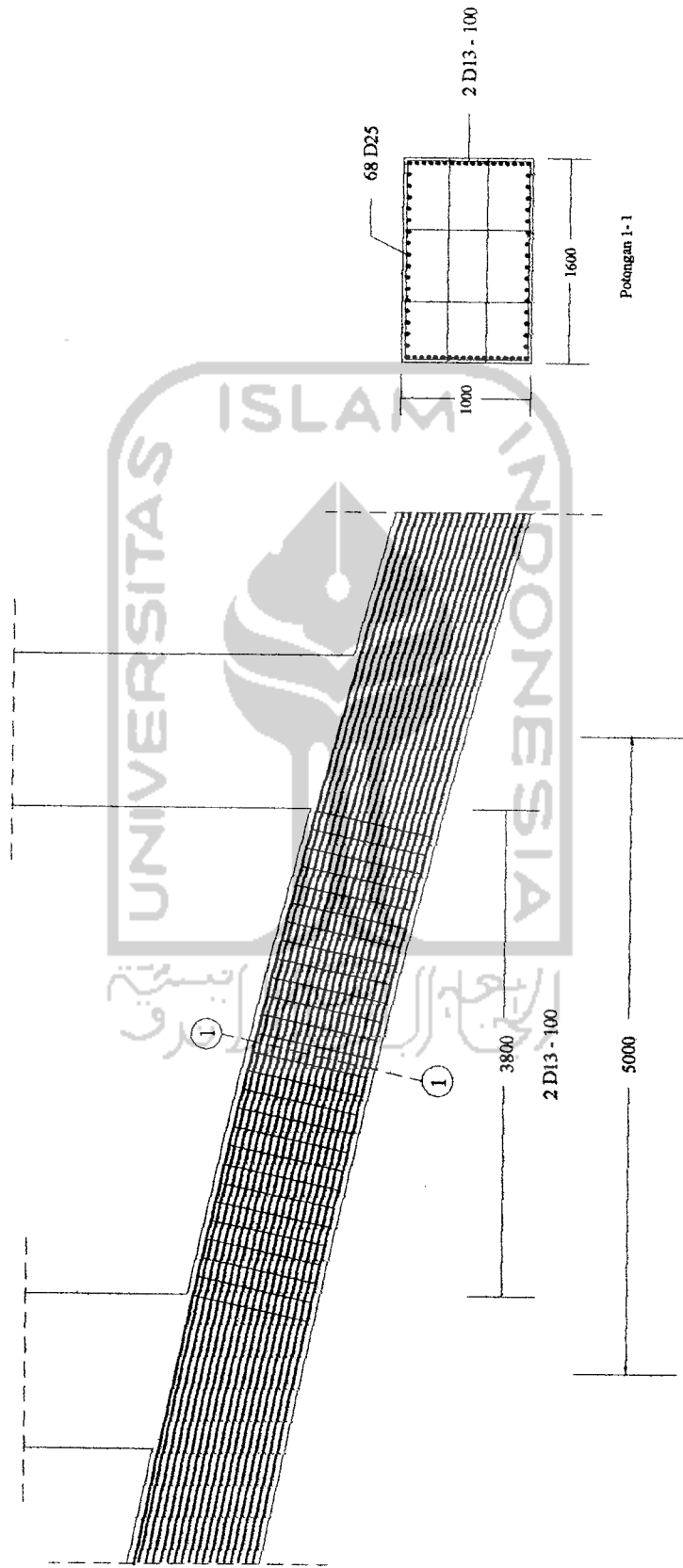
DETIL BALOK LINGKUNG BL43

| | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|--|--|-------|------|----|----------|
| <p>PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL</p> | <p>DETIL PENULANGAN LINGKUNG BL43</p> | | | | |



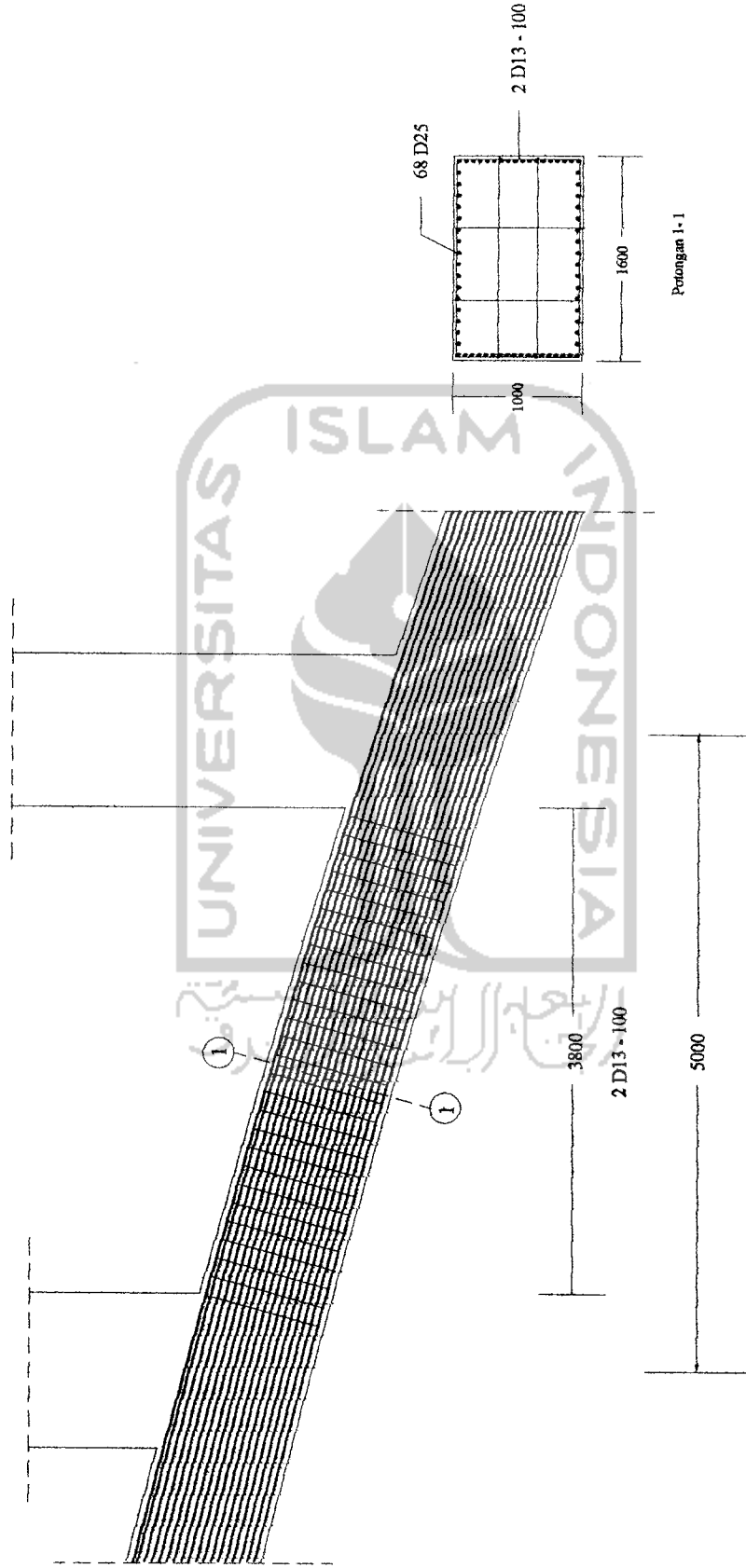
DETIL BALOK LENGKUNG BL44

| PERENCANAAN JEMBATAN BETON BERTULANG TYPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL44 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



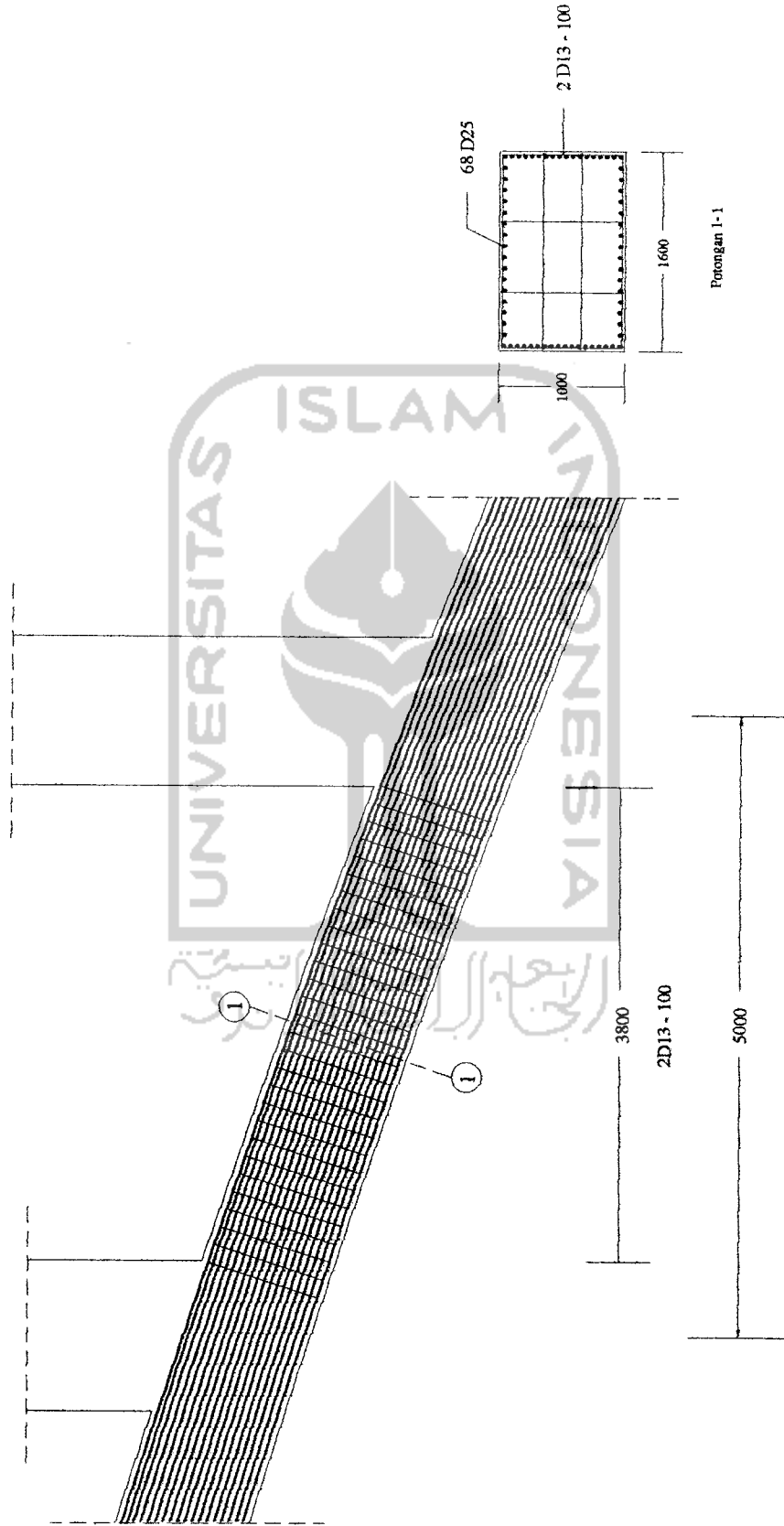
DETIL BALOK LENGKUNG BL45

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------------|-------|------|----|----------|
| | DETIL PENULANGAN LENGKUNG BL45 | | | | |



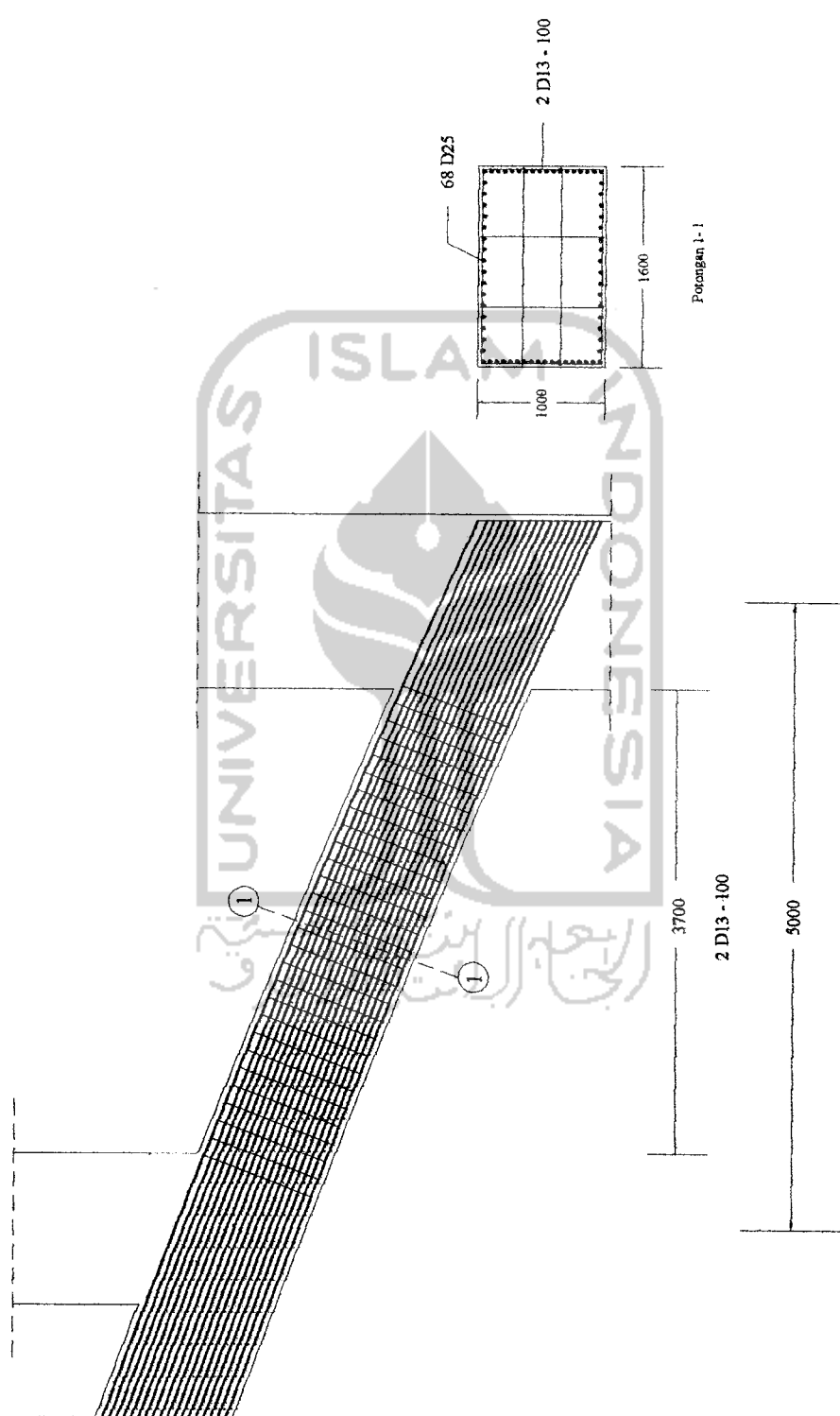
DETL BALOK LENGKUNG BL46

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETL PENULANGAN LENGKUNG BL46 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |



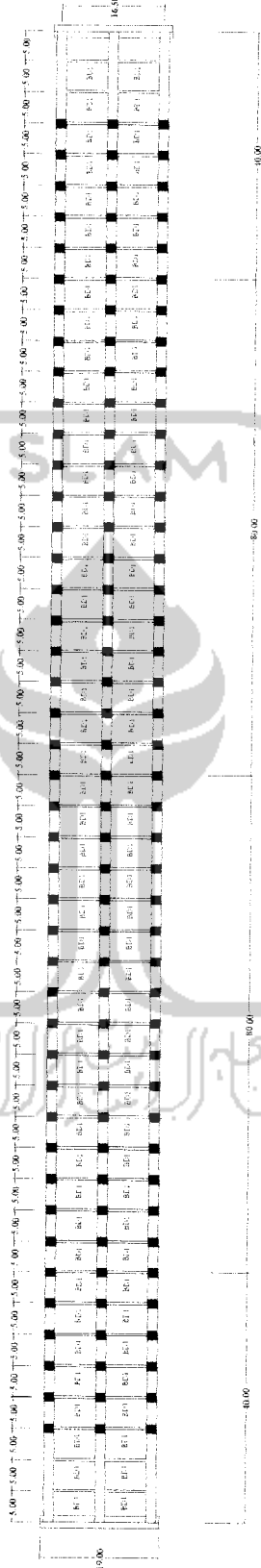
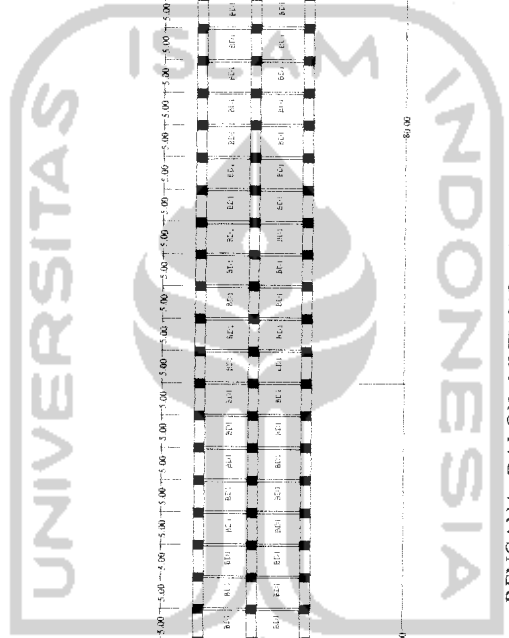
DETIL BALOK LENGKUNG BL47

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN LENGKUNG BL47 | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



DETIL BALOK LENGKUNG BL48

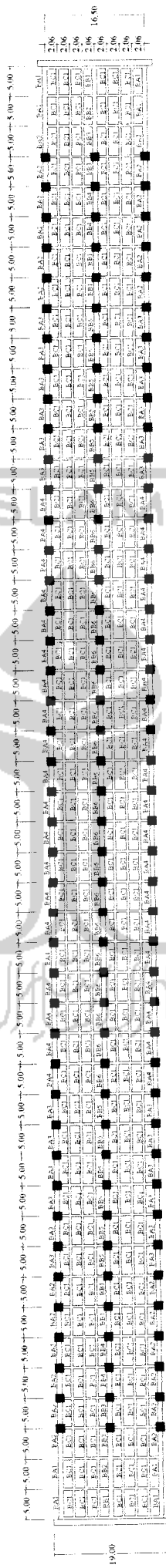
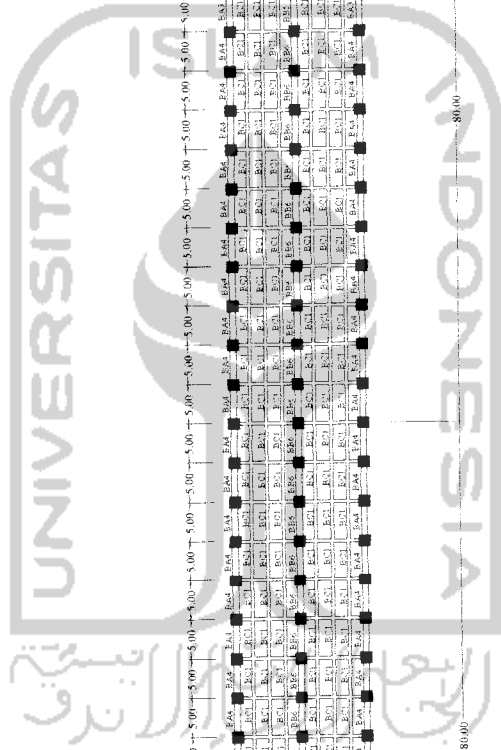
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN BALOK LENGKUNG BL 48 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |



RENCANA BALOK LINTANG BAWAH

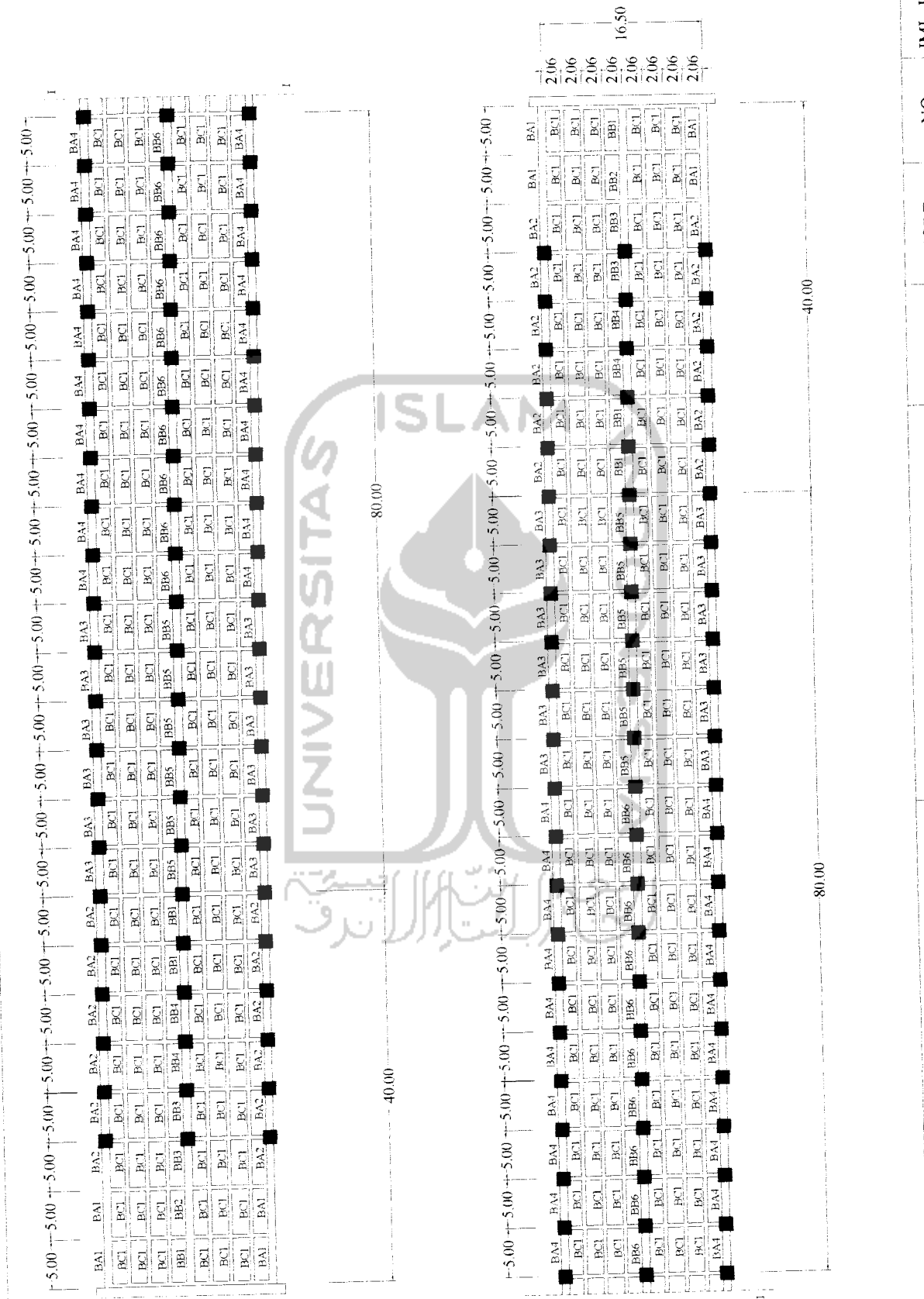
PERENCANAAN JEMBATAN BETON BERTULANG
 TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
 DI ATAS SUNGAI KRETEK BANTUL

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|--------------------------------|-------|------|----|-----------|
| RENCANA BALOK LINTANG BAWAH | | | | |

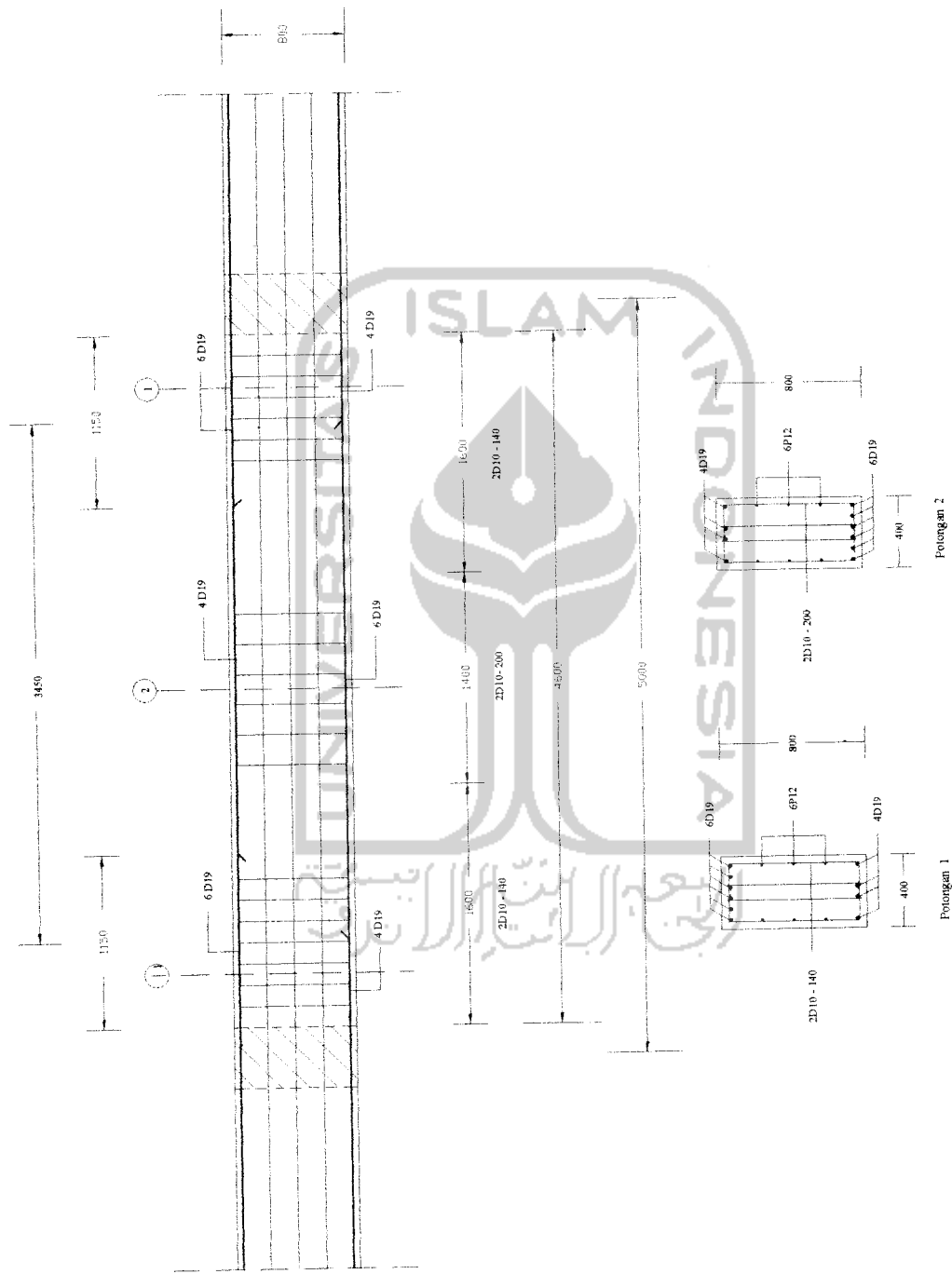


RENCANA BALOK

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|---|-------|------|----|-----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| RENCANA BALOK | | | | |

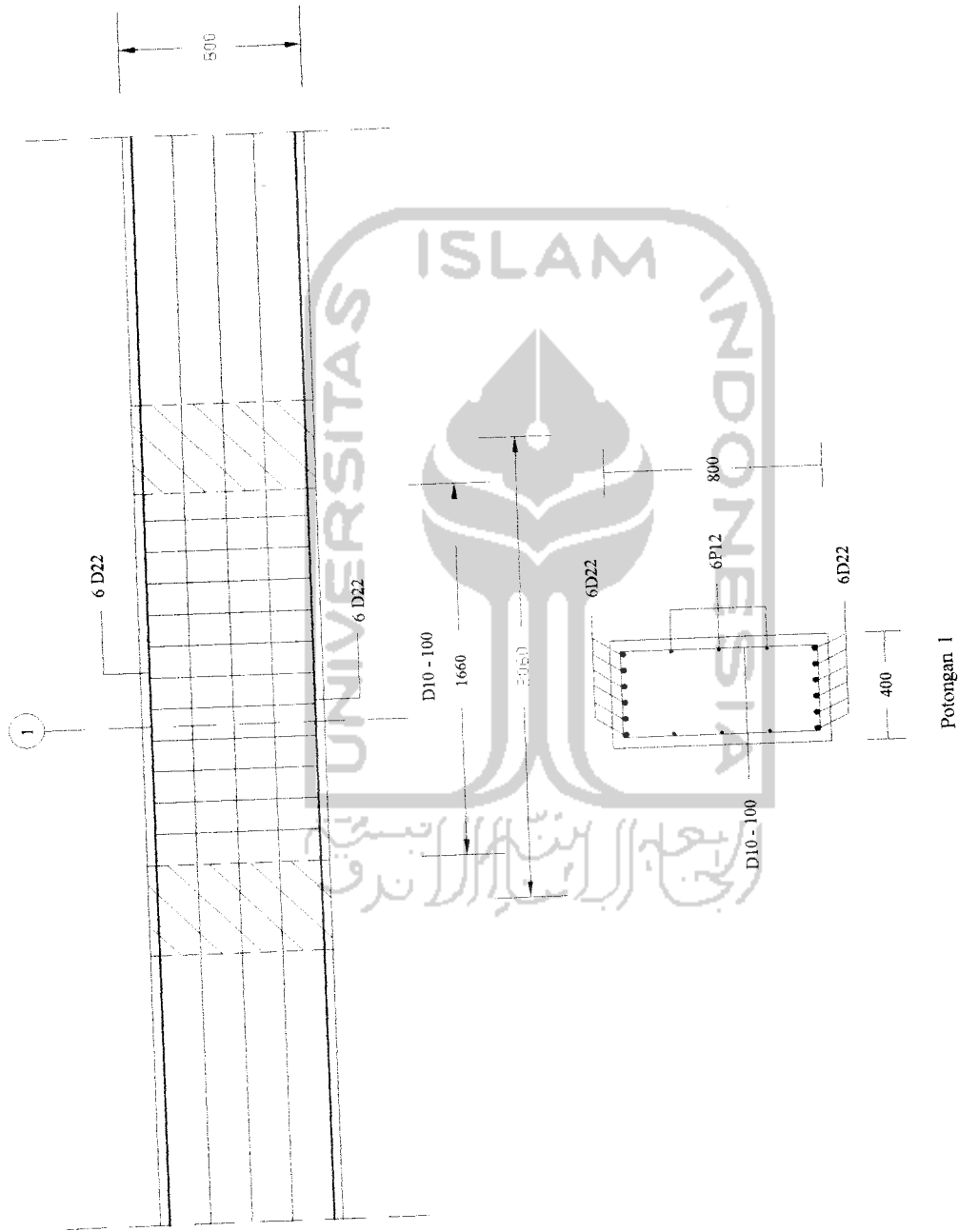


| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|---|-------|------|----|-----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| RENCANA BALOK | | | | |



Detail Balok Anak BCI

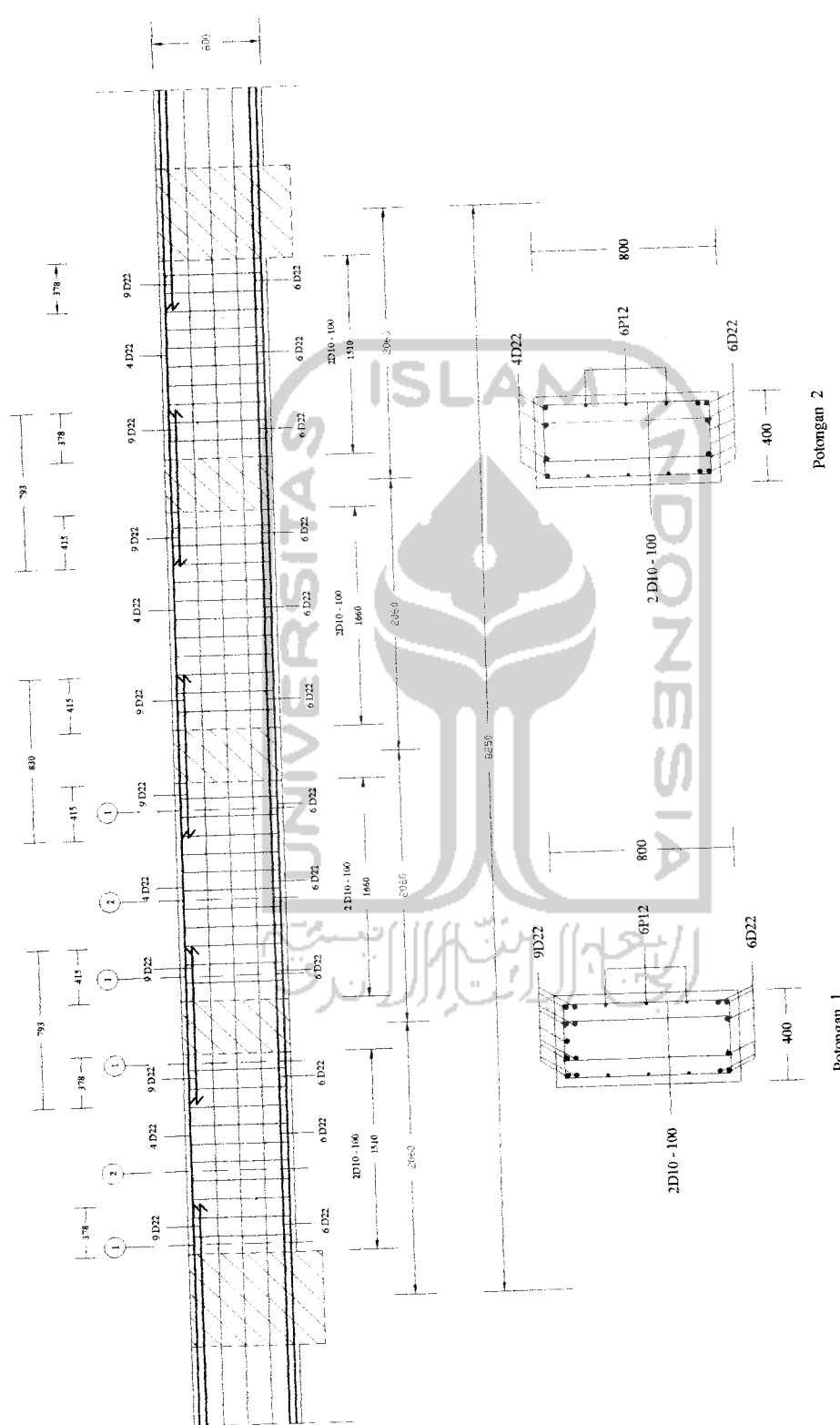
| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETAIL PENULANGAN BALOK ANAK BCI | | | | |



Potongan 1

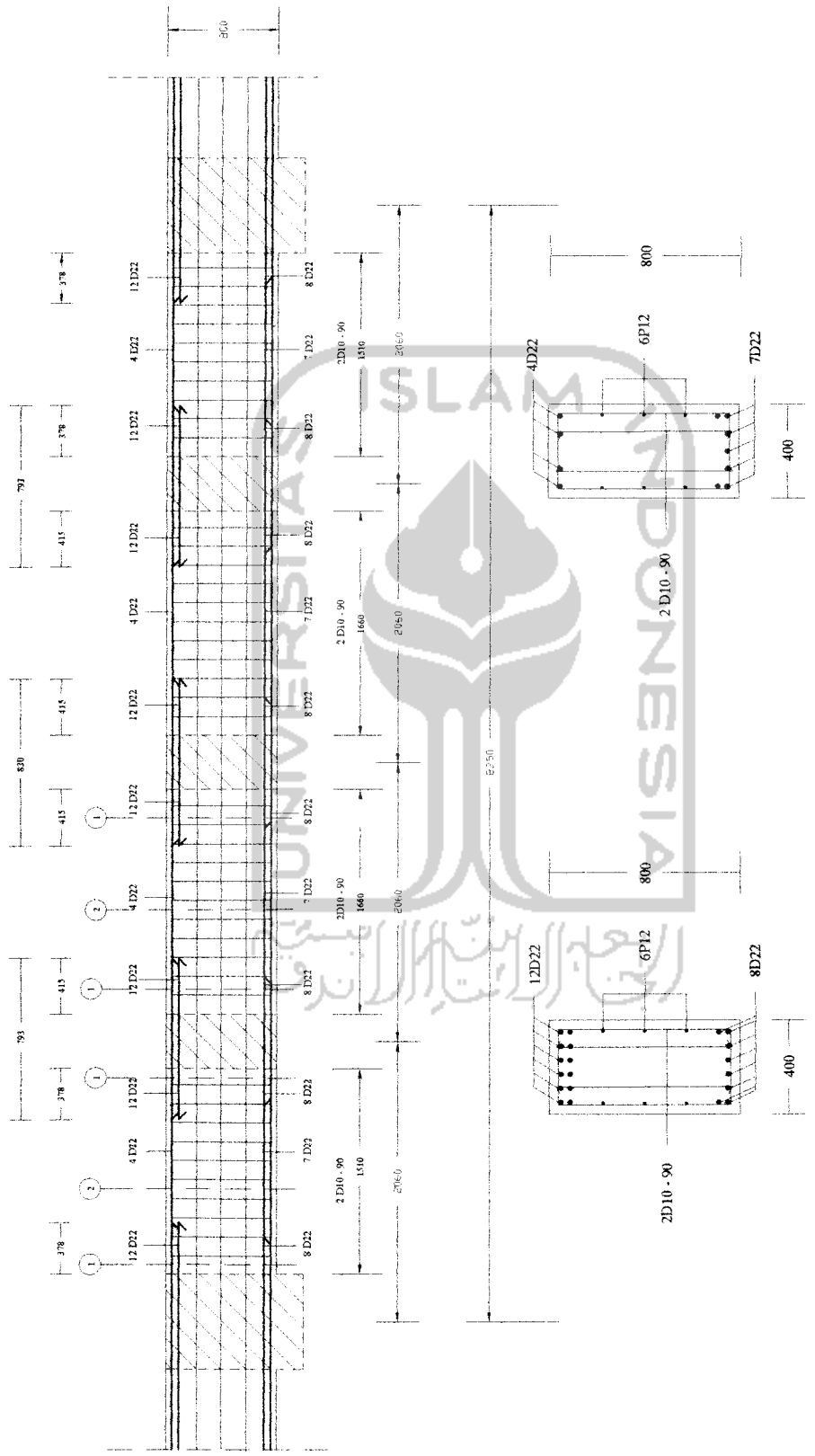
Detail Balok Lintang Bawah

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe Gelagar Lengkung (Arch Bridge) Di Atas Sungai Kretek Bantul | | | | |
| DETIL PENULANGAN BALOK LINTANG BAWAH | | | | |



Detail Balok Lintang Atas Jenis 1

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN BALOK LINTANG ATAS JENIS 1 | | | | |

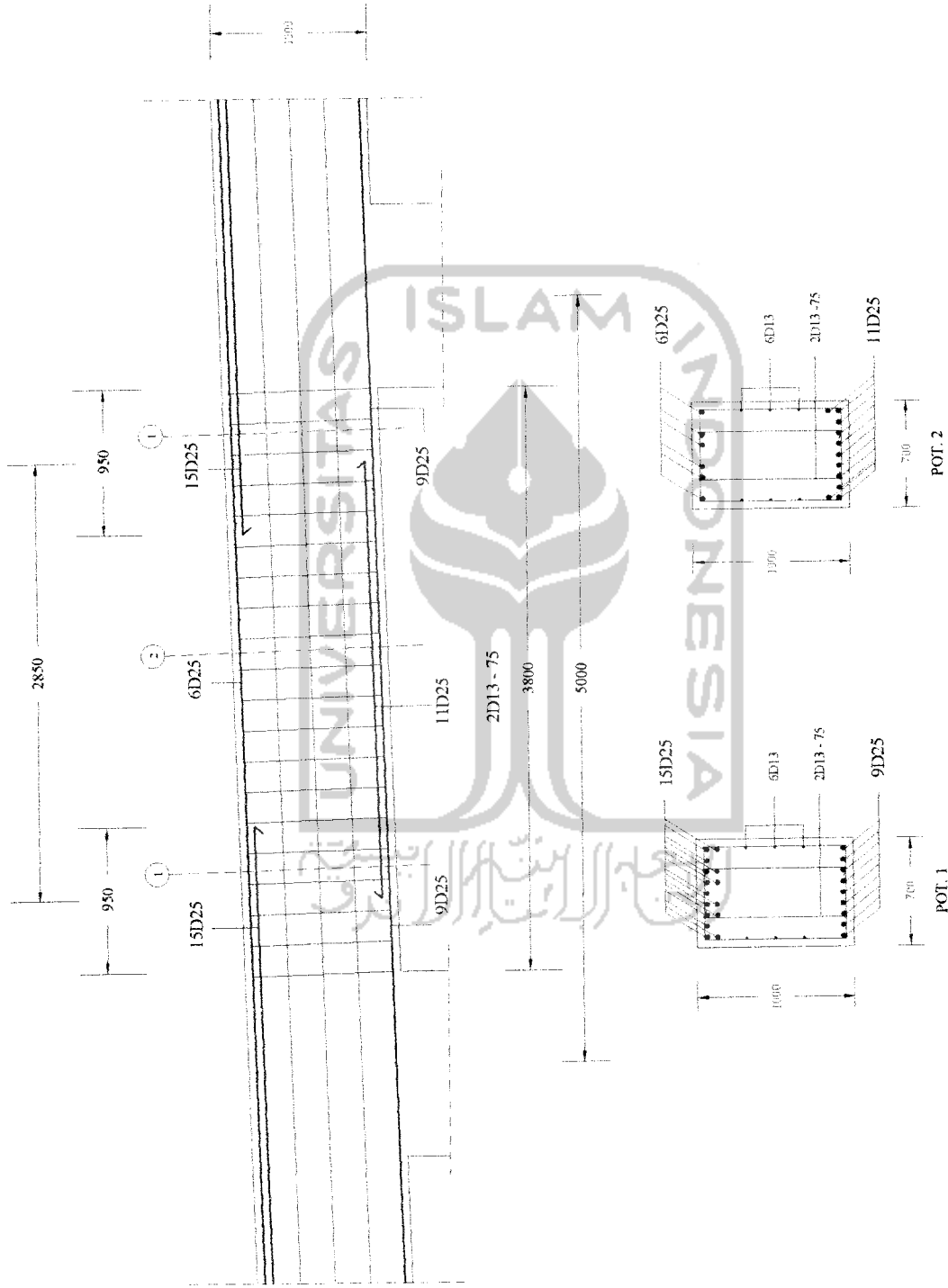


Potongan 2

Potongan 1

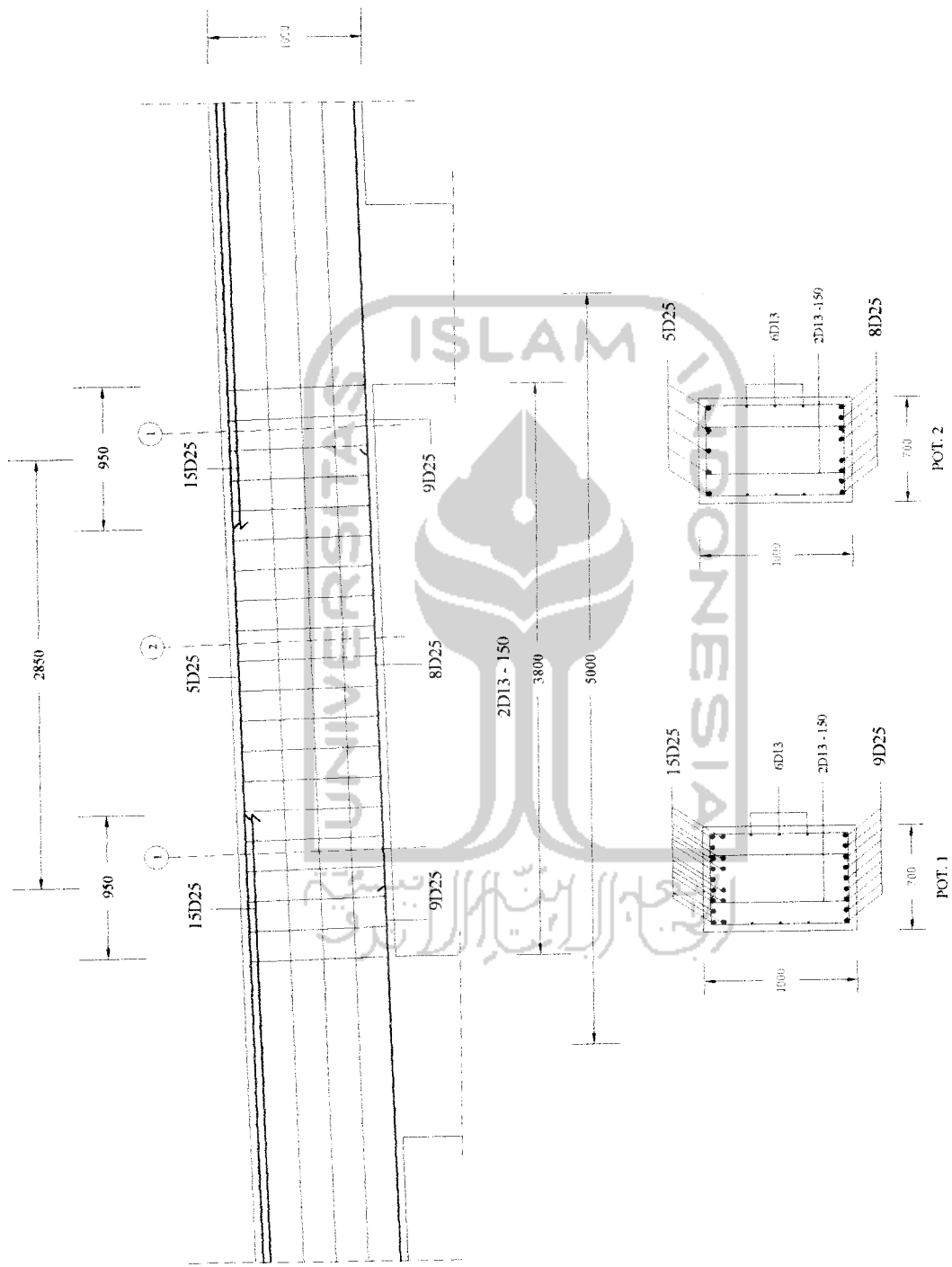
Detil Balok Lintang Atas Jenis 2

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN BALOK LINTANG ATAS JENIS 2 | | | | |



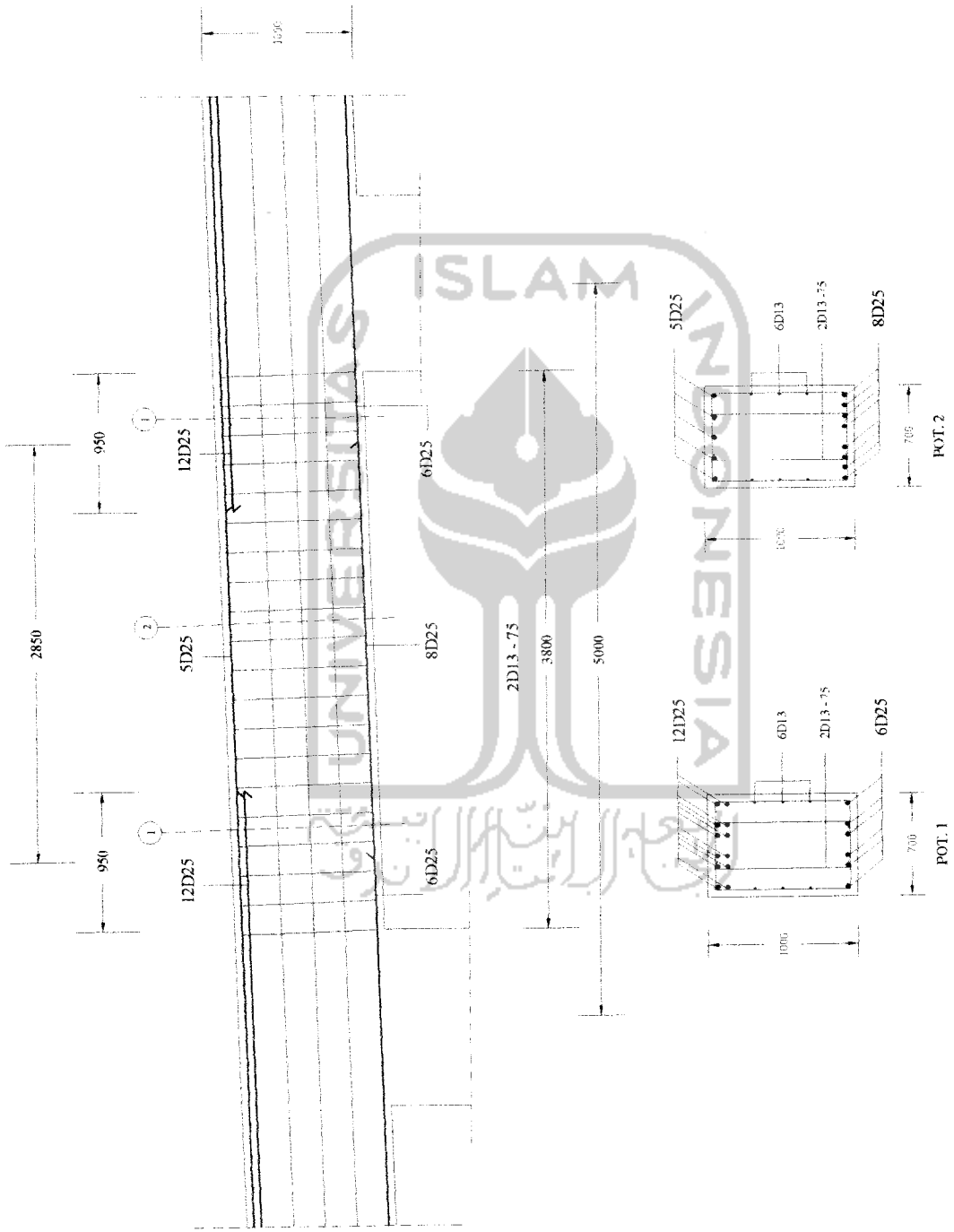
DETIL BALOK INDUK BA1 (1000X700)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN BALOK INDUK BA1 | | | | |



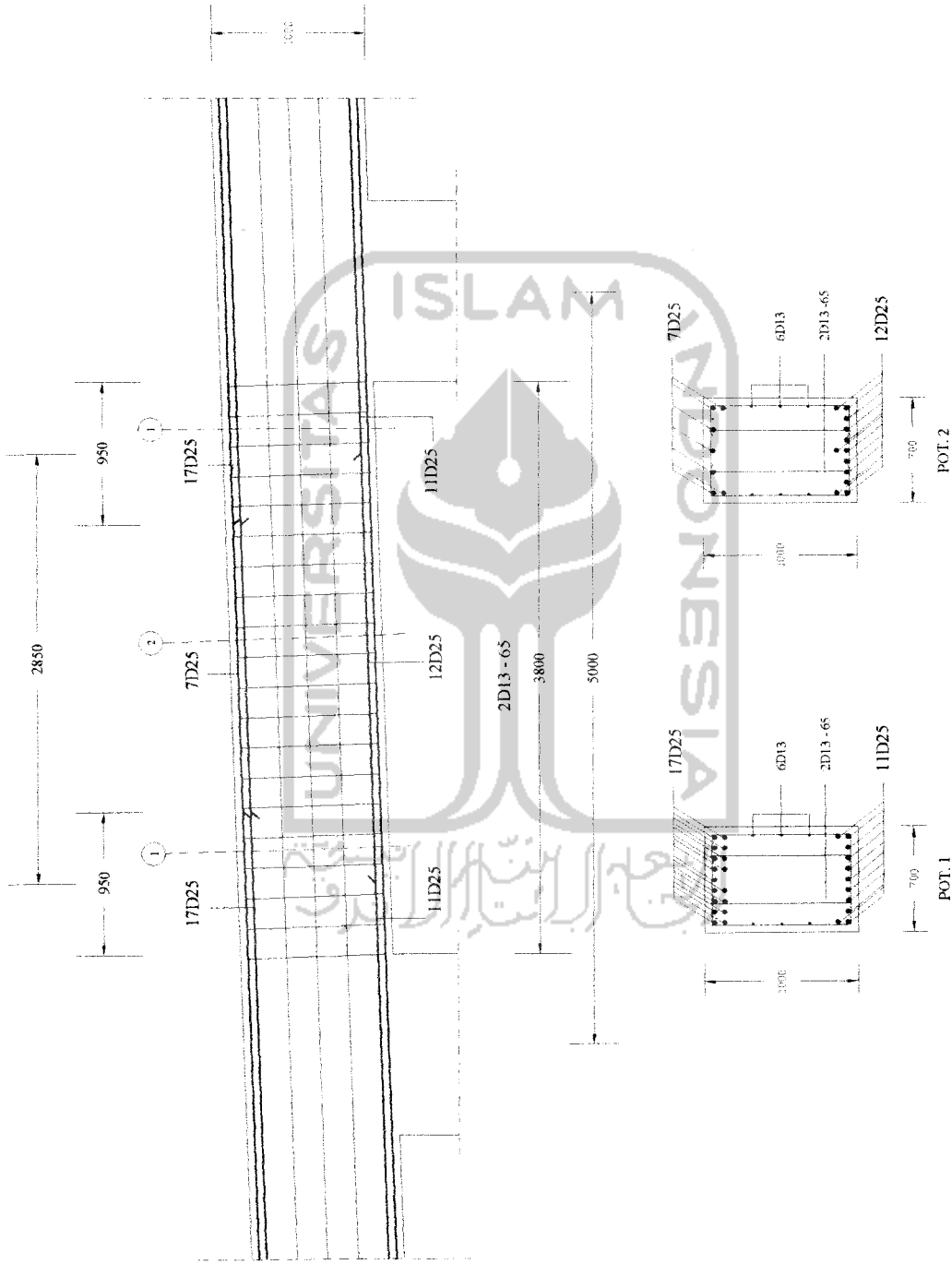
DETIL BALOK INDUK BA2 (1000X700)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN BALOK INDUK BA2 | | | | |



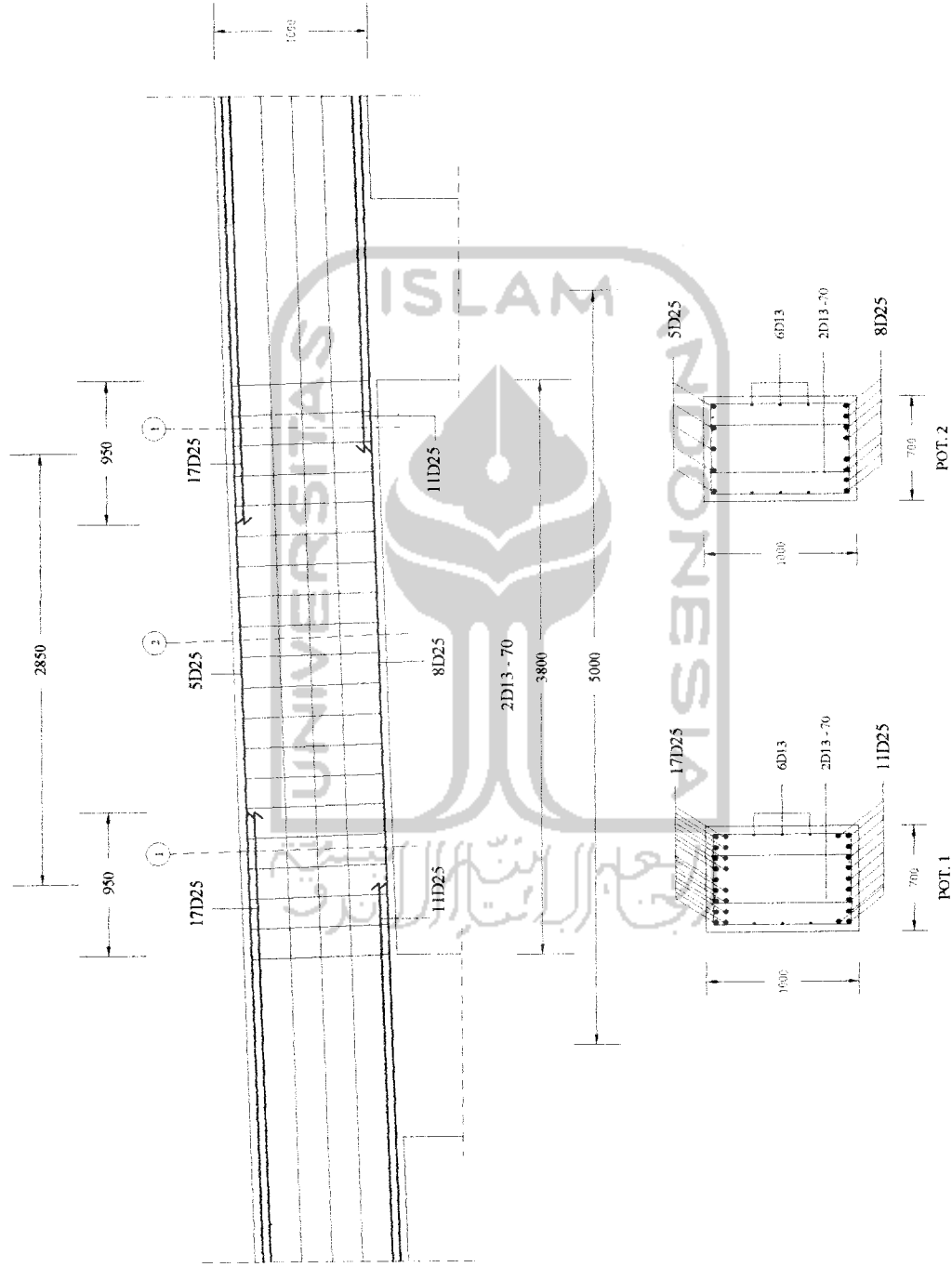
DETIL BALOK INDUK BA3 (1000X700)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe Gelagar Lengkung (Arch Bridge) di Atas Sungai Kretek Bantul | | | | |
| DETIL PENULANGAN BALOK INDUK BA3 | | | | |



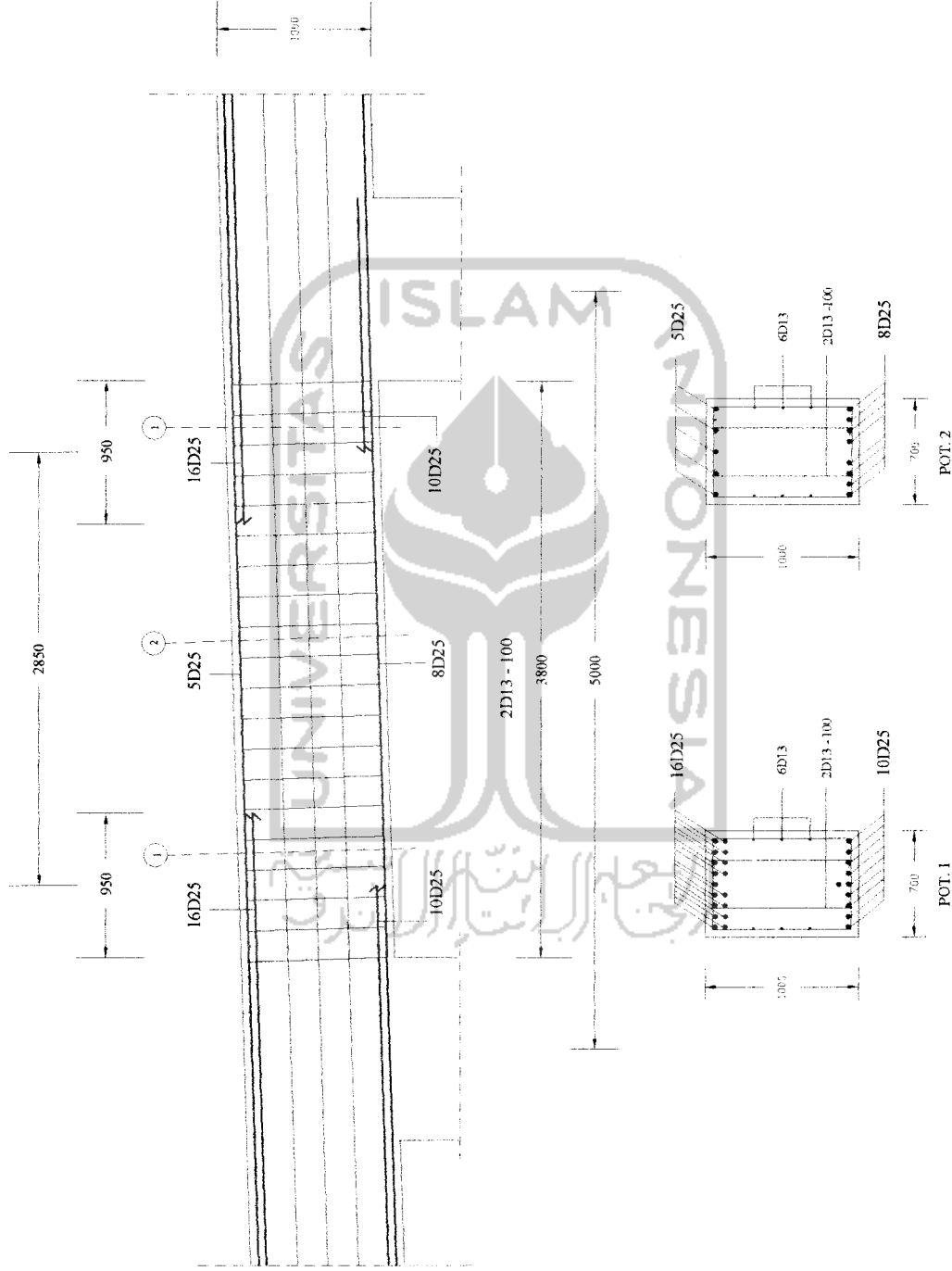
DETIL BALOK INDUK BBI (1000X700)

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DETIL PENULANGAN BALOK INDUK BBI | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



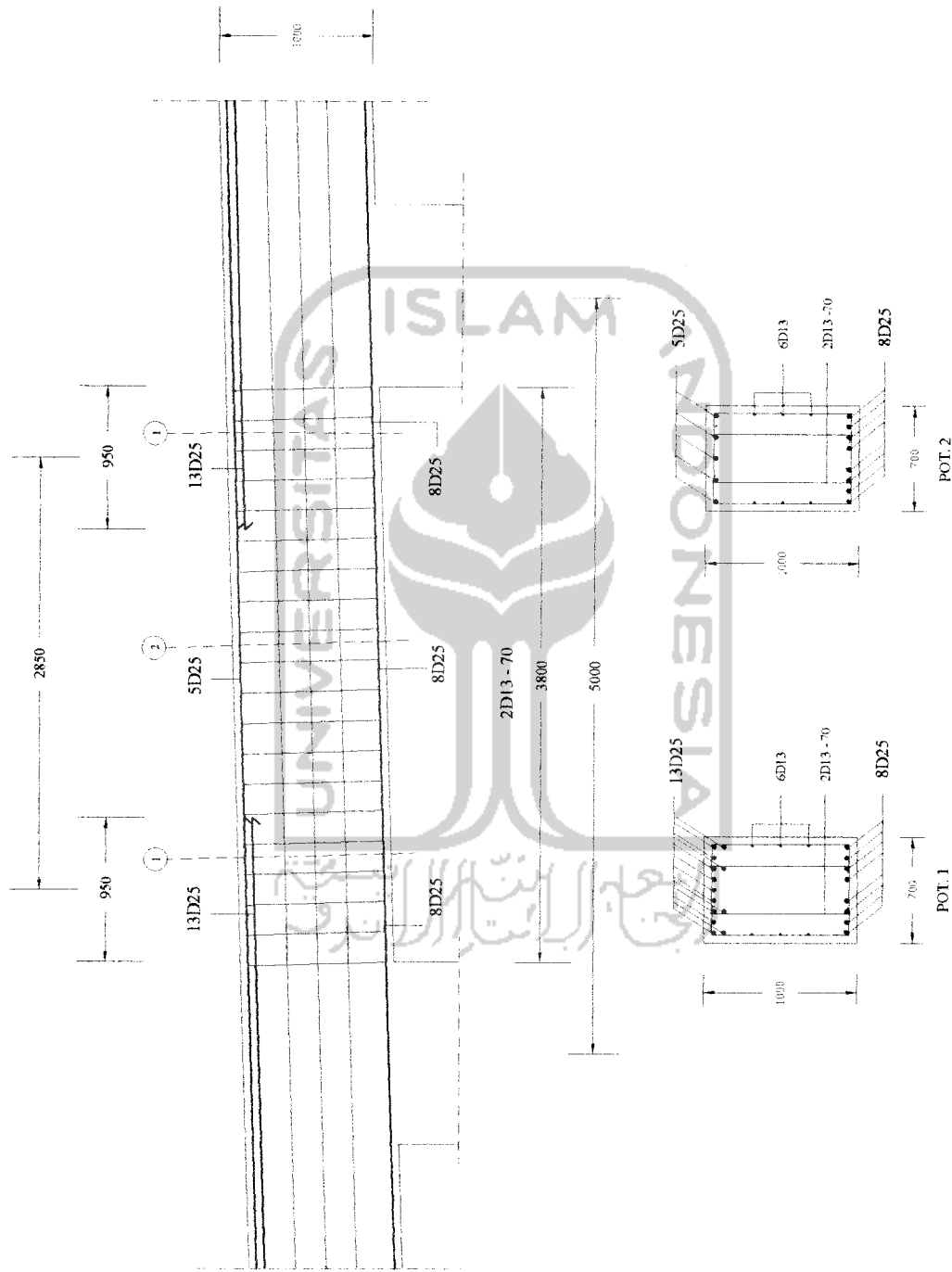
DETIL BALOK INDUK BB4 (1000X700)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| DETIL PENULANGAN BALOK INDUK BB4 | | | | |
| PERENCANAAN JEMBATAN BETON BERTULANG TIBE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |



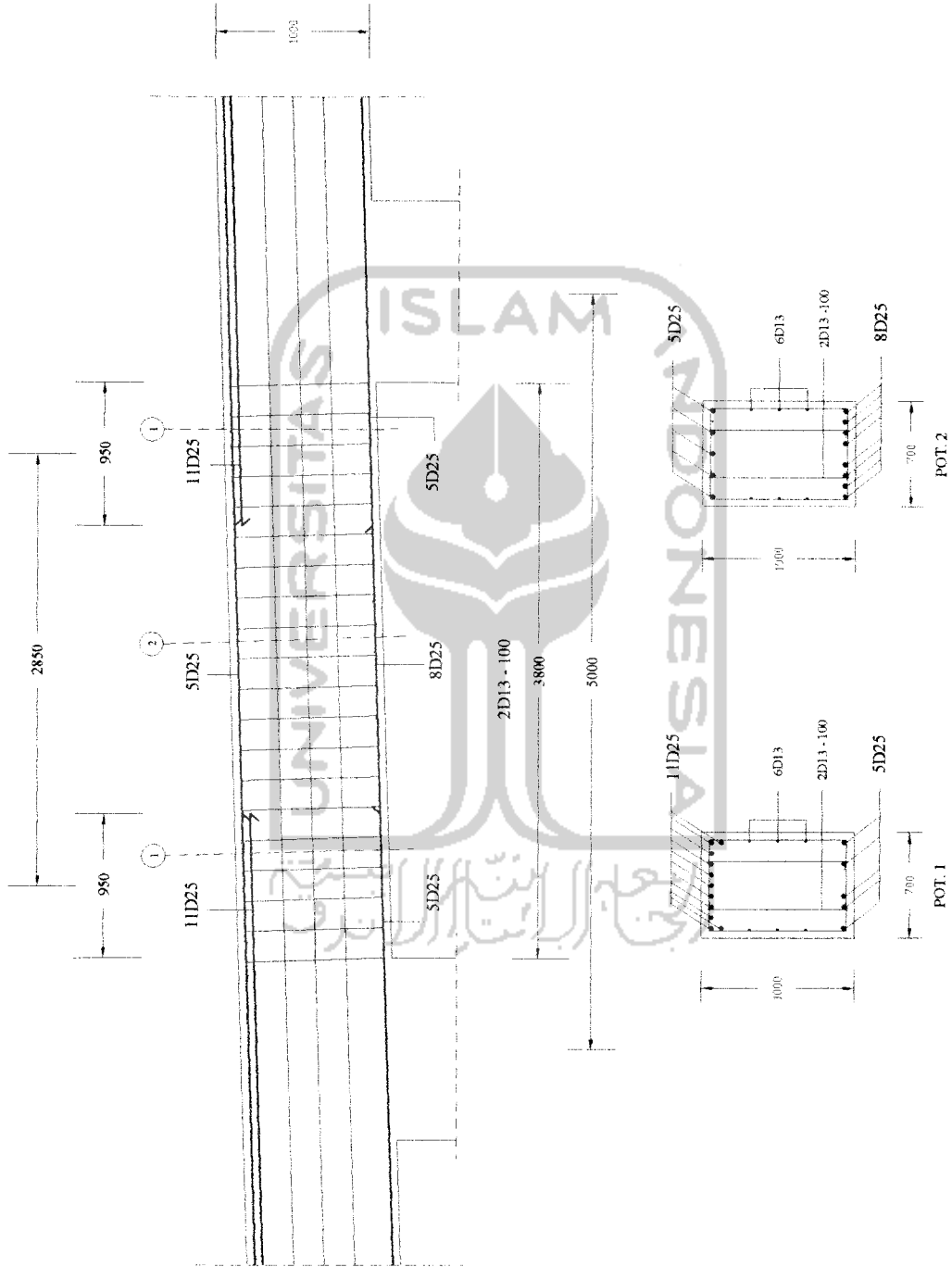
DETIL BALOK INDUK BB3 (1000X700)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN BALOK INDUK BB3 | | | | |



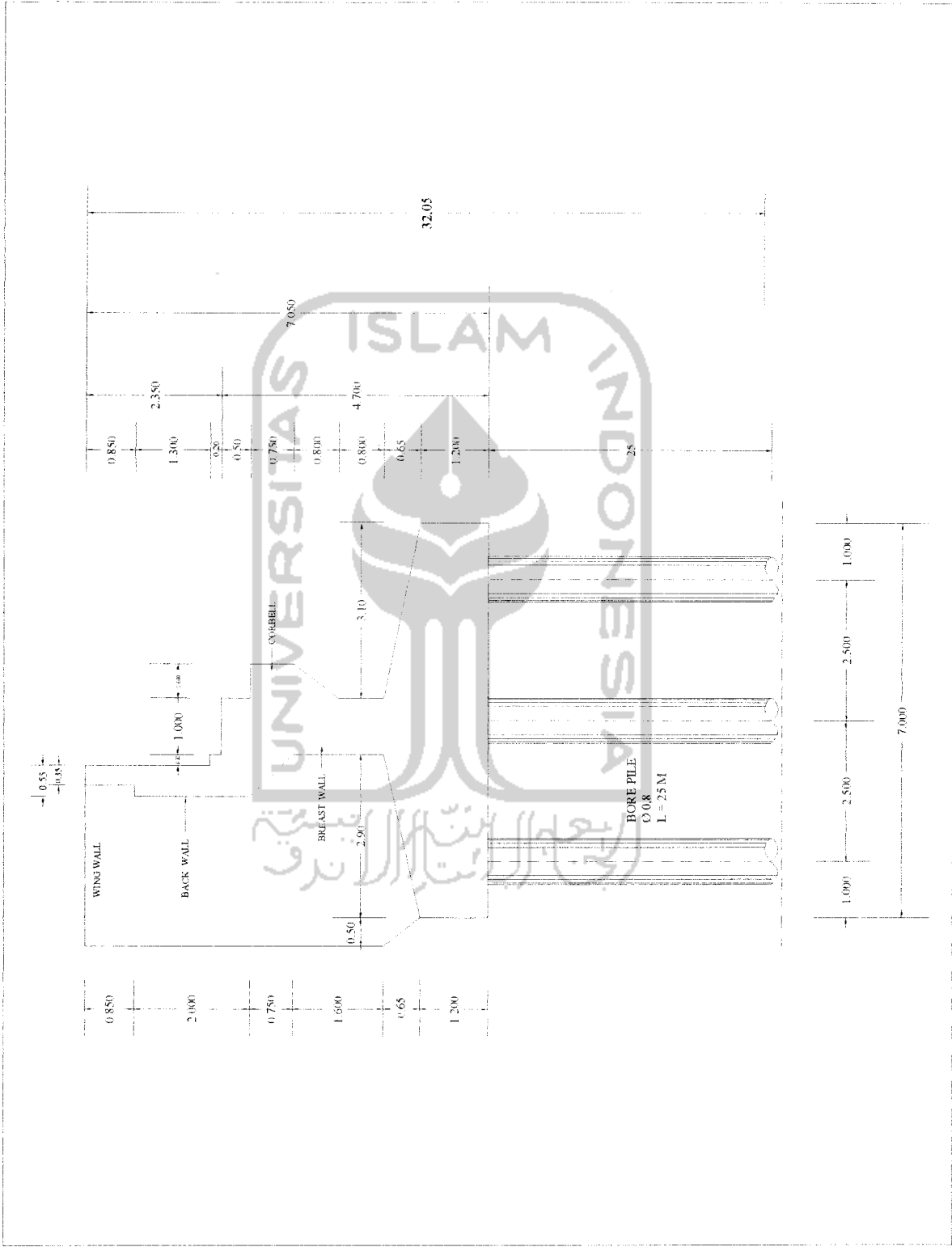
DETAIL BALOK INDUK BB5 (1000X700)

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUJUDUL GAMBAR DETAIL PENULANGAN BALOK INDUK BB5 | SKALA | KODE | NO | JML. LBR |
|---|--|-------|------|----|----------|
| | | | | | |

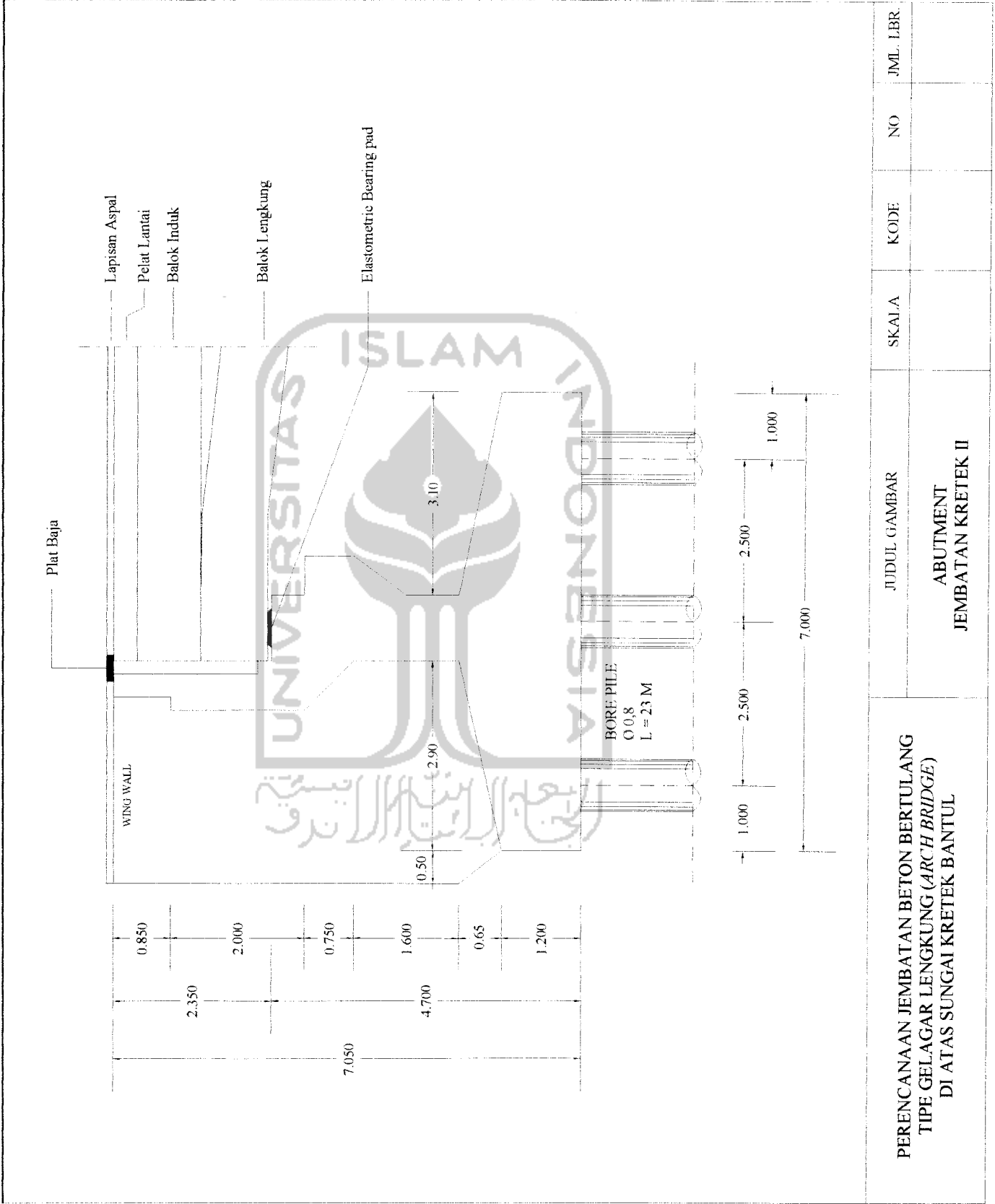


DETIL BALOK INDUK BB6 (1000X700)

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-------|------|----|----------|
| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DETIL PENULANGAN BALOK INDUK BB6 | | | | |



| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|---|-------|------|----|-----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | | | | |
| DIMENSI ABUTMENT JEMBATAN KRETEK II | | | | |



PERENCANAAN JEMBATAN BETON BERTULANG
 TIPE GELAGAR LINGKUNG (ARCH BRIDGE)
 DI ATAS SUNGAI KRETEK BANTUL

JUDUL GAMBAR

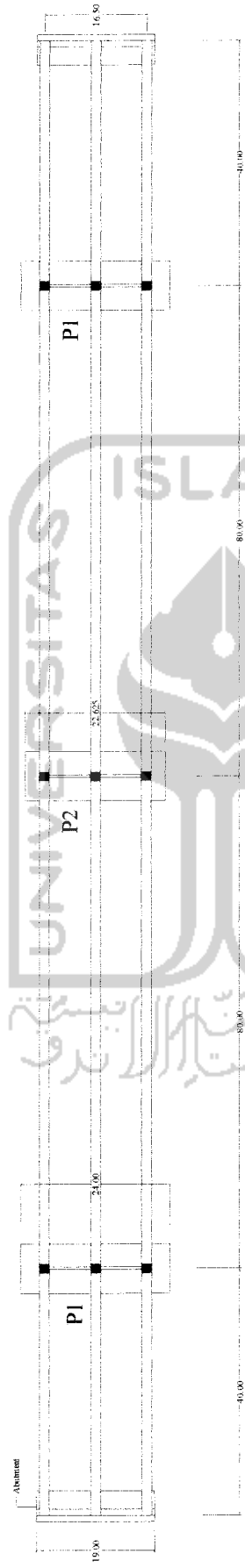
ABUTMENT
 JEMBATAN KRETEK II

SKALA

KODE

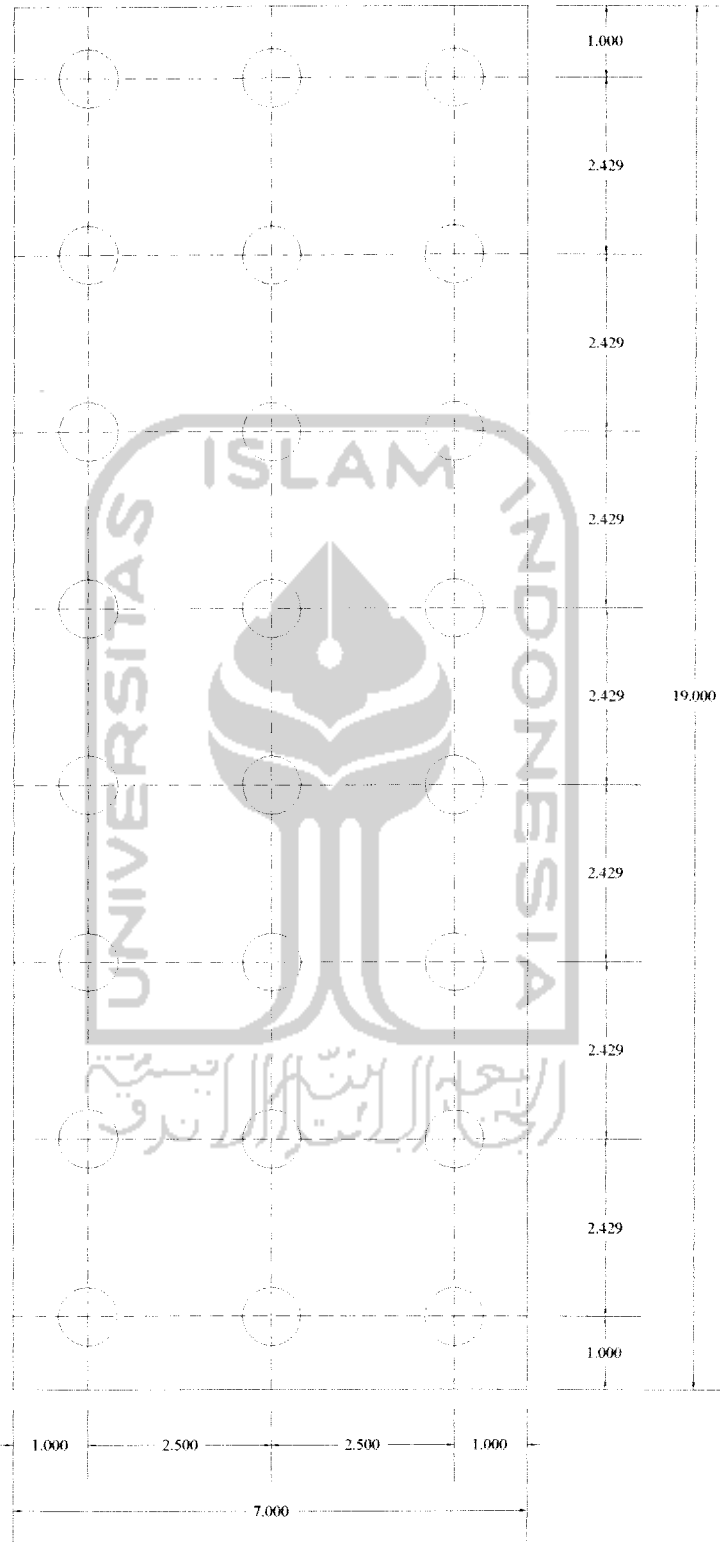
NO

JML. LBR.



PERENCANAAN JEMBATAN BETON BERTULANG
 TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
 DI ATAS SUNGAI KRETEK BANTUL

| JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|-----------------|-------|------|----|-----------|
| RENCANA PONDASI | | | | |



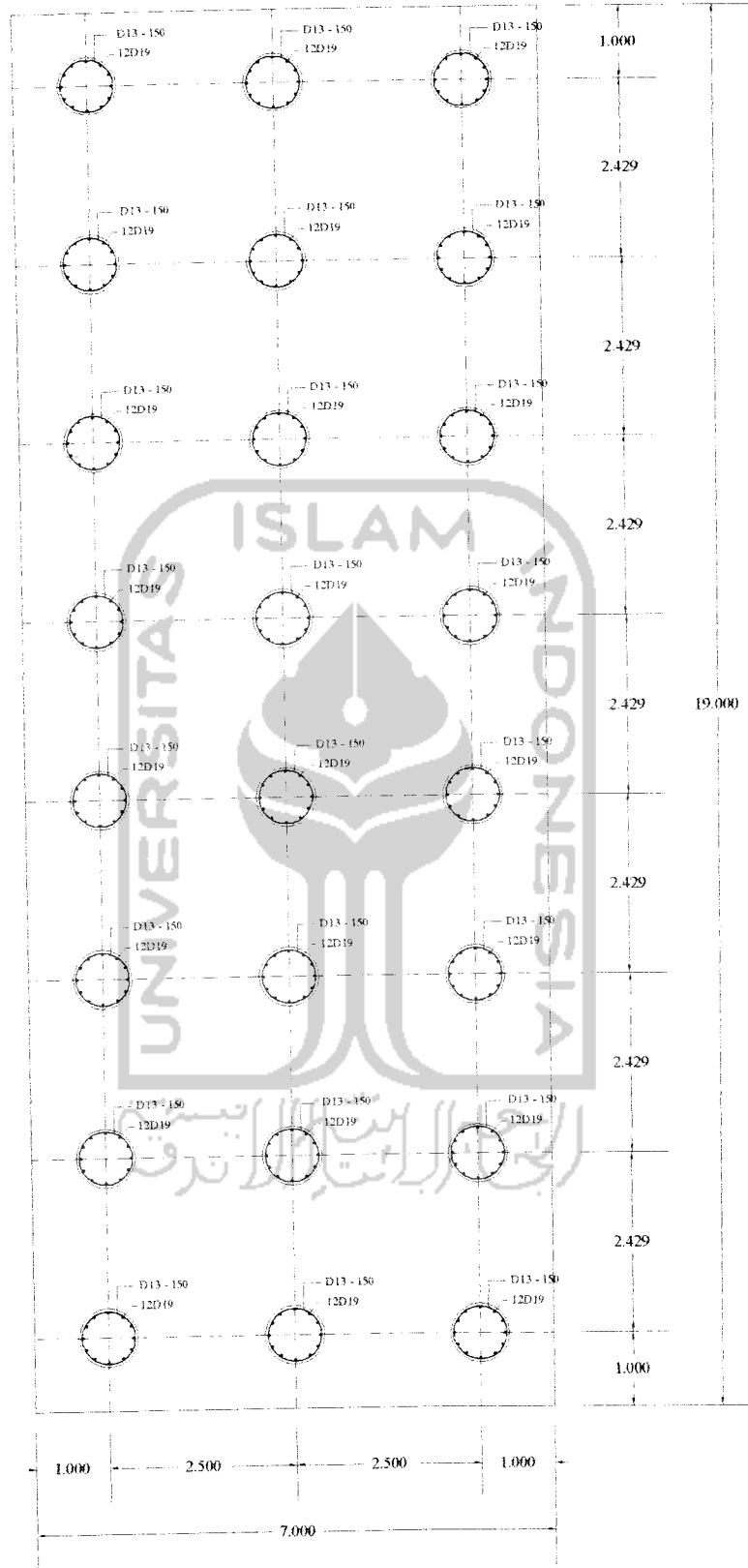
DENAH FONDASI ABUTMENT

| PERENCANAAN JEMBATAN BETON BERTULANG TIBE GELAGAR LINGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR DENAH PONDASI ABUTMENT | SKALA | KODE | NO | JML LBR |
|---|--|-------|------|----|---------|
| | | | | | |

WING WA

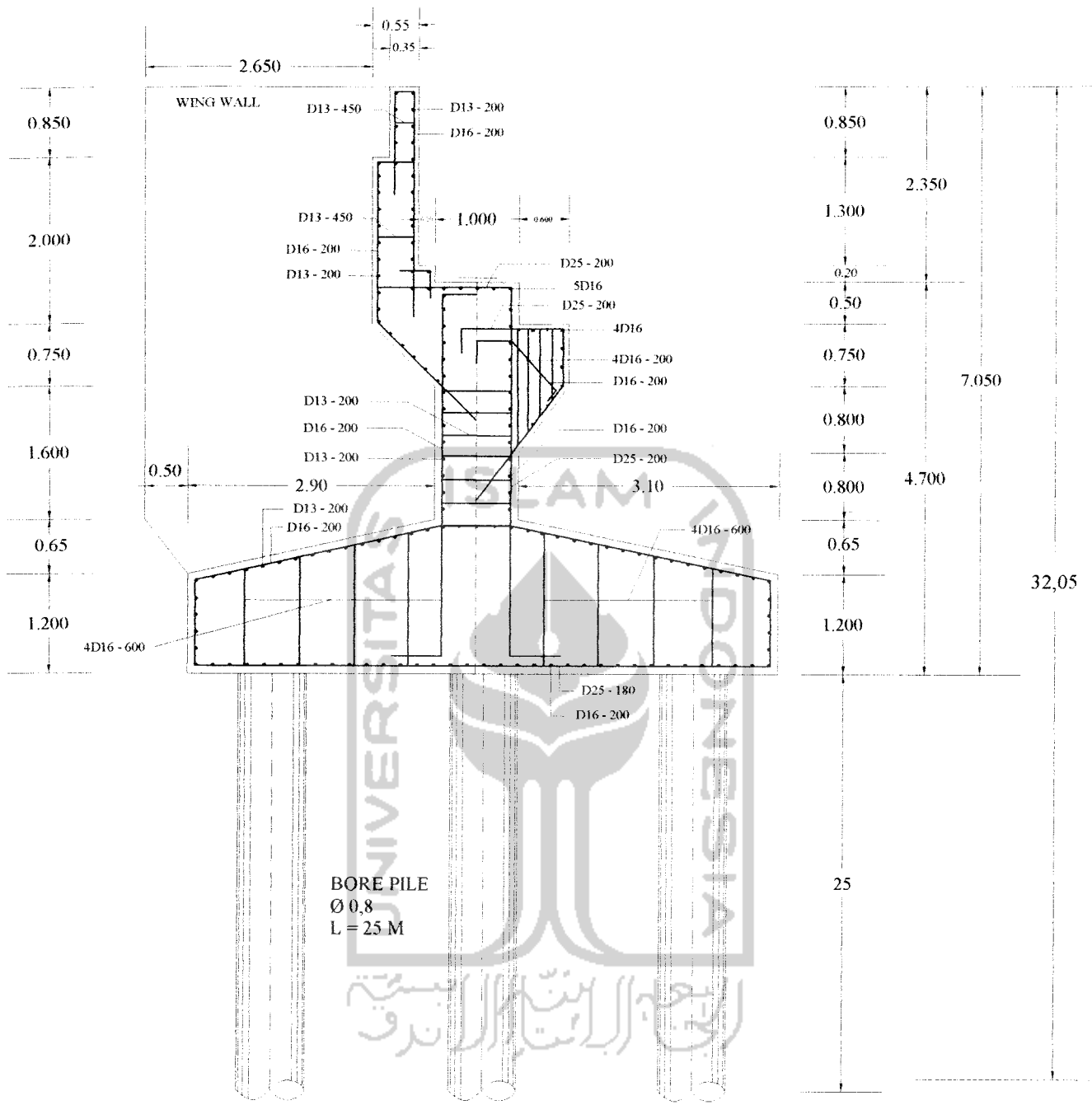
1.000

BATAN B
NGKUNG
GAI KRET



PEMBESIAN BORE PILE ABUTMENT

| PERENCANAAN JEMBATAN BETON BERTILANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR PEMBESIAN BORE PILE ABUTMENT | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |



PEMBESIAN ABUTMENT

PERENCANAAN JEMBATAN BETON BERTULANG
TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
DI ATAS SUNGAI KRETEK BANTUL

JUDUL GAMBAR

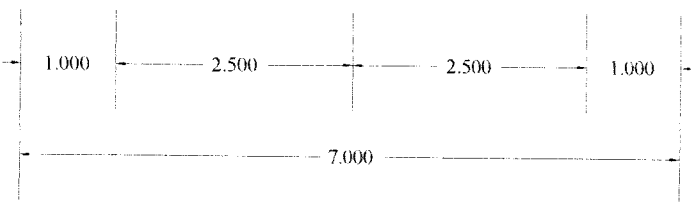
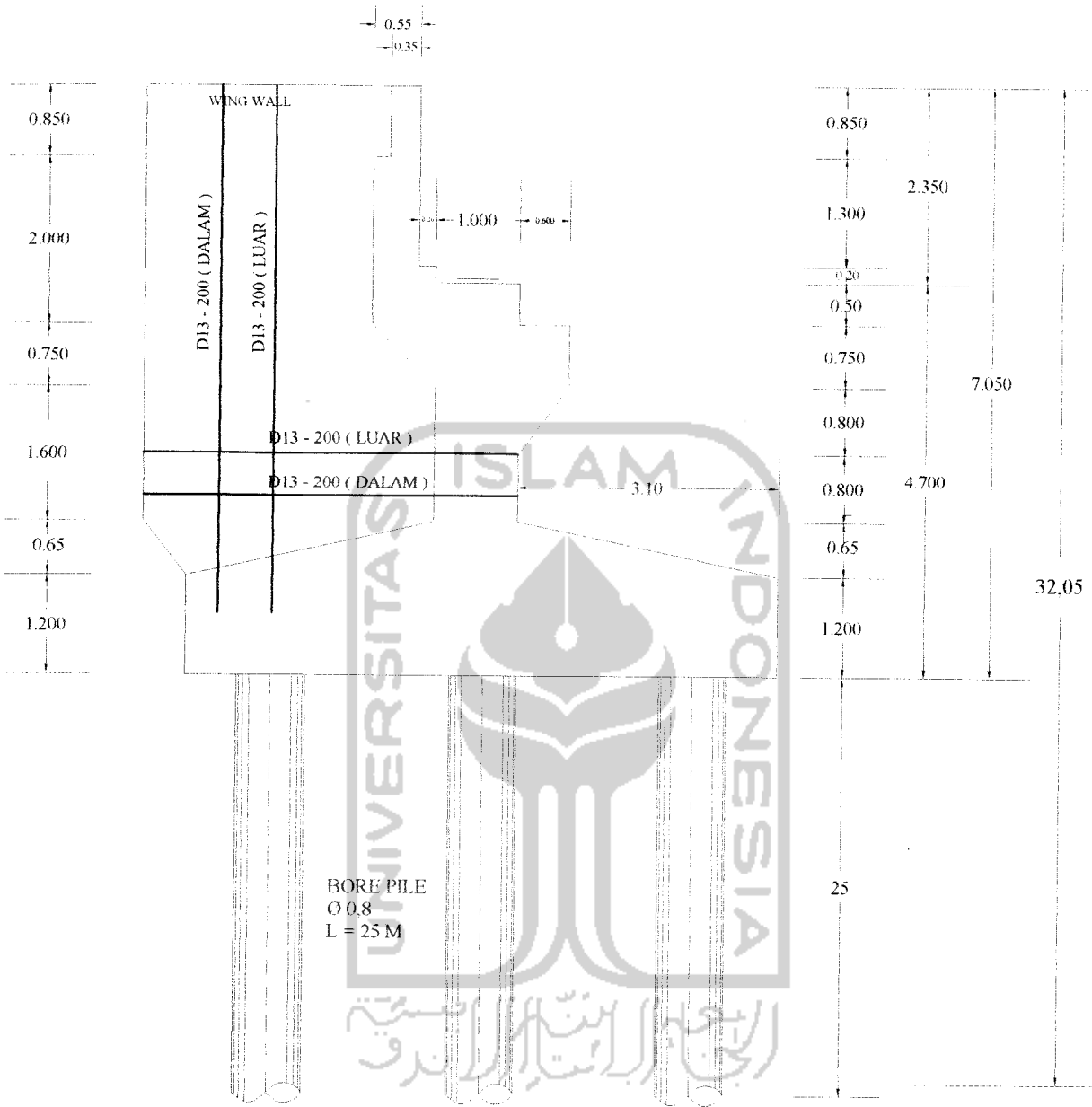
SKALA

KODE

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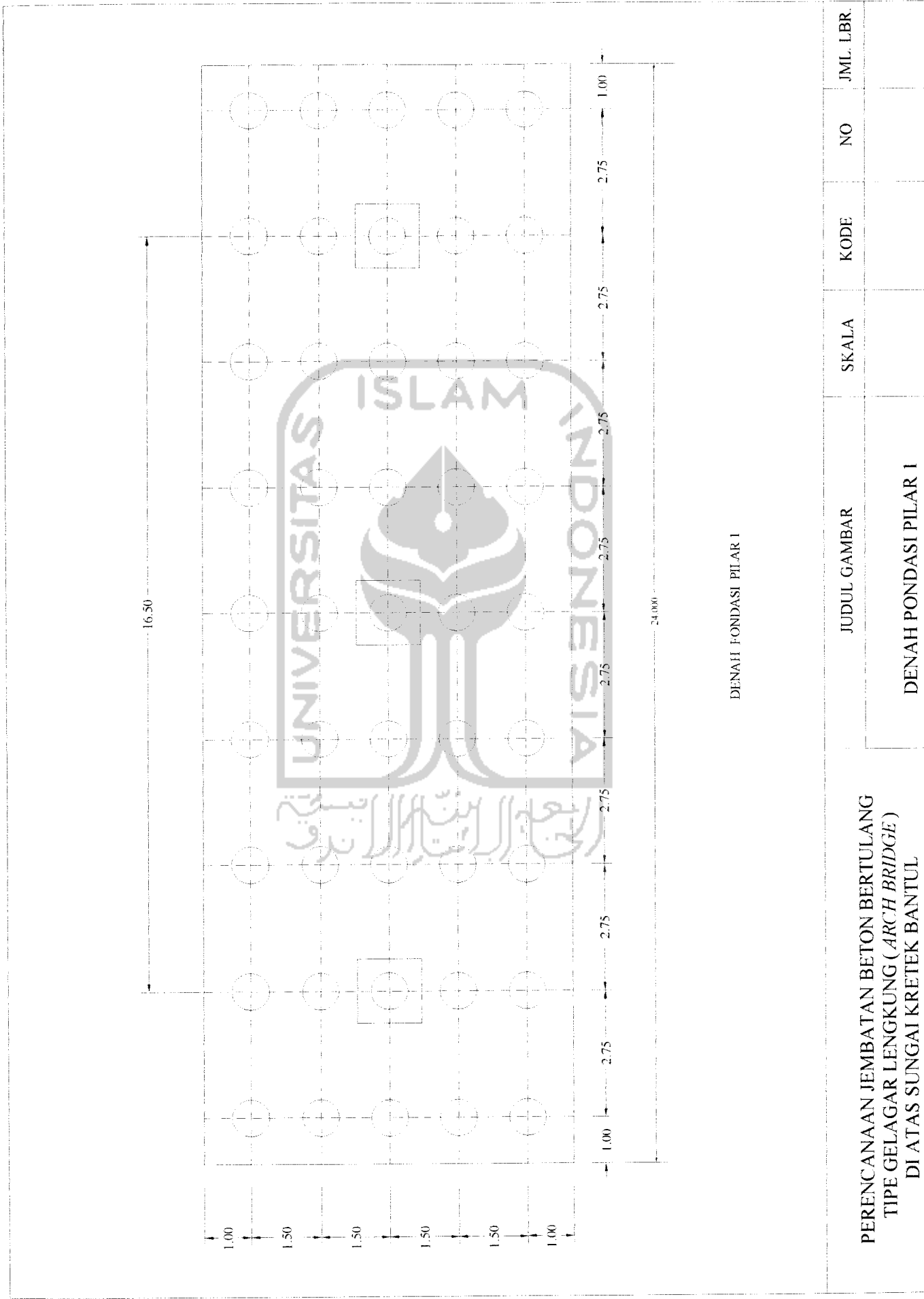
JML. LBR.

PEMBESIAN ABUTMENT



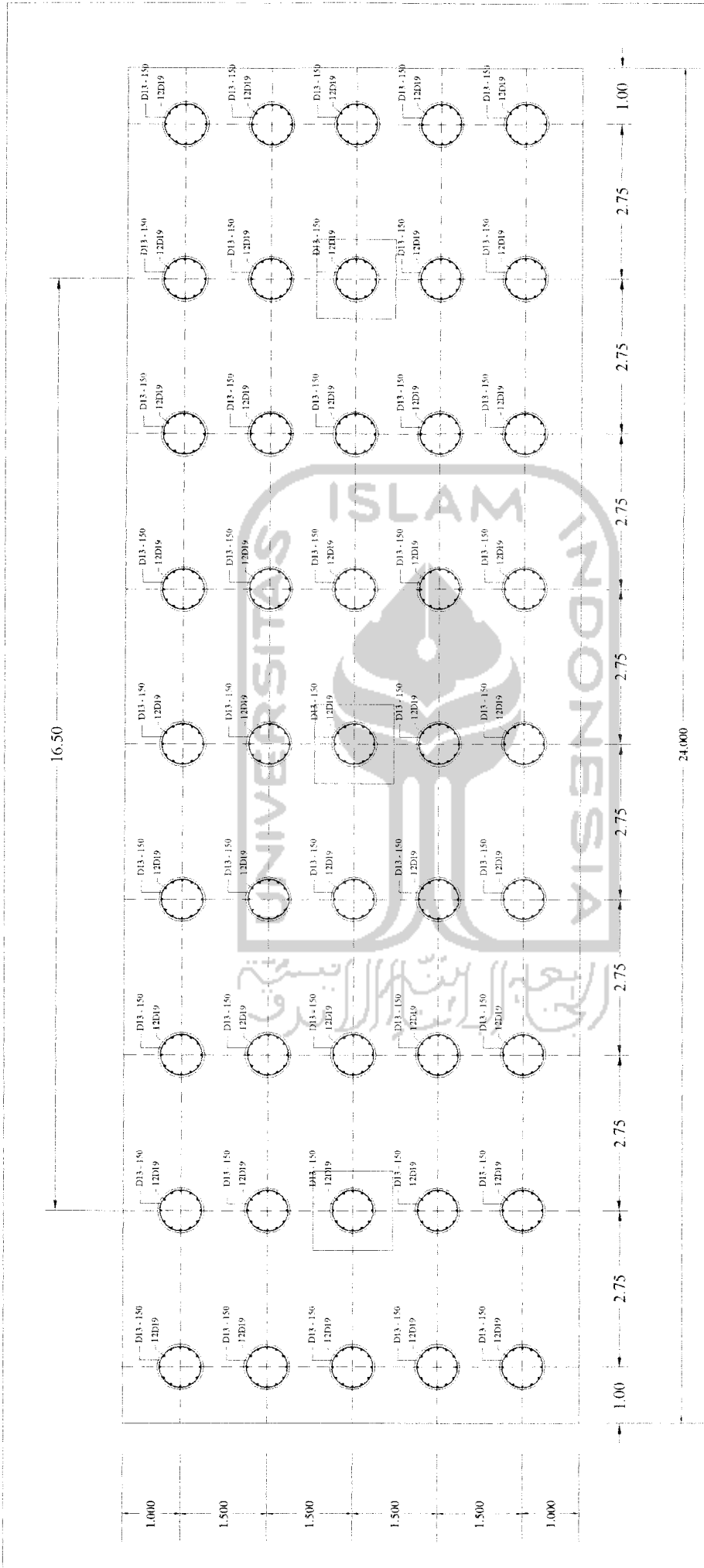
PEMBESIAN WING WALL

| | | | | | |
|---|---------------------|-------|------|----|-----------|
| PERENCANAAN JEMBATAN BETON BERTULANG TIFE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
| | PEMBESIAN WING WALL | | | | |

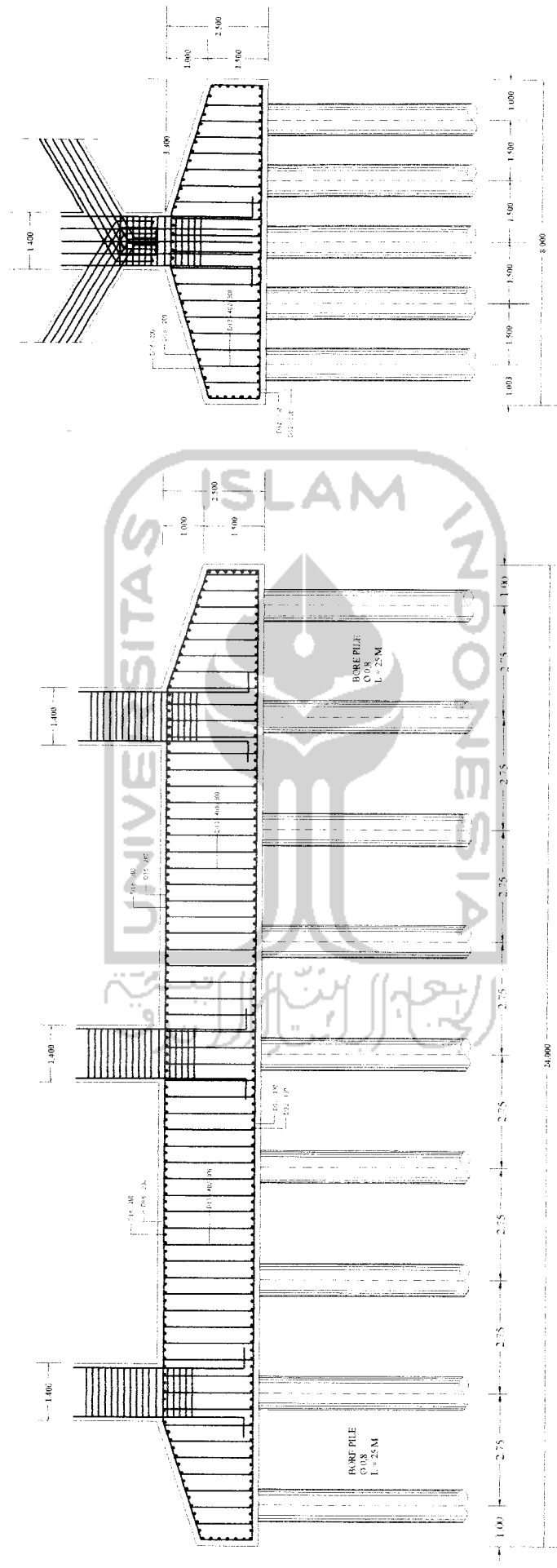


DENAH FONDASI PILAR 1

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|---|-----------------------|-------|------|----|-----------|
| | DENAH FONDASI PILAR 1 | | | | |

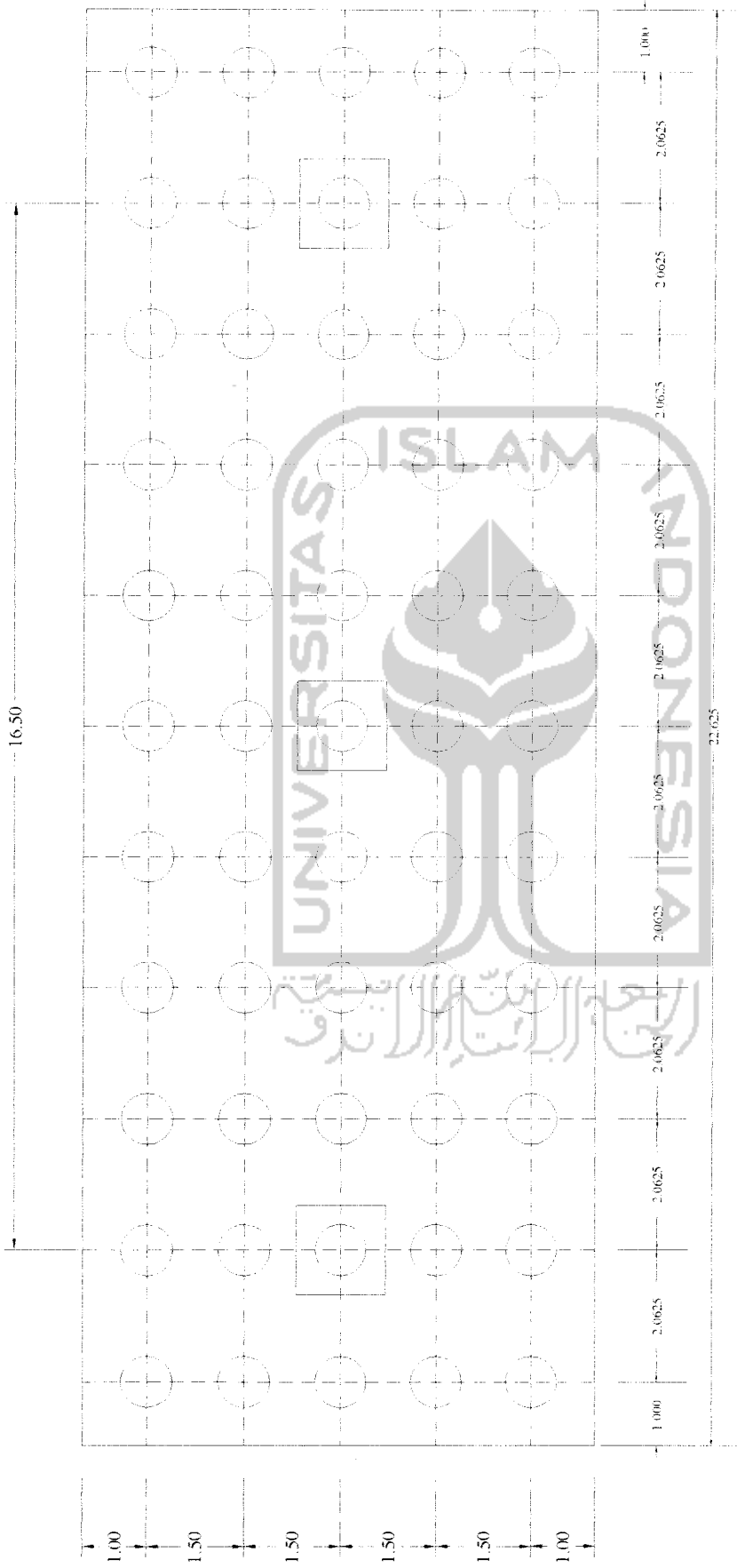


| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|---|-----------------------------|-------|------|----|-----------|
| | PEMBESIAN BORE PILE PILAR 1 | | | | |



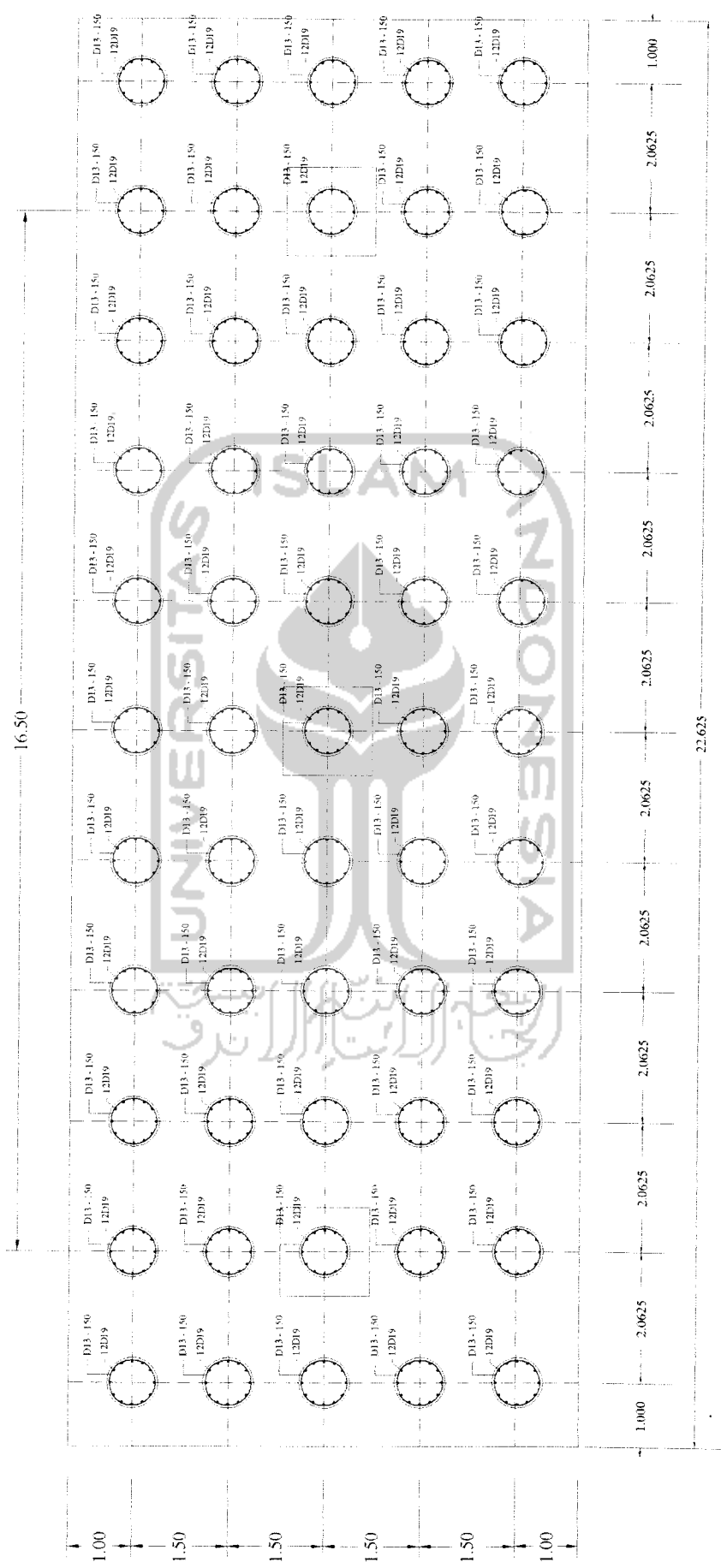
PEMBESIAN PILE CAP PILAR I

| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR PEMBESIAN PONDASI PILAR I | SKALA | KODE | NO | JML. LBR |
|---|---|-------|------|----|----------|
| | | | | | |

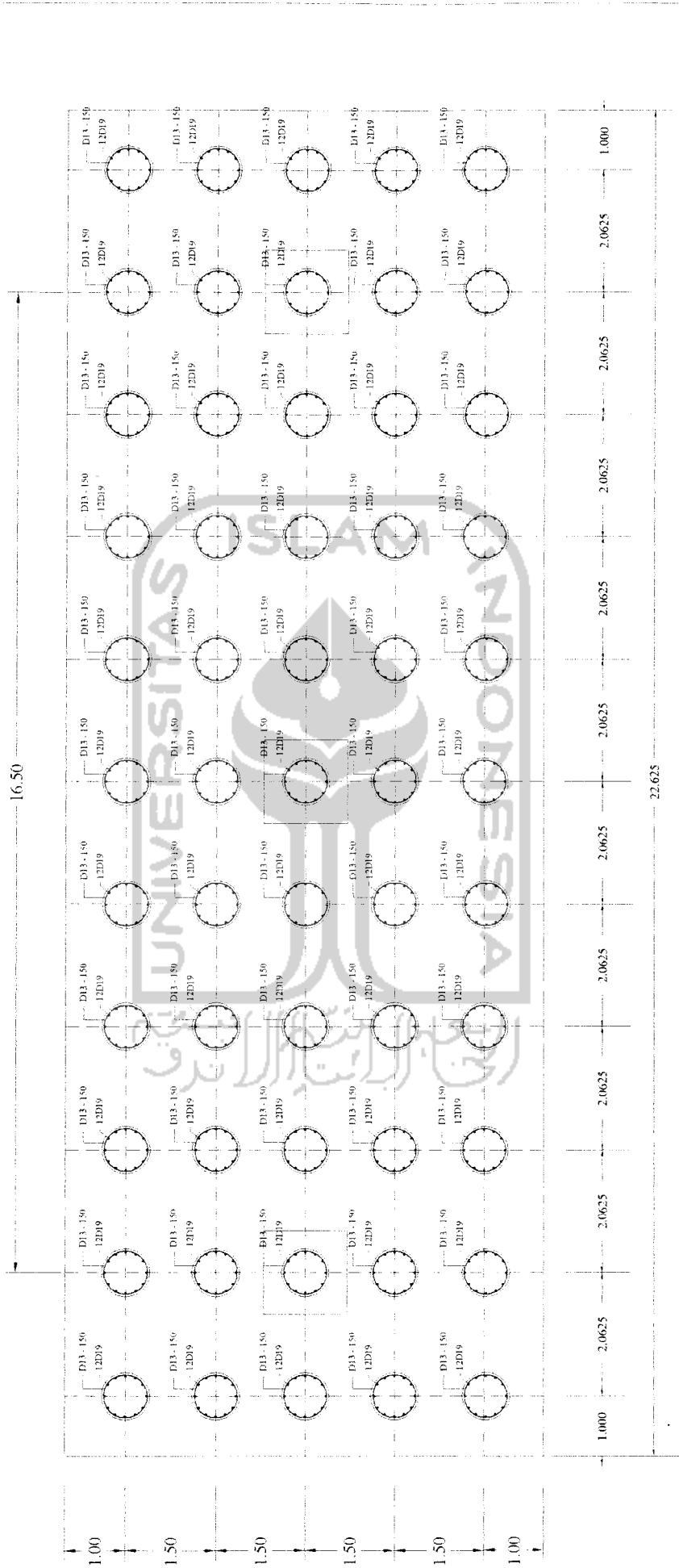


DENAH FONDASI PILAR 2

| PERENCANAAN JEMBATAN BETON BERTULANG Tipe GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR. |
|---|-----------------------|-------|------|----|-----------|
| | DENAH PONDASI PILAR 2 | | | | |



| PERENCANAAN JEMBATAN BETON BERTULANG TIPE GELAGAR LENGKUNG (ARCH BRIDGE) DI ATAS SUNGAI KRETEK BANTUL | JUDUL GAMBAR | SKALA | KODE | NO | JML. LBR |
|---|-----------------------------|-------|------|----|----------|
| | PEMBESIAN BORE PILE PILAR 2 | | | | |



PERENCANAAN JEMBATAN BETON BERTULANG
 TIPE GELAGAR LENGKUNG (ARCH BRIDGE)
 DI ATAS SUNGAI KRETEK BANTUL

JUDUL GAMBAR
 PEMBESIAN BORE PILE PILAR 2

| SKALA | KODE | NO | JML. LBR. |
|-------|------|----|-----------|
| | | | |