



LAMPIRAN



LAMPIRAN 1



**LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL FTSP
UNIVERSITAS ISLAM INDONESIA**

PENGUJIAN BERAT JENIS DAN KADAR AIR

Proyek : Tugas Akhir
Lokasi : Sedayu, Kabupaten Bantul
Kode sampel : Asli/Undisturbed
Tanggal : 10 November 2002

Kadar air

1	Berat container, gram	W1	22.02	22.22
2	Berat Cont. + tanah basah, gram	W2	59.33	83.95
3	Berat Cont. + tanah kering, gram	W3	49.44	64.53
4	Berat air, gram	$A = W2 - W3$	9.89	19.42
5	Berat tanah kering, gram	$B = W3 - W1$	27.42	42.31
6	kadar air, %	$(A/B) \times 100\%$	36.07	45.90
7	kadar air rata-rata, %		40.98	

BERAT JENIS AGREGAT HALUS (lolos #10)

1	No pengujian		1	2
2	Berat Picknometer (W1)		20.33	19.60
3	Berat Picknometer +tanah kering (W2)		39.52	38.10
4	Berat Picknometer + tanah + air (W3)		81.55	81.15
5	Berat Picknometer + air (W4)		70.67	70.31
6	Temperatur (to)		27.00	27.00
7	Berat tanah kering (Wt)		18.21	17.34
8	$A = Wt + W4$		88.88	87.65
9	$I = A - W3$		7.33	6.50
10	Berat Jenis tanah, $G_s = Wt / I$		2.48	2.67
12	Berat jenis rata-rata			2.576



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL FTSP
UNIVERSITAS ISLAM INDONESIA

PENGUJIAN BERAT JENIS DAN KADAR AIR

Proyek : Tugas Akhir
 Lokasi : Sedayu, Kabupaten Bantul
 Kode sampel : Disturbed
 Tanggal : 10 November 2002

Kadar air

1	Berat container, gram	W1	22.18	22.11
2	Berat Cont. + tanah basah, gram	W2	45.78	47.62
3	Berat Cont. + tanah kering, gram	W3	39.37	40.26
4	Berat air, gram	$A = W2 - W3$	6.41	7.36
5	Berat tanah kering, gram	$B = W3 - W1$	17.19	18.15
6	kadar air, %	$(A/B) \times 100\%$	37.29	40.55
7	kadar air rata-rata, %		38.92	

BERAT JENIS AGREGAT HALUS (lolos #10)

1	No pengujian		1	2
2	Berat Picknometer (W1)		20.33	19.60
3	Berat Picknometer +tanah kering (W2)		39.52	38.10
4	Berat Picknometer + tanah + air (W3)		82.45	80.12
5	Berat Picknometer + air (W4)		69.82	70.31
6	Temperatur (to)		27.00	27.00
7	Berat tanah kering (Wt)		19.19	18.50
8	$A = Wt + W4$		89.01	88.81
9	$I = A - W3$		6.56	8.69
10	Berat Jenis tanah, $G_s = Wt / I$		2.93	2.13
12	Berat jenis rata-rata			2.527



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL FTSP
UNIVERSITAS ISLAM INDONESIA

PENGUJIAN BERAT JENIS DAN KADAR AIR

Proyek : Tugas Akhir
 Lokasi : PT. IGA MURNI SEJAHTERA
 Kode sampel : Kapur Karbid
 Tanggal : 10 November 2002

Kadar air

1	Berat container, gram	W1	22.18	21.56
2	Berat Cont. + tanah basah, gram	W2	39.34	35.73
3	Berat Cont. + tanah kering, gram	W3	36.89	34.68
4	Berat air, gram	$A = W2 - W3$	2.45	1.05
5	Berat tanah kering, gram	$B = W3 - W1$	14.71	13.12
6	kadar air, %	$(A/B) \times 100\%$	16.66	8.00
7	kadar air rata-rata, %			12.33

BERAT JENIS AGREGAT HALUS (lolos #10)

1	No pengujian		1	2
2	Berat Picknometer (W1)		19.02	14.46
3	Berat Picknometer + tanah kering (W2)		22.05	17.41
4	Berat Picknometer + tanah + air (W3)		45.81	41.64
5	Berat Picknometer + air (W4)		45.17	41.08
6	Temperatur (to)		27.00	27.00
7	Berat tanah kering (Wt)		3.03	2.95
8	$A = Wt + W4$		48.20	44.03
9	$I = A - W3$		2.39	2.39
10	Berat Jenis tanah, $G_s = Wt / I$		1.27	1.23
12	Berat jenis rata-rata			1.251

GRAIN SIZE ANALYSIS

Project : Tugas Akhir Location : Sedayu, Kabupaten Bantul
 Test no : Gradasi Tanah Asli Date : 9 November 2002
 Tested by : Marwan Hamdono Prasadja

Soil sample (disturbed/undisturbed)

Mass of soil = 60 gr Hydromoter type = 152 H
 Specific Gravity, G = 2.300 Hydr. Correction, a = 1.102
 $K_2 = a/W \times 100 = 1.83599419$ Meniscus correction, m = 1

Sieve Analysis

Sieve No	Opening (mm)	Mass retained (gr)	Mass retained (gr)	% finer by mass $e/W \times 100\%$	Remarks
4	4.750	d1 =	e1 = 60.00	100.00	e7 = W - Sd
10	2.000	d2 =	e2 = 58.19	96.98	e6 = d7 + e7
20	0.850	d3 =	e3 = 56.69	94.48	e5 = d6 + e6
40	0.425	d4 =	e4 = 56.09	93.48	e4 = d5 + e5
60	0.250	d5 =	e5 = 55.30	92.17	e3 = d4 + e4
140	0.106	d6 =	e6 = 53.73	89.55	e2 = d3 + e3
200	0.075	d7 =	e7 = 53.02	88.37	e1 = d2 + e2
		Sd =			

Hirometer Analysis

Time	elapsed time min. T	R1	R2	t	R' R1 + m	L	K	D (mm)	Rc= R1-R2+Cr	P K2 x R (%)
12.48										
12.50	2	44	-2.0	27	45	8.927	0.0140	0.02962137	47.3	86.84
12.53	5	43	-2.0	27	44	9.091	0.0140	0.01890522	46.3	85.01
2.55	30	41	-2.0	27	42	9.418	0.0140	0.0078558	44.3	81.33
13.48	60	40	-2.0	27	41	9.582	0.0140	0.00560297	43.3	79.50
14.01	250	36	-2.0	27	37	10.237	0.0140	0.00283714	39.3	72.15
12.48	1440	25	-2.0	27	26	12.038	0.0140	0.00128192	28.3	51.96

Remarks :

Rc = R1 - R2 + Cr (Cr = Temperatur correction factors)

R' = R1 + m (m correctoin for meniscus)

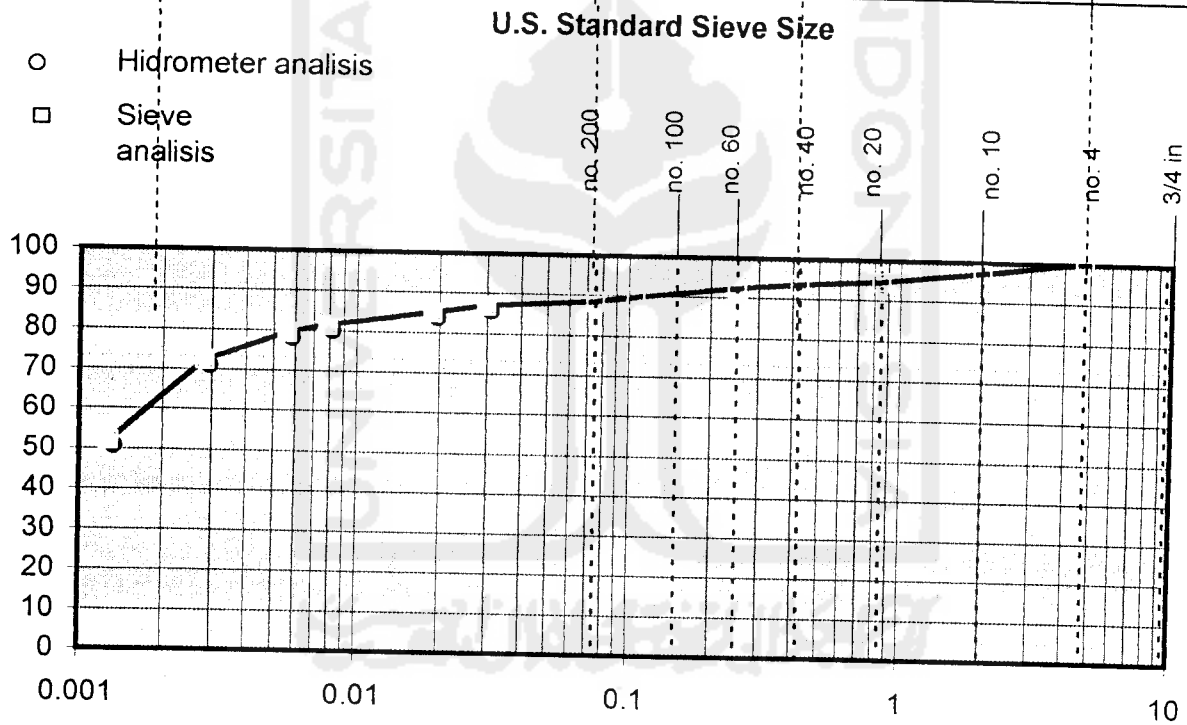
SOIL MECHANICS LABORATORY
 CIVIL ENGINEERING DEPARTEMENT
 ISLAMIC UNIVERSITY OF INDONESIA

GRAIN SIZE ANALYSIS

Project : Tugas Akhir
 Tested : Marwan Hamdono Prasadja
 Smple no. : Gradasi Tanah Asli
 Date : 9 November 2002
 Location : Sedayu, Kabupaten Bantul

Soil sample (disturbed/undisturbed)
 Specific Gravity : 2.3
 Discription of soil : Clay

Clay	Silt	Sand	Gravel
		Fine	Coarse to medium



Finer # 200 :	88.37 %	D10 (mm)	
		D30 (mm)	
Gravel :	0.00 %	D60 (mm)	
Sand :	11.63 %	Cu = D60/D10	
Silt :	25.10 %	= D30 ² / (D10xD60)	
Clay :	63.27 %		

SOIL MECHANICS LABORATORY
 CIVIL ENGINEERING DEPARTEMENT
 SLAMIC UNIVERSITY OF INDONESIA



LAMPIRAN 3



LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UIH
 Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PEMADATAN TANAH
Proctor test

PROYEK : Tugas Akhir
 Asal Sampel : Sedayu, Kabupaten Bantul
 Sampel : Tanah+kapurkarbid 0%
 DIKERJAKAN : Marwan Hamdono Prasadj
 TANGGAL : 18 Nopember 2002

DATA SILINDER		
1	Diameter (ϕ) cm	10.21
2	Tinggi (H) cm	11.54
3	Volume (V) cm ³	944.82
4	Berat gram	1748

DATA PENUMBUK	
Berat (kg)	2.505
Jumlah lapis	3
Jumlah tumbukan /lapis	25
Tinggi jatuh	30.48

Berat jenis Gs	2.527
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PENAMBAHAN AIR					
1	Berat tanah absah gram	2000	2000	2000	2000
2	Kadar air mula-mula %	9.000	9.000	9.000	9.000
3	Penambahan air %	10	20	25	30
4	Penambahan air ml	200	400	500	600

PENGUJIAN PEMADATAN SILINDER					
1	Nomor pengujian	1	2	3	4
2	Berat silinder + tanah padat gram	3159	3343	3375	3355
3	Berat tanah padat gram	1411	1595	1627	1607
4	Berat volume tanah gr/cm ³	1.493	1.688	1.722	1.701

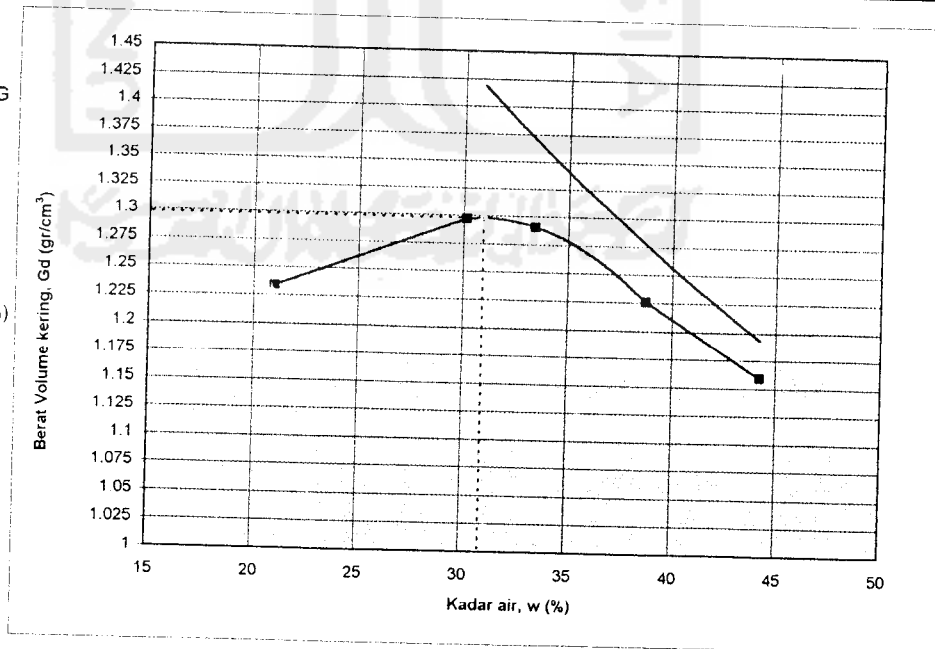
PENGUJIAN KADAR AIR										
1	NOMOR PERCOBAAN	1		2		3		4		5
2	Nomor cawan	a	b	a	b	a	b	a	b	a
3	Berat cawan kosong gram	21.67	21.93	22.05	21.94	21.86	21.94	21.74	21.85	22.05
4	Berat cawan + tanah basah gram	49.45	40.55	43.85	44.42	43.17	42.35	51.79	51.19	56.65
5	Berat cawan + tanah kering gram	44.58	37.35	39.00	39.02	37.77	37.30	43.15	43.25	46.00
8	Kadar air = w %	21.26	20.75	28.61	31.62	33.94	32.88	40.35	37.10	44.47
9	Kadar air rata-rata	21.00		30.11		33.41		38.73		44.01
10	Berat volume tanah kering gr/cm ³	1.234		1.297		1.291		1.226		1.159

BERAT VOLUME KERING
 MAKSIMUM (gr/cm³)

1.29818

KADAR AIR OPTIMUM (%)

30.91





LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
 Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PEMADATAN TANAH
Proctor test

PROYEK : Tugas Akhir
 Asal Sampel : Sedayu, Kabupaten Bantul
 Sampel : Tanah+kapurkarbid 3%

DIKERJAKAN : Marwan Hamdono Prasadjia
 TANGGAL : 18 Nopember 2002

DATA SILINDER		
1	Diameter (ϕ) cm	10.21
2	Tinggi (H) cm	11.54
3	Volume (V) cm ³	944.82
4	Berat gram	1748

DATA PENUMBUK	
Berat (kg)	2.505
Jumlah lapis	3
Jumlah tumbukan /lapis	25
Tinggi jatuh	30.48

Berat jenis Gs	2.527
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PENAMBAHAN AIR					
1	Berat tanah absah gram	2000	2000	2000	2000
2	Kadar air mula-mula %	9.000	9.000	9.000	9.000
3	Penambahan air %	10	20	25	30
4	Penambahan air ml	200	400	500	600
					700

PENGUJIAN PEMADATAN SILINDER					
1	Nomor pengujian	1	2	3	4
2	Berat silinder + tanah padat gram	3159	3343	3375	3355
3	Berat tanah padat gram	1411	1595	1627	1607
4	Berat volume tanah gr/cm ³	1.493	1.688	1.722	1.701
					1.672

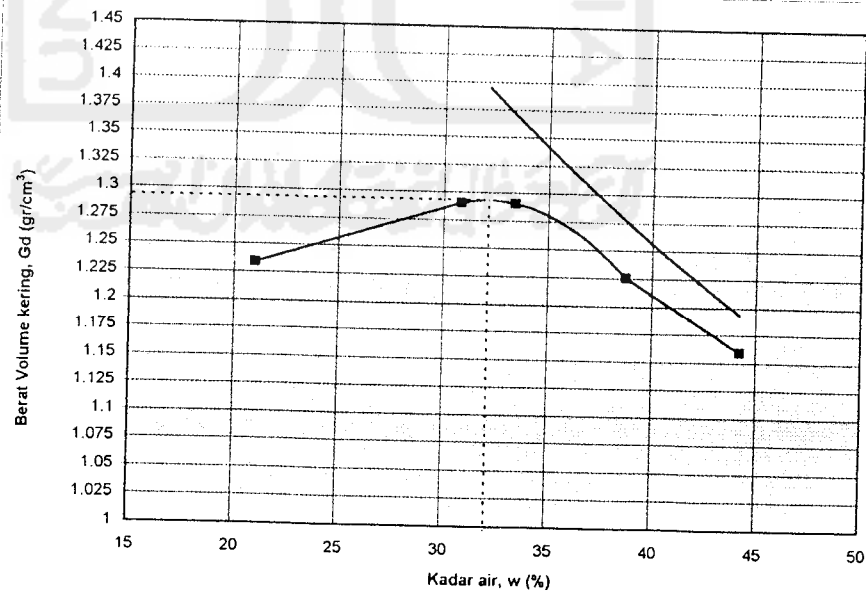
PENGUJIAN KADAR AIR											
1	NOMOR PERCOBAAN	1		2		3		4		5	
2	Nomor cawan	a	b	a	b	a	b	a	b	a	b
3	Berat cawan kosong gram	21.67	21.93	22.05	21.94	21.86	21.94	21.74	21.85	22.05	21.85
4	Berat cawan + tanah basah gram	49.45	40.55	43.85	44.42	43.17	42.35	51.79	51.19	56.65	70.05
5	Berat cawan + tanah kering gram	44.58	37.35	38.82	39.02	37.77	37.30	43.15	43.25	46.00	55.32
8	Kadar air = w %	21.26	20.75	29.99	31.62	33.94	32.88	40.35	37.10	44.47	44.01
9	Kadar air rata-rata	21.00		30.80		33.41		38.73		44.24	
10	Berat volume tanah kering gr/cm ³	1.234		1.291		1.291		1.226		1.159	

BERAT VOLUME KERING
 MAKSIMUM (gr/cm³)

1.29331

KADAR AIR OPTIMUM (%)

32.13





LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
 Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PEMADATAN TANAH
Proctor test

PROYEK : Tugas Akhir
 Asal Sampel : Sedayu, Kabupaten Bantul
 Sampel : Tanah+kapur karbid 6%
 DIKERJAKAN : Marwan Hamdono Prasadja
 TANGGAL : 18 Nopember 2002

DATA SILINDER	
1	Diameter (ϕ) cm : 10.21
2	Tinggi (H) cm : 11.54
3	Volume (V) cm ³ : 944.82
4	Berat gram : 1748

DATA PENUMBUK	
Berat (kg)	2.505
Jumlah lapis	3
Jumlah tumbukan /lapis	25
Tinggi jatuh	30.48

Berat jenis Gs	2.527
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PENAMBAHAN AIR						
1	Berat tanah absah gram	2000	2000	2000	2000	2000
2	Kadar air mula-mula %	9.000	9.000	9.000	9.000	9.000
3	Penambahan air %	17.5	22.5	27.5	32.5	37.5
4	Penambahan air ml	350	450	550	650	750

PENGUJIAN PEMADATAN SILINDER						
1	Nomor pengujian	1	2	3	4	5
2	Berat silinder + tanah padat gram	3159	3326	3380	3357	3335
3	Berat tanah padat gram	1411	1578	1632	1609	1587
4	Berat volume tanah gr/cm ³	1.493	1.670	1.727	1.703	1.680

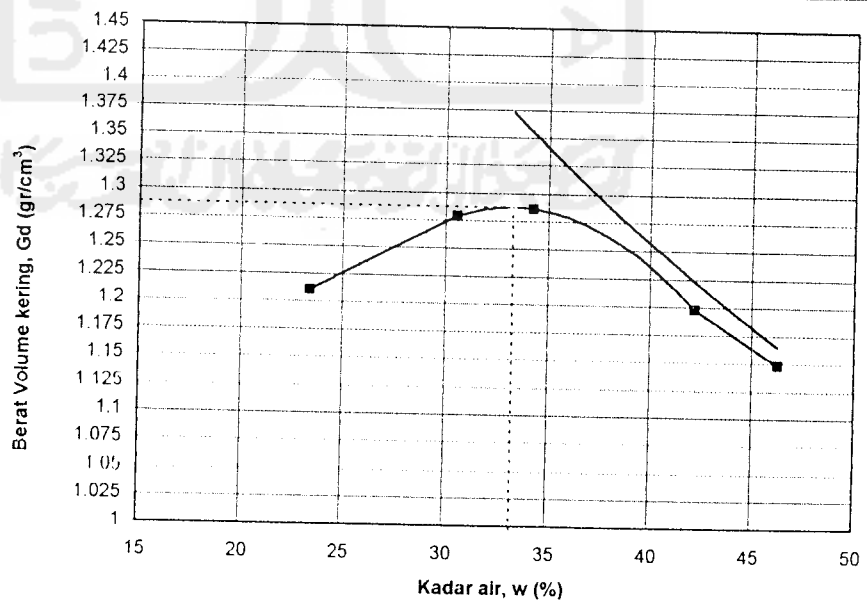
PENGUJIAN KADAR AIR										
1	NOMOR PERCOBAAN	1		2		3		4		5
2	Nomor cawan	a	b	a	b	a	b	a	b	a
3	Berat cawan kosong gram	21.99	21.78	21.92	21.94	21.54	21.92	21.25	21.57	22.02
4	Berat cawan + tanah basah gram	46.24	46.05	41.95	45.02	48.41	55.05	43.43	48.64	50.28
5	Berat cawan + tanah kering gram	41.27	41.85	37.36	39.51	41.56	46.59	36.89	40.56	41.43
8	Kadar air = w %	25.78	20.93	29.73	31.36	34.22	34.29	41.82	42.55	45.60
9	Kadar air rata-rata	23.35		30.54		34.25		42.18		46.95
10	Berat volume tanah kering gr/cm ³	1.211		1.279		1.287		1.198		1.148

BERAT VOLUME KERING
 MAKSIMUM (gr/cm³)

1.28772

KADAR AIR OPTIMUM (%)

33.26





LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
 Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PEMADATAN TANAH
Proctor test

PROYEK : Tugas Akhir
 Asal Sampel : Sedayu, Kabupaten Bantul
 Sampel : Tanah+kapur karbid 9%
 DIKERJAKAN : Marwan Hamdono Prasadja
 TANGGAL : 18 Nopember 2002

DATA SILINDER	
1 Diameter (ϕ) cm	10.21
2 Tinggi (H) cm	11.54
3 Volume (V) cm ³	944.82
4 Berat gram	1748

DATA PENUMBUK	
Berat (kg)	2.505
Jumlah lapis	3
Jumlah tumbukan /lapis	25
Tinggi jatuh	30.48

Berat jenis Gs	2.527
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PENAMBAHAN AIR					
1 Berat tanah absah gram	2000	2000	2000	2000	2000
2 Kadar air mula-mula %	9.000	9.000	9.000	9.000	9.000
3 Penambahan air %	15	20	25	30	35
4 Penambahan air ml	300	400	500	600	700

PENGUJIAN PEMADATAN SILINDER					
1 Nomor pengujian	1	2	3	4	5
2 Berat silinder + tanah padat gram	3159	3300	3375	3339	3320
3 Berat tanah padat gram	1411	1552	1627	1591	1572
4 Berat volume tanah gr/cm ³	1.493	1.643	1.722	1.684	1.664

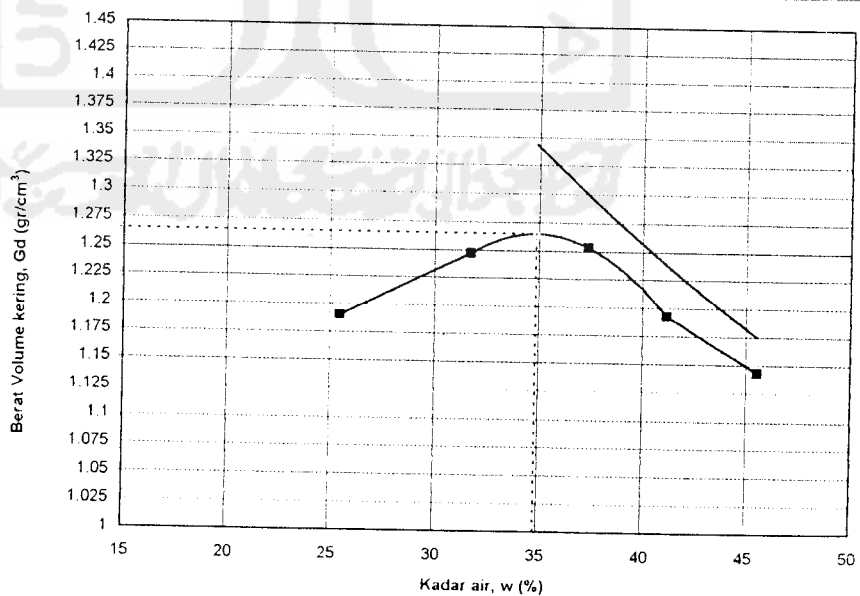
PENGUJIAN KADAR AIR										
1 NOMOR PERCOBAAN	1		2		3		4		5	
2 Nomor cawan	a	b	a	b	a	b	a	b	a	b
3 Berat cawan kosong gram	22.03	22.01	21.93	22.05	21.66	14.74	22.45	22.17	21.95	22.05
4 Berat cawan + tanah basah gram	42.48	42.91	46.02	43.98	43.67	35.95	50.78	46.19	50.28	51.21
5 Berat cawan + tanah kering gram	38.45	38.55	40.21	38.71	37.30	30.57	42.55	39.16	42.00	41.52
8 Kadar air = w %	24.54	26.36	31.78	31.63	40.73	33.99	40.95	41.38	41.30	49.77
9 Kadar air rata-rata	25.45		31.71		37.36		41.16		45.53	
10 Berat volume tanah kering gr/cm ³	1.190		1.247		1.254		1.193		1.143	

BERAT VOLUME KERING
 MAKSIMUM (gr/cm³)

1.26508

KADAR AIR OPTIMUM (%)

34.85





LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
 Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PEMADATAN TANAH

Proctor test

PROYEK : Tugas Akhir
 Asal Sampel : Sedayu, Kabupaten Bantul
 Sampel : Tanah+kapur karbid 12%

DIKERJAKAN : Marwan Hamdono Prasadja
 TANGGAL : 18 Nopember 2002

DATA SILINDER	
1	Diameter (ϕ) cm : 10.21
2	Tinggi (H) cm : 11.54
3	Volume (V) cm ³ : 944.82
4	Berat gram : 1748

DATA PENUMBUK	
Berat (kg)	2.505
Jumlah lapis	3
Jumlah tumbukan /lapis	25
Tinggi jatuh	30.48

Berat jenis Gs	2.527
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PENAMBAHAN AIR					
1	Berat tanah absah gram	2000	2000	2000	2000
2	Kadar air mula-mula %	9.000	9.000	9.000	9.000
3	Penambahan air %	17.5	22.5	27.5	32.5
4	Penambahan air ml	350	450	550	650

PENGUJIAN PEMADATAN SILINDER					
1	Nomor pengujian	1	2	3	4
2	Berat silinder + tanah padat gram	3159	3268	3370	3357
3	Berat tanah padat gram	1411	1520	1622	1609
4	Berat volume tanah gr/cm ³	1.493	1.609	1.717	1.703

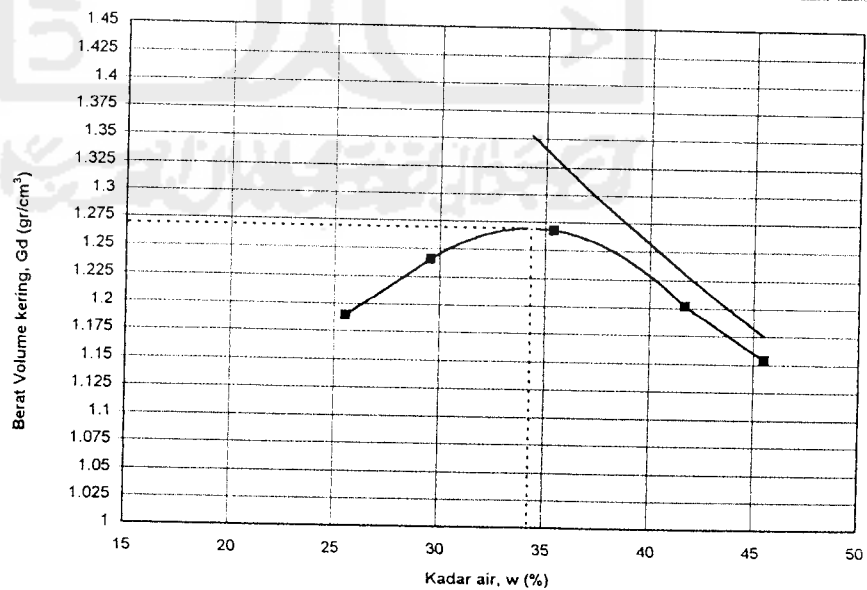
PENGUJIAN KADAR AIR										
1	NOMOR PERCOBAAN	1		2		3		4		5
2	Nomor cawan	a	b	a	b	a	b	a	b	a
3	Berat cawan kosong gram	21.74	22.09	21.68	21.85	22.04	21.42	21.95	22.17	22.02
4	Berat cawan + tanah basah gram	43.63	42.77	43.09	42.85	38.14	37.15	40.39	41.35	41.38
5	Berat cawan + tanah kering gram	39.28	38.47	38.08	38.18	33.84	34.33	41.65	41.71	45.97
8	Kadar air = w %	24.80	26.25	30.55	28.60	36.44	34.33	41.65	41.71	45.97
9	Kadar air rata-rata	25.53		29.57		35.38		41.68		45.02
10	Berat volume tanah kering gr/cm ³	1.190		1.242		1.268		1.202		1.154

BERAT VOLUME KERING
 MAKSIMUM (gr/cm³)

1.26948

KADAR AIR OPTIMUM (%)

34.31





LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
 Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PEMADATAN TANAH
Proctor test

PROYEK
 Asal Sampel
 Sampel

Tugas Akhir
 Sedayu, Kabupaten Bantul
 Tanah+kapur karbid 15%

DIKERJAKAN
 TANGGAL

Marwan Hamdono Prasadja
 18 Nopember 2002

DATA SILINDER		
1	Diameter (ϕ) cm	10.21
2	Tinggi (H) cm	11.54
3	Volume (V) cm ³	944.82
4	Berat gram	1748

DATA PENUMBUK	
Berat (kg)	2.505
Jumlah lapis	3
Jumlah tumbukan /lapis	25
Tinggi jatuh	30.48

Berat jenis Gs	2.527
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PENAMBAHAN AIR						
1	Berat tanah absah gram	2000	2000	2000	2000	2000
2	Kadar air mula-mula %	9.000	9.000	9.000	9.000	9.000
3	Penambahan air %	20	25	30	35	40
4	Penambahan air ml	400	500	600	700	800

PENGUJIAN PEMADATAN SILINDER						
1	Nomor pengujian	1	2	3	4	5
2	Berat silinder + tanah padat gram	3200	3317	3370	3332	3300
3	Berat tanah padat gram	1452	1569	1622	1584	1552
4	Berat volume tanah gr/cm ³	1.537	1.661	1.717	1.677	1.643

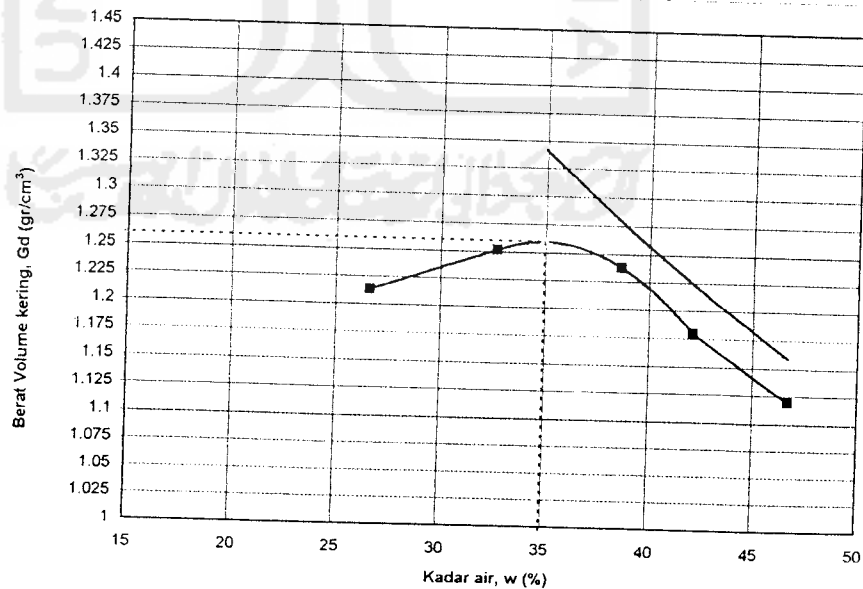
PENGUJIAN KADAR AIR											
1	NOMOR PERCOBAAN	1		2		3		4		5	
2	Nomor cawan	a	b	a	b	a	b	a	b	a	b
3	Berat cawan kosong gram	22.26	22.01	21.58	22.05	21.76	22.14	21.87	21.75	21.87	22.43
4	Berat cawan + tanah basah gram	42.48	43.68	50.08	46.29	39.81	48.64	49.36	48.24	54.35	53.25
5	Berat cawan + tanah kering gram	38.26	39.09	43.10	40.29	34.85	41.15	41.22	40.39	43.89	43.56
8	Kadar air = w %	26.38	26.87	32.43	32.89	37.89	39.40	42.07	42.11	47.50	45.86
9	Kadar air rata-rata	26.62		32.66		38.65		42.09		46.68	
10	Berat volume tanah kering gr/cm ³	1.214		1.252		1.238		1.180		1.120	

BERAT VOLUME KERING
 MAKSIMUM (gr/cm³)

1.25973

KADAR AIR OPTIMUM (%)

34.93





LABORATORIUM MEKANIKA TANAH
 JURUSAN TEKNIK SIPIL FTSP
 UNIVERSITAS ISLAM INDONESIA

PENGUJIAN BATAS CAIR

PROJECT : Tugas Akhir
 LOCATION : Sedayu, Kabupaten Bantul
 Sample No. : Lempung + kapur karbid 0%

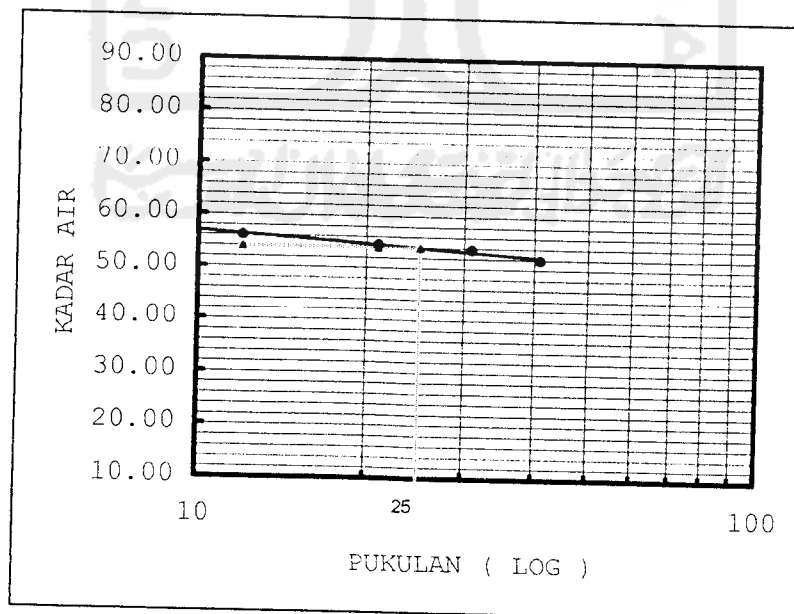
Date : November 17th, 2002
 Tested by : Marwan Hamdono Prasadja

NO	NO. PENGUJIAN	I		II		III		IV	
		1	2	3	4	5	6	7	8
1	NO CAWAN								
2	Berat cawan kosong	21.71	21.83	22.28	21.90	22.18	21.44	21.11	22.21
3	Berat cawan + tanah basah (gr)	45.02	39.54	35.24	45.95	40.93	39.85	49.18	51.53
4	Berat cawan + tanah kering (gr)	36.68	33.15	30.57	37.65	34.35	33.45	39.54	41.56
5	Berat air (3) - (4)	8.34	6.39	4.67	8.30	6.58	6.40	9.64	9.97
6	Berat tanah kering (4) - (2)	14.97	11.32	8.29	15.75	12.17	12.01	18.43	19.35
7	KADAR AIR = $\frac{(5)}{(6)} \times 100 \% =$	55.71	56.45	56.33	52.70	54.07	53.29	52.31	51.52
8	KADAR AIR RATA-RATA =		56.08		54.52		53.68		51.92
9	PUKULAN		12		21		31		41

PENGUJIAN BATAS PLASTIS

NO		1	2
1	NO CAWAN		
2	BERAT CAWAN KOSONG	21.98	21.92
3	BERAT CAWAN + TANAH BASAH	51.51	72.86
4	BERAT CAWAN + TANAH KERING	43.31	61.54
5	BERAT AIR (3)-(4)	8.20	11.32
6	BERAT TANAH KERING (4)-(2)	21.33	39.62
7	KADAR AIR = $\frac{(5)}{(6)} \times 100 \% =$	38.44	28.57
8	KADAR AIR RATA-RATA =		33.51

KESIMPULAN
 FLOW INDEX : 3.013
 BATAS CAIR : 53.89
 BATAS PLASTIS : 33.51
 INDEX PLASTISITAS : 20.38





LABORATORIUM MEKANIKA TANAH
 JURUSAN TEKNIK SIPIL FTSP
 UNIVERSITAS ISLAM INDONESIA

PENGUJIAN BATAS CAIR

PROJECT : Tugas Akhir
 LOCATION : Sedayu, Kabupaten Bantul
 Sample No. : Lempung + kapur karbid 3%

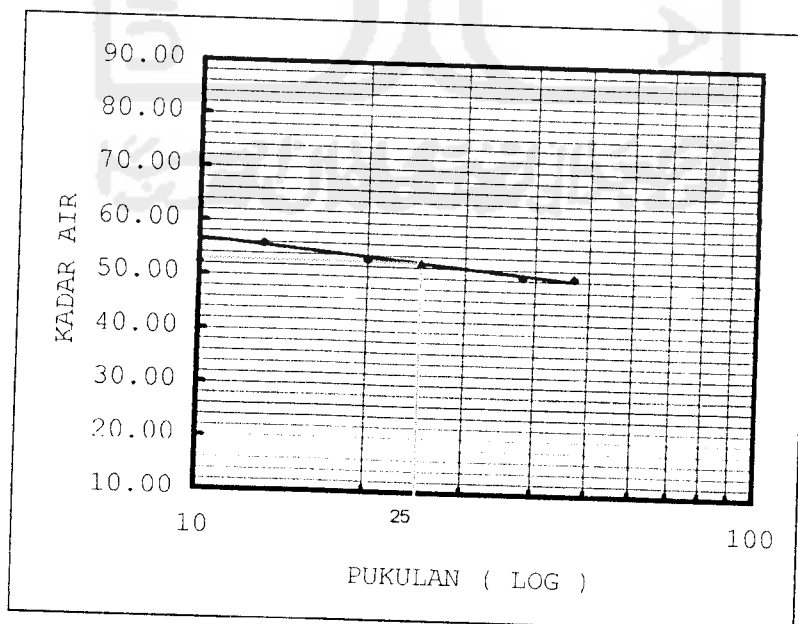
Date : November 17th, 2002
 Tested by : Marwan Hamdono Prasadja

NO	NO. PENGUJIAN	I		II		III		IV	
		1	2	3	4	5	6	7	8
1	NO CAWAN								
2	Berat cawan kosong	21.92	22.43	22.39	21.67	21.75	21.57	21.58	21.94
3	Berat cawan + tanah basah (gr)	50.68	60.46	46.80	51.10	47.93	46.25	49.66	53.34
4	Berat cawan + tanah kering (gr)	40.49	46.65	38.35	40.83	39.04	38.04	40.00	43.04
5	Berat air (3) - (4)	10.19	13.81	8.45	10.27	8.89	8.21	9.66	10.30
6	Berat tanah kering (4) - (2)	18.57	24.22	15.96	19.16	17.29	16.47	18.42	21.10
7	KADAR AIR = $\frac{(5)}{(6)} \times 100\% =$	54.87	57.02	52.94	53.60	51.42	49.85	52.44	48.82
8	KADAR AIR RATA-RATA =		55.95		53.27		50.63		50.63
9	PUKULAN		13		20		38		47

PENGUJIAN BATAS PLASTIS

NO	NO CAWAN		
		1	2
2	BERAT CAWAN KOSONG	22.09	21.86
3	BERAT CAWAN + TANAH BASAH	38.51	39.45
4	BERAT CAWAN + TANAH KERING	33.67	34.22
5	BERAT AIR (3)-(4)	4.84	5.23
6	BERAT TANAH KERING (4)-(2)	11.58	12.36
7	KADAR AIR = $\frac{(5)}{(6)} \times 100\% =$	41.80	42.31
8	KADAR AIR RATA-RATA =	42.06	

KESIMPULAN
 FLOW INDEX : 4.169
 BATAS CAIR : 52.80
 BATAS PLASTIS : 42.06
 INDEX PLASTISITAS : 10.75





LABORATORIUM MEKANIKA TANAH
 JURUSAN TEKNIK SIPIL FTSP
 UNIVERSITAS ISLAM INDONESIA

PENGUJIAN BATAS CAIR

PROJECT : Tugas Akhir
 LOCATION : Sedayu, Kabupaten Bantul
 Sample No. : Lempung + kapur karbid 6%

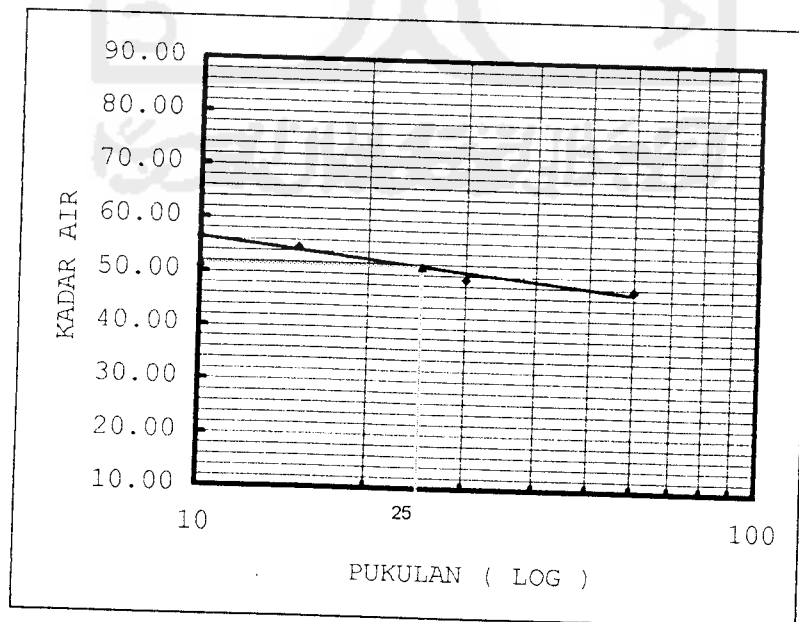
Date : November 17th, 2002
 Tested by : Marwan Hamdono Prasadja

NO	NO. PENGUJIAN	I		II		III		IV	
		1	2	3	4	5	6	7	8
1	NO CAWAN								
2	Berat cawan kosong	21.95	21.87	21.93	21.78	21.68	21.67	21.99	21.98
3	Berat cawan + tanah basah (gr)	48.79	54.24	59.27	54.10	65.17	53.23	48.63	57.52
4	Berat cawan + tanah kering (gr)	39.12	42.55	45.94	42.79	50.74	42.86	40.00	46.07
5	Berat air (3) - (4)	9.67	11.69	13.33	11.31	14.43	10.37	8.63	11.45
6	Berat tanah kering (4) - (2)	17.17	20.68	24.01	21.01	29.06	21.19	18.01	24.09
7	KADAR AIR = $\frac{(5)}{(6)} \times 100\% =$	56.32	56.53	55.52	53.83	49.66	48.94	47.92	47.53
8	KADAR AIR RATA-RATA =		56.42		54.68		49.30		47.72
9	PUKULAN		10		15		30		60

PENGUJIAN BATAS PLASTIS

NO	NO. PENGUJIAN		
		1	2
1	NO CAWAN		
2	BERAT CAWAN KOSONG	22.05	22.05
3	BERAT CAWAN + TANAH BASAH	40.09	44.96
4	BERAT CAWAN + TANAH KERING	34.53	38.13
5	BERAT AIR (3)-(4)	5.56	6.83
6	BERAT TANAH KERING (4)-(2)	12.48	16.08
7	KADAR AIR = $\frac{(5)}{(6)} \times 100\% =$	44.55	42.48
8	KADAR AIR RATA-RATA =	43.51	

KESIMPULAN
 FLOW INDEX : 5.451
 BATAS CAIR : 51.55
 BATAS PLASTIS : 43.51
 INDEX PLASTISITAS : 8.04





LABORATORIUM MEKANIKA TANAH
 JURUSAN TEKNIK SIPIL FTSP
 UNIVERSITAS ISLAM INDONESIA

PENGUJIAN BATAS CAIR

PROJECT : Tugas Akhir
 LOCATION : Sedayu, Kabupaten Bantul
 Sample No. : lempung + kapur karbid 9%

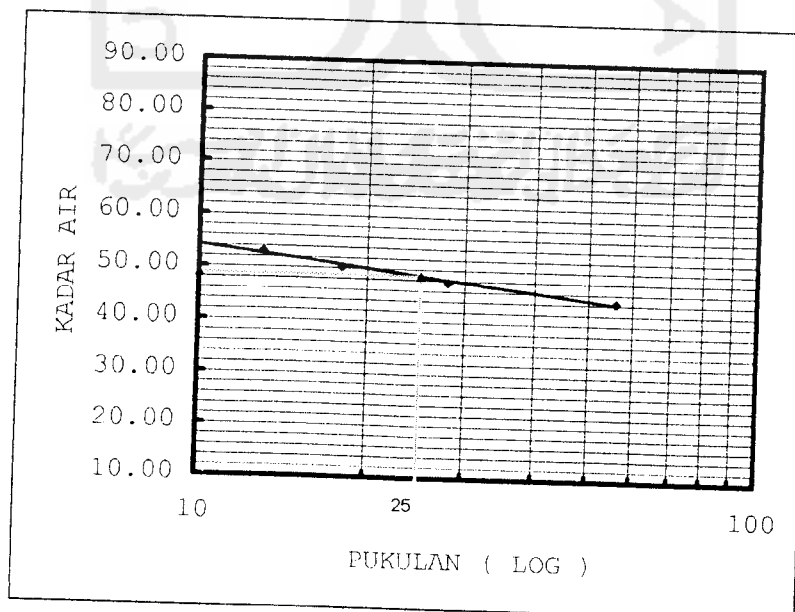
Date : November 17th, 2002
 Tested by : Marwan Hamdono Prasadja

NO	NO. PENGUJIAN	I		II		III		IV	
		1	2	3	4	5	6	7	8
1	NO CAWAN								
2	Berat cawan kosong	22.14	22.02	21.76	21.82	21.54	21.94	22.17	21.94
3	Berat cawan + tanah basah (gr)	61.24	57.65	65.35	51.89	63.50	57.93	45.48	54.92
4	Berat cawan + tanah kering (gr)	47.67	45.30	50.75	41.86	50.00	46.25	38.39	44.69
5	Berat air (3) - (4)	13.57	12.35	14.60	10.03	13.50	11.68	7.09	10.23
6	Berat tanah kering (4) - (2)	25.53	23.28	28.99	20.04	28.46	24.31	16.22	22.75
7	(5) KADAR AIR = ----- x 100 % = (6)	53.15	53.05	50.36	50.05	47.43	48.05	43.71	44.97
8	KADAR AIR RATA-RATA =		53.10		50.21		47.74		44.34
9	PUKULAN		13		18		28		56

PENGUJIAN BATAS PLASTIS

NO	NO. PENGUJIAN		
		1	2
1	NO CAWAN		
2	BERAT CAWAN KOSONG	21.74	21.99
3	BERAT CAWAN + TANAH BASAH	52.55	60.04
4	BERAT CAWAN + TANAH KERING	43.05	48.25
5	BERAT AIR (3)-(4)	9.50	11.79
6	BERAT TANAH KERING (4)-(2)	21.31	26.26
7	(5) KADAR AIR = ----x 100 % = (6)	44.58	44.90
8	KADAR AIR RATA-RATA =		44.74

KESIMPULAN
 FLOW INDEX : 6.046
 BATAS CAIR : 48.76
 BATAS PLASTIS : 44.74
 INDEX PLASTISITAS : 4.02





LABORATORIUM MEKANIKA TANAH
 JURUSAN TEKNIK SIPIL FTSP
 UNIVERSITAS ISLAM INDONESIA

PENGUJIAN BATAS CAIR

PROJECT : Tugas Akhir
 LOCATION : Sedayu, Kabupaten Bantul
 Sample No. : Lempung + kapur karbid 12%

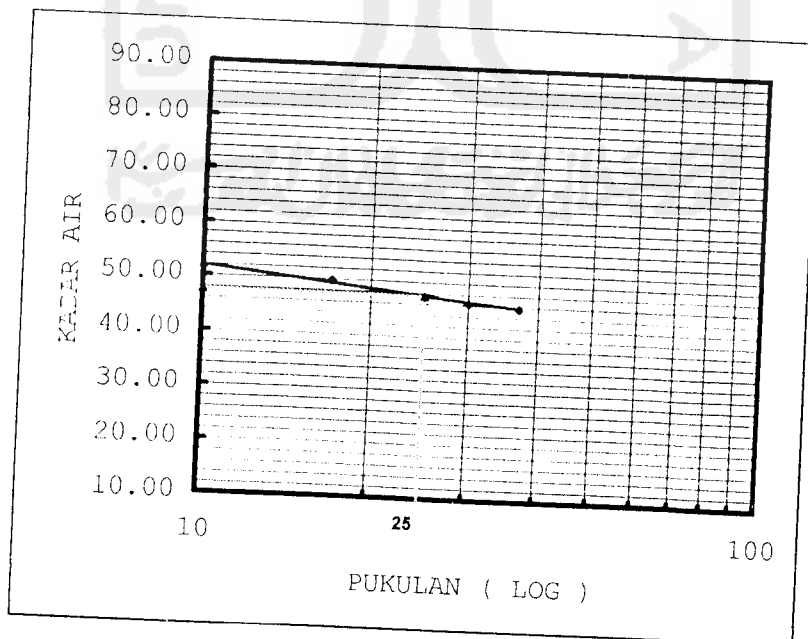
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

NO	NO. PENGUJIAN	I		II		III		IV	
		1	2	3	4	5	6	7	8
1	NO CAWAN								
2	Berat cawan kosong	21.25	21.87	14.74	22.05	22.03	21.74	22.01	21.85
3	Berat cawan + tanah basah (gr)	52.53	52.74	49.54	53.43	56.35	47.87	57.35	51.40
4	Berat cawan + tanah kering (gr)	41.95	42.17	37.88	43.09	45.54	39.53	46.23	42.18
5	Berat air (3) - (4)	10.58	10.57	11.66	10.34	10.81	8.34	11.12	9.22
6	Berat tanah kering (4) - (2)	20.70	20.30	23.14	21.04	23.51	17.79	24.22	20.33
7	KADAR AIR = $\frac{(5)}{(6)} \times 100\% =$	51.11	52.07	50.39	49.14	45.98	46.88	45.91	45.35
8	KADAR AIR RATA-RATA =		51.59		49.77				
9	PUKULAN		10		17		30		37

PENGUJIAN BATAS PLASTIS

NO	NO. PENGUJIAN	I		II	
		1	2	3	4
1	NO CAWAN				
2	BERAT CAWAN KOSONG	21.69	21.96		
3	BERAT CAWAN + TANAH BASAH	43.50	39.20		
4	BERAT CAWAN + TANAH KERING	36.24	34.27		
5	BERAT AIR (3)-(4)	7.26	4.93		
6	BERAT TANAH KERING (4)-(2)	14.55	12.31		
7	KADAR AIR = $\frac{(5)}{(6)} \times 100\% =$	49.90	40.05		
8	KADAR AIR RATA-RATA =		44.97		

KESIMPULAN
 FLOW INDEX : 4.318
 BATAS CAIR : 47.50
 BATAS PLASTIS : 44.97
 INDEX PLASTISITAS : 2.52





LABORATORIUM MEKANIKA TANAH
 JURUSAN TEKNIK SIPIL FTSP
 UNIVERSITAS ISLAM INDONESIA

PENGUJIAN BATAS CAIR

PROJECT : Tugas Akhir
 LOCATION : Sedayu, Kabupaten Bantul
 Sample No. : Lempung + kapur karbid15%

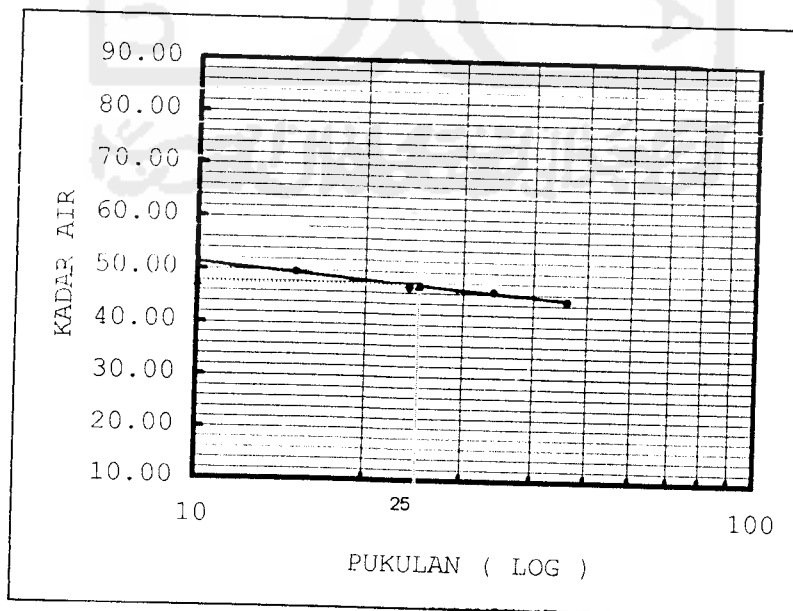
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

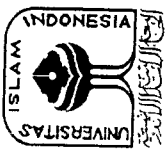
NO	NO. PENGUJIAN	I		II		III		IV	
		1	2	3	4	5	6	7	8
1	NO CAWAN								
2	Berat cawan kosong	21.57	21.78	21.66	22.04	22.22	22.45	22.47	21.42
3	Berat cawan + tanah basah (gr)	64.32	55.13	49.83	59.00	56.07	52.64	55.24	46.89
4	Berat cawan + tanah kering (gr)	51.24	43.25	40.87	47.08	45.45	42.97	45.09	39.02
5	Berat air (3) - (4)	13.08	11.88	8.96	11.92	10.62	9.67	10.15	7.87
6	Berat tanah kering (4) - (2)	29.67	21.47	19.21	25.04	23.23	20.52	22.62	17.60
7	KADAR AIR = $\frac{(5)}{(6)} \times 100\% =$	44.08	55.33	46.64	47.60	45.72	47.12	44.87	44.72
8	KADAR AIR RATA-RATA =		49.71		47.12		46.42		44.79
9	PUKULAN		15		24		34		46

PENGUJIAN BATAS PLASTIS

NO	NO CAWAN		
		1	2
2	BERAT CAWAN KOSONG	9.80	12.75
3	BERAT CAWAN + TANAH BASAH	28.25	29.40
4	BERAT CAWAN + TANAH KERING	22.98	23.81
5	BERAT AIR (3)-(4)	5.27	5.59
6	BERAT TANAH KERING (4)-(2)	13.18	11.06
7	KADAR AIR = $\frac{(5)}{(6)} \times 100\% =$	39.98	50.54
8	KADAR AIR RATA-RATA =	45.26	

KESIMPULAN
 FLOW INDEX : 4.112
 BATAS CAIR : 47.39
 BATAS PLASTIS : 45.26
 INDEX PLASTISITAS : 2.13





LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
 Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PENGUJIAN BATAS SUSUT TANAH

PROYEK : Tugas Akhir
 Asal Sampel : Sedayu, Kabupaten Bantul
 NO Sampel : BST (0% - 6%)

DIKERJAKAN : Marwan Hamdono Prasadja
 TANGGAL : 15 November 2002

		0%	3%	6%
1	No Pengujian (kode sampel)			
2	Berat Cawan Susut	41.11	22.40	46.48
3	Berat cawan susut + tanah basah	66.93	39.89	71.64
4	Berat cawan susut + tanah kering	57.43	34.25	62.24
5	Berat tanah basah	25.82	17.49	25.16
6	Berat tanah Kering	16.32	11.85	15.76
7	Kadar air	0.58	0.48	0.60
8	Volume cawan susut	16.20	9.49	15.42
9	Berat air raksa yang terdesak tanah kering + gelas ukur	155.20	130.50	183.65
10	Berat gelas ukur	33.67	33.67	33.67
11	Berat air raksa	121.53	96.83	149.98
12	Volume tanah kering	8.94	7.12	11.03
13	Batas Susut Tanah	13.70	27.62	31.81
14	Batas susut tanah rata-rata	20.660		33.178
15	Angka Susut	1.82631449	1.6644	1.4291
16	Berat Jenis	2.435820896	3.0803	2.6201
17	Berat Jenis rata-rata	2.758	2.698	2.688



LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN UII
 Jl. Kaliurang KM. 14,4 Telp. (0274) 895042 Yogyakarta 55584.

PENGUJIAN BATAS SUSUT TANAH

PROYEK : Tugas Akhir
 Asal Sampel : Sedayu, Kabupaten Bantul
 NO Sampel : BST (9% - 15%)
 DIKERJAKAN : Marwan Hamdono Prasadja
 TANGGAL : 16 November 2002

1	No Pengujian (kode sampel)	9%			12%			15%		
		W1 (gr)	W2 (gr)	W3 (gr)	W4 (gr)	W5 (gr)	W6 (gr)	W7 (gr)	W8 (gr)	W9 (gr)
2	Berat Cawan Susut	40.97	22.40	40.97	40.97	34.67	40.97	40.97	40.97	40.97
3	Berat cawan susut + tanah basat	65.15	38.11	66.24	62.15	63.25	64.82	64.82	64.82	64.82
4	Berat cawan susut + tanah kering	56.45	32.22	57.60	53.03	53.46	54.97	54.97	54.97	54.97
5	Berat tanah basah	24.18	15.71	25.27	27.48	22.28	23.85	23.85	23.85	23.85
6	Berat tanah Kering	15.48	9.82	16.63	18.36	12.49	14.00	14.00	14.00	14.00
7	Kadar air	$w(\%) = \frac{(W_a - W_o)}{W_o} \times 100\%$								
8	Volume cawan susut	0.56	0.60	0.52	0.50	0.78	0.70	0.70	0.70	0.70
9	Berat air raksa yang terdesak	14.96	9.49	14.96	16.33	14.96	15.42	15.42	15.42	15.42
10	tanah kering + gelas ukur	201.30	146.26	227.05	237.23	226.58	227.45	227.45	227.45	227.45
11	Berat gelas ukur	33.67	33.67	33.67	33.67	33.67	33.67	33.67	33.67	33.67
12	Berat air raksa	167.63	112.59	193.38	203.56	192.91	193.78	193.78	193.78	193.78
13	Volume tanah kering	12.33	8.28	14.22	14.97	14.18	14.25	14.25	14.25	14.25
14	Batas Susut Tanah	$SL (\%) = \frac{(w - (V \cdot V^o))}{W_o} \times 100$								
15	Batas susut tanah rata-rata	39.20	47.67	47.51	42.26	72.19	62.03	62.03	62.03	62.03
16	Angka Susut	43.44	44.88	44.88	44.88	67.11	67.11	67.11	67.11	67.11
17	Berat Jenis	1.255908847	1.1862	1.1696	1.2266	0.8805	0.98255754	0.98255754	0.98255754	0.98255754
18	Berat Jenis rata-rata	2.473633749	2.7301	2.6322	2.5468	2.4168	2.51572327	2.51572327	2.51572327	2.51572327
19	Gs rata-rata	2.602								
20	2.589	2.589								



LAMPIRAN 5



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT Undisturbed - 1

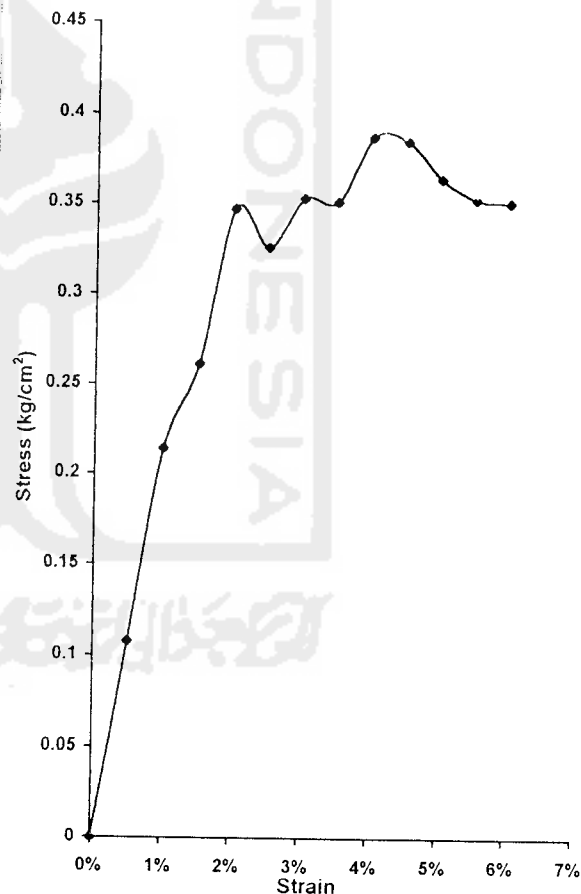
Date : November 18th, 2002
 Tested by : Maiwan Hamdono Prasadja

Sample data	
diam (mm)	6.58
Area (mm ²)	34.0049
Ht,Lo (mm)	13.94
Vol (mm ³)	474.028
Wt (gr)	840
Wet Unit wt (gr/cm ³)	1.77205
Dry Unit wt (gr/cm ³)	1.25772

Water Content		
Wt Container (cup), gr	22.02	22.22
Wt of Cup + Wet soil, gr	59.33	83.95
Wt of Cup + Dry soil, gr	48.57	65.92
Water Content %	40.53	41.26
Average water content %	40.89	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ³)	Load dial (unit)	Unit Strain (ΔL/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	5.5	0.50%	3.6806	0.107694
140	11	1.00%	7.3612	0.214301
210	13.5	1.51%	9.0342	0.261671
280	18	2.01%	12.0456	0.347116
350	17	2.51%	11.3764	0.326152
420	18.5	3.01%	12.3802	0.353102
490	18.5	3.52%	12.3802	0.351274
560	20.5	4.02%	13.7186	0.387223
630	20.5	4.52%	13.7186	0.385197
700	19.5	5.02%	13.0494	0.36448
770	19	5.52%	12.7148	0.353257
840	19	6.03%	12.7148	0.351379
910				
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 0.38722 kg/cm²
 α = 49 °
 Angle Of Internal friction, φ = 8 °
 Cohesion = 0.168 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT Undisturbed - 2

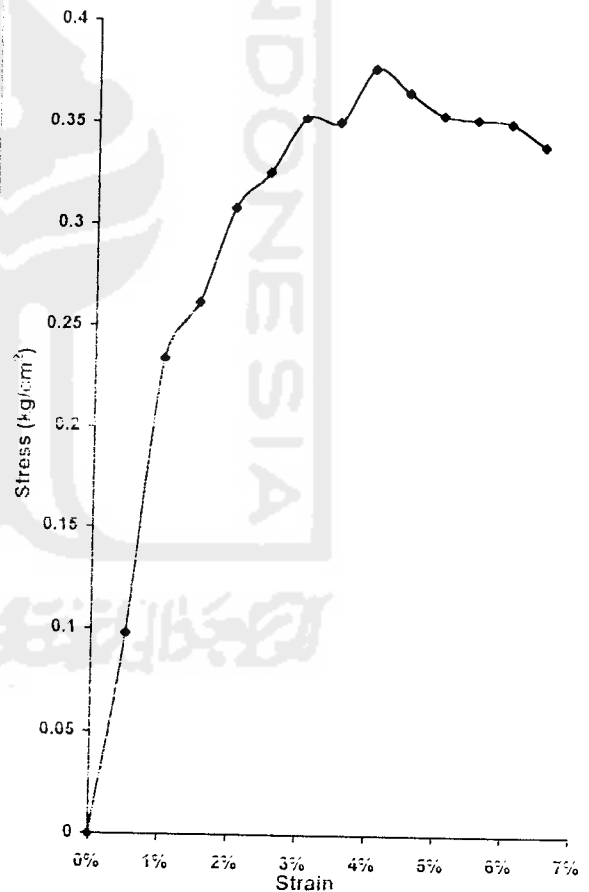
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	6.58
Area (mm ²)	34.0049
Ht,Lo (mm)	13.94
Vol (mm ³)	474.028
Wt (gr)	840
Wet Unit wt (gr/cm ³)	1.77205
Dry Unit wt (gr/cm ³)	1.25694

Water Content		
Wt Container (cup), gr	21.97	21.94
Wt of Cup + Wet soil, gr	59.41	83.89
Wt of Cup + Dry soil, gr	48.51	65.91
Water Content %	41.07	40.89
Average water content %	40.98	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (ΔL/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	5	0.50%	3.346	0.097903
140	12	1.00%	8.0304	0.233782
210	13.5	1.51%	9.0342	0.261671
280	16	2.01%	10.7072	0.308548
350	17	2.51%	11.3764	0.326152
420	18.5	3.01%	12.3802	0.353102
490	18.5	3.52%	12.3802	0.351274
500	20	4.02%	13.384	0.377779
630	19.5	4.52%	13.0494	0.366407
700	19	5.02%	12.7148	0.355135
770	19	5.52%	12.7148	0.353257
840	19	6.03%	12.7148	0.351379
910	18.5	6.53%	12.3802	0.340304
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 0.37778 kg/cm²
 α = 50°
 Angle Of Internal friction, φ = 10°
 Cohesion = 0.150 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT Undisturbed - 3

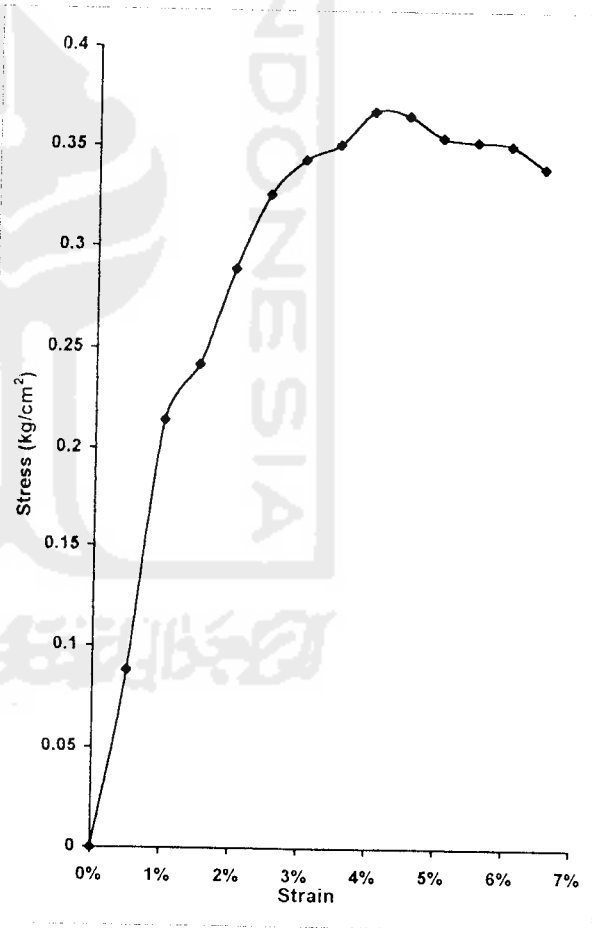
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	6.58
Area (mm ²)	34.0049
Ht,Lo (mm)	13.94
Vol (mm ³)	474.028
Wt (gr)	840
Wet Unit wt (gr/cm ³)	1.77205
Dry Unit wt (gr/cm ³)	1.25725

Water Content		
Wt Container (cup), gr	21.93	21.99
Wt of Cup + Wet soil, gr	59.14	83.76
Wt of Cup + Dry soil, gr	48.12	66.17
Water Content %	42.08	39.81
Average water content %	40.95	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	4.5	0.50%	3.0114	0.088113
140	11	1.00%	7.3612	0.214301
210	12.5	1.51%	8.365	0.242288
280	15	2.01%	10.038	0.289263
350	17	2.51%	11.3764	0.326152
420	18	3.01%	12.0456	0.343558
490	18.5	3.52%	12.3802	0.351274
560	19.5	4.02%	13.0494	0.368334
630	19.5	4.52%	13.0494	0.366407
700	19	5.02%	12.7148	0.355135
770	19	5.52%	12.7148	0.353257
840	19	6.03%	12.7148	0.351379
910	18.5	6.53%	12.3802	0.340304
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1580				
1750				
1820				
1890				
1960				



qu = 0.36833 kg/cm²
 α = 50°
 Angle Of Internal friction, φ = 10°
 Cohesion = 0.155 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT disturbed 0% - 1

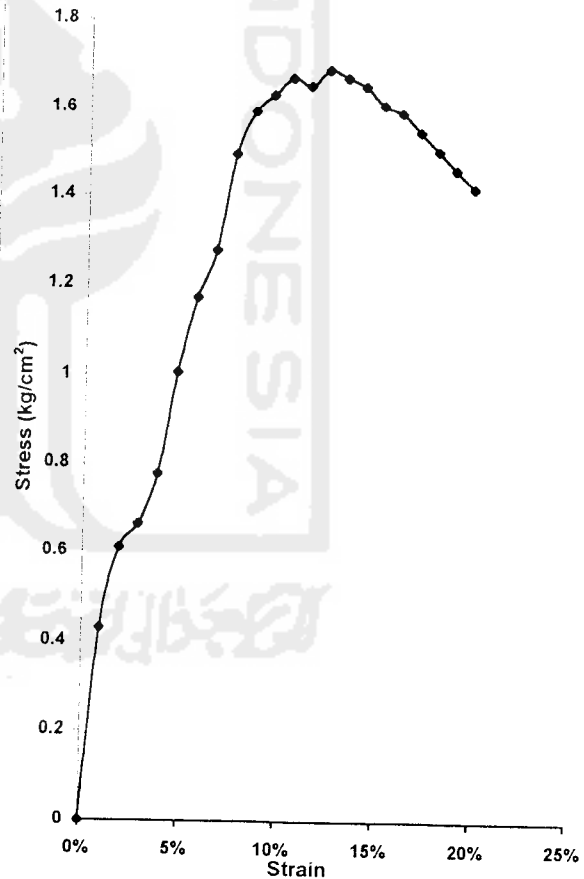
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	154
Wet Unit wt (gr/cm ³)	1.9329
Dry Unit wt (gr/cm ³)	1.47649

Water Content		
Wt Container (cup), gr	21.75	21.74
Wt of Cup + Wet soil, gr	56.10	56.13
Wt of Cup + Dry soil, gr	47.87	48.13
Water Content %	31.51	30.31
Average water content %	30.91	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%NL/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	7	0.94%	4.6844	0.431557
140	10	1.89%	6.692	0.610631
210	11	2.83%	7.3612	0.665227
280	13	3.78%	8.6996	0.778533
350	17	4.72%	11.3764	1.008087
420	20	5.67%	13.384	1.174226
490	22	6.61%	14.7224	1.278713
560	26	7.56%	17.3992	1.49592
630	28	8.50%	18.7376	1.594528
700	29	9.45%	19.4068	1.634425
770	30	10.39%	20.076	1.673146
840	30	11.34%	20.076	1.655507
910	31	12.28%	20.7452	1.692464
980	31	13.23%	20.7452	1.674237
1050	31	14.17%	20.7452	1.656011
1120	30.5	15.11%	20.4106	1.611369
1190	30.5	16.06%	20.4106	1.593436
1260	30	17.00%	20.076	1.549675
1330	29.5	17.95%	19.7414	1.506503
1400	29	18.89%	19.4068	1.463918
1470	28.5	19.84%	19.0722	1.421922
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.69246 kg/cm²
 α = 51 °
 Angle Of Internal friction, φ = 12 °
 Cohesion = 0.685 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT disturbed 0% - 2

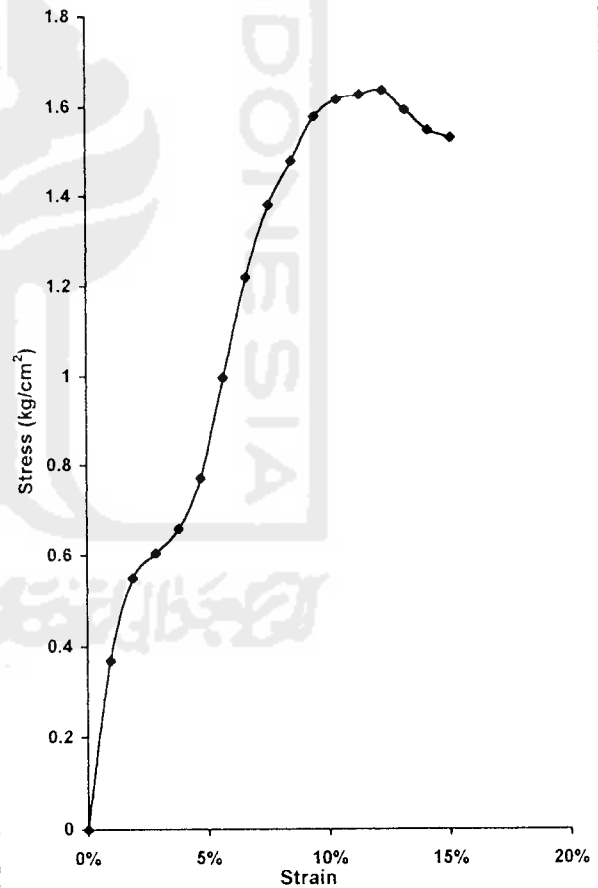
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	156
Wet Unit wt (gr/cm ³)	1.958
Dry Unit wt (gr/cm ³)	1.49344

Water Content		
Wt Container (cup), gr	21.74	22.22
Wt of Cup + Wet soil, gr	56.13	56.21
Wt of Cup + Dry soil, gr	48.14	47.98
Water Content %	30.27	31.95
Average water content %	31.11	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (\L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	6	0.94%	4.0152	0.369906
140	9	1.89%	6.0228	0.549568
210	10	2.83%	6.692	0.604751
280	11	3.78%	7.3612	0.658759
350	13	4.72%	8.6996	0.77089
420	17	5.67%	11.3764	0.998092
490	21	6.61%	14.0532	1.22059
560	24	7.56%	16.0608	1.380849
630	26	8.50%	17.3992	1.480633
700	28	9.45%	18.7376	1.578065
770	29	10.39%	19.4068	1.617374
840	29.5	11.34%	19.7414	1.627915
910	30	12.28%	20.076	1.637868
980	29.5	13.23%	19.7414	1.592226
1050	29	14.17%	19.4068	1.549172
1120	29	15.11%	19.4068	1.532121
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu =	1.63787 kg/cm ²
α =	52 °
Angle Of Internal friction, φ =	14 °
Cohesion =	0.640 kg/cm ²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT disturbed 0% - 3

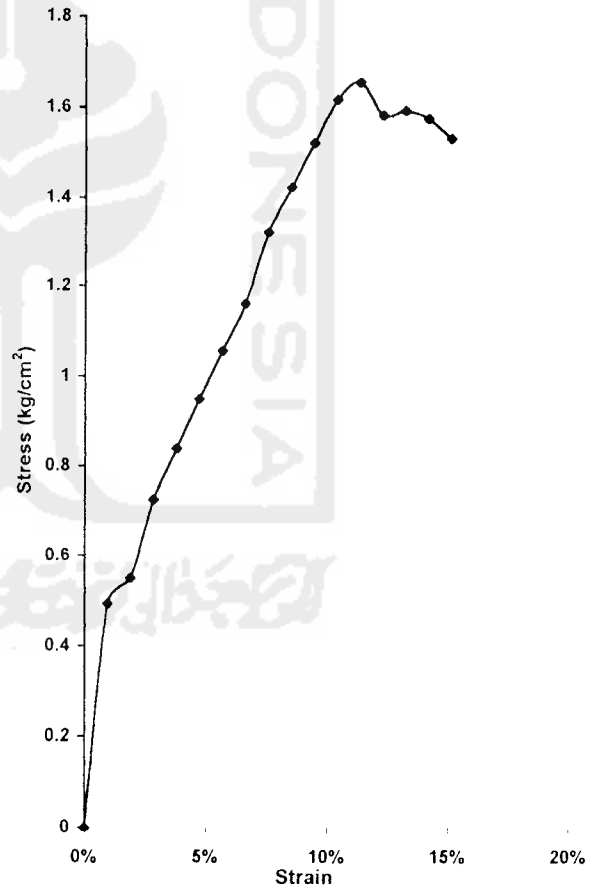
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	157
Wet Unit wt (gr/cm ³)	1.97055
Dry Unit wt (gr/cm ³)	1.50495

Water Content		
Wt Container (cup), gr	21.76	22.22
Wt of Cup + Wet soil, gr	56.21	55.97
Wt of Cup + Dry soil, gr	48.21	47.86
Water Content %	30.25	31.63
Average water content %	30.94	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	8	0.94%	5.3536	0.493208
140	9	1.89%	6.0228	0.549568
210	12	2.83%	8.0304	0.725702
280	14	3.78%	9.3688	0.838421
350	16	4.72%	10.7072	0.948788
420	18	5.67%	12.0456	1.056803
490	20	6.61%	13.384	1.162467
560	23	7.56%	15.3916	1.323314
630	25	8.50%	16.73	1.423686
700	27	9.45%	18.0684	1.521706
770	29	10.39%	19.4068	1.617374
840	30	11.34%	20.076	1.655507
910	29	12.28%	19.4068	1.583273
980	29.5	13.23%	19.7414	1.593226
1050	29.5	14.17%	19.7414	1.575881
1120	29	15.11%	19.4068	1.532121
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu =	1.65551 kg/cm ²
α =	52 °
Angle Of Internal friction, φ =	14 °
Cohesion =	0.647 kg/cm ²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT disturbed 3% - 1

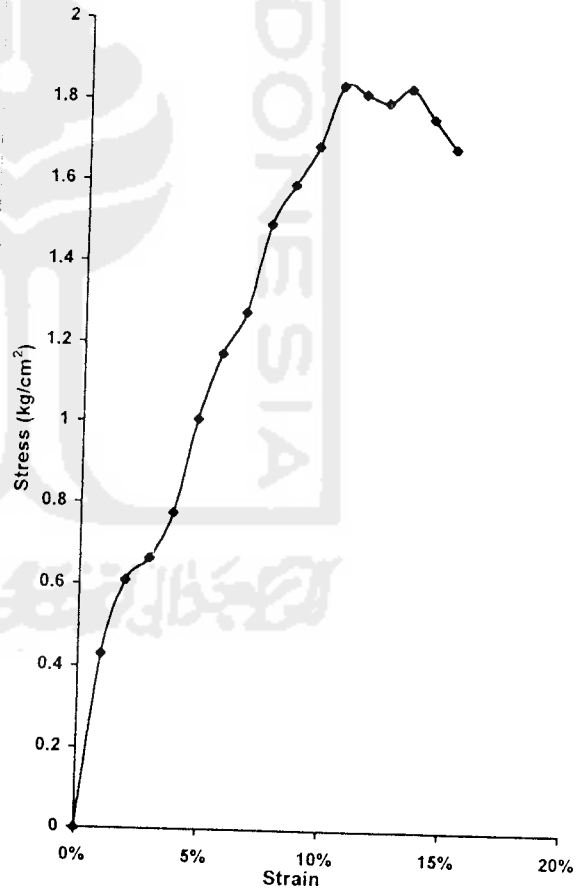
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	160
Wet Unit wt (gr/cm ³)	2.00821
Dry Unit wt (gr/cm ³)	1.51957

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	54.12	56.25
Wt of Cup + Dry soil, gr	46.35	47.95
Water Content %	32.05	32.26
Average water content %	32.16	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	7	0.94%	4.6844	0.431557
140	10	1.89%	6.692	0.610631
210	11	2.83%	7.3612	0.665227
280	13	3.78%	8.6996	0.778533
350	17	4.72%	11.3764	1.008087
420	20	5.67%	13.384	1.174226
490	22	6.61%	14.7224	1.278713
560	26	7.56%	17.3992	1.49592
630	28	8.50%	18.7376	1.594528
700	30	9.45%	20.076	1.690784
770	33	10.39%	22.0836	1.84046
840	33	11.34%	22.0836	1.821058
910	33	12.28%	22.0836	1.801655
980	34	13.23%	22.7528	1.83626
1050	33	14.17%	22.0836	1.76285
1120	32	15.11%	21.4144	1.690616
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu =	1.84046 kg/cm ²
α =	62 °
Angle Of Internal friction, φ =	34 °
Cohesion =	0.489 kg/cm ²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT disturbed 3% - 2

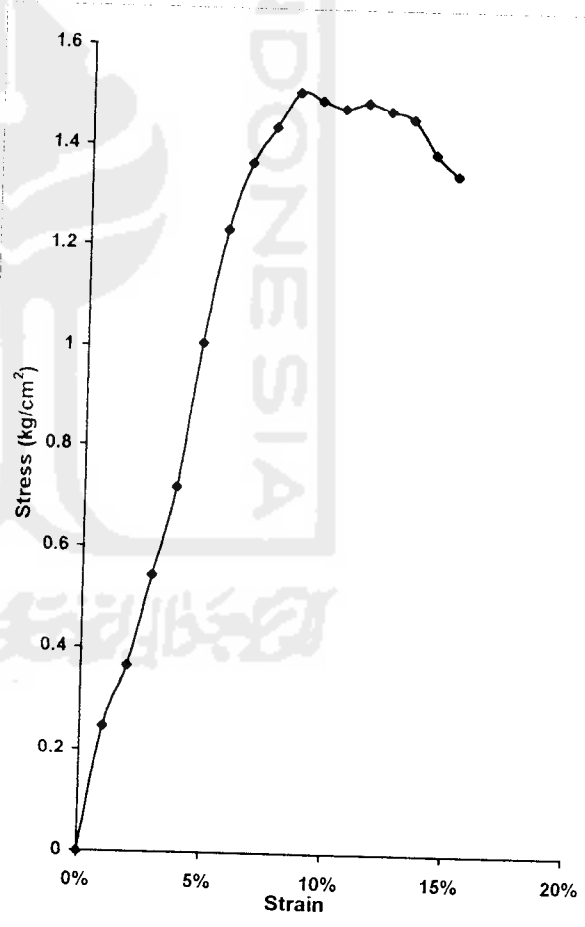
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	157.95
Wet Unit wt (gr/cm ³)	1.98248
Dry Unit wt (gr/cm ³)	1.49988

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	54.12	56.35
Wt of Cup + Dry soil, gr	46.32	48.05
Water Content %	32.22	32.13
Average water content %	32.18	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	4	0.94%	2.6768	0.246604
140	6	1.89%	4.0152	0.366379
210	9	2.83%	6.0228	0.544276
280	12	3.78%	8.0304	0.718646
350	17	4.72%	11.3764	1.008087
420	21	5.67%	14.0532	1.232937
490	23.5	6.61%	15.7262	1.365898
560	25	7.56%	16.73	1.438384
630	26.5	8.50%	17.7338	1.509107
700	26.5	9.45%	17.7338	1.493526
770	26.5	10.39%	17.7338	1.477945
840	27	11.34%	18.0684	1.489956
910	27	12.28%	18.0684	1.474082
980	27	13.23%	18.0684	1.458207
1050	26	14.17%	17.3992	1.388912
1120	25.5	15.11%	17.0646	1.34721
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.50911 kg/cm²
 α = 63 °
 Angle Of Internal friction, φ = 36 °
 Cohesion = 0.384 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT disturbed 3% - 3

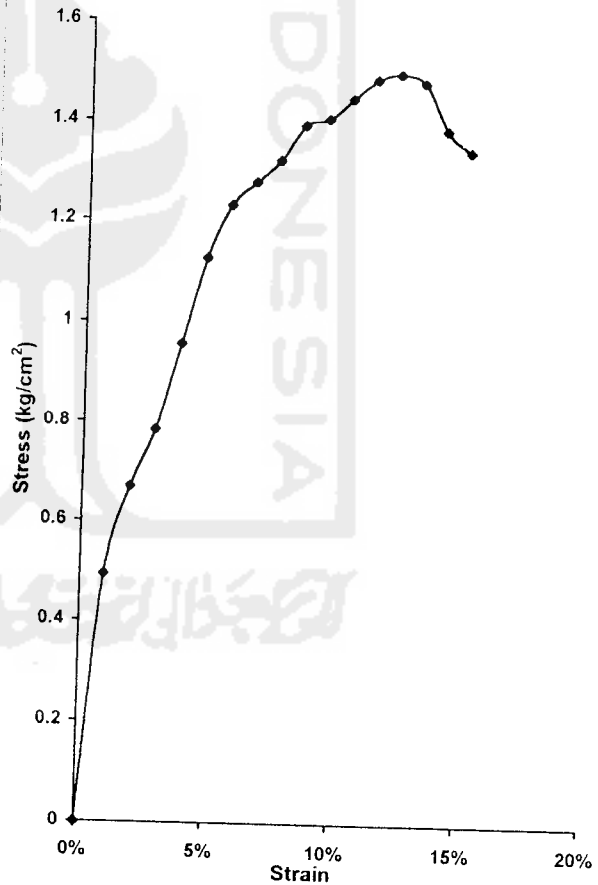
Date : November 18th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	158.5
Wet Unit wt (gr/cm ³)	1.98938
Dry Unit wt (gr/cm ³)	1.50546

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	54.18	56.27
Wt of Cup + Dry soil, gr	46.32	48.05
Water Content %	32.47	31.82
Average water content %	32.14	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	8	0.94%	5.3536	0.493208
140	11	1.89%	7.3612	0.671694
210	13	2.83%	8.6996	0.786177
280	16	3.78%	10.7072	0.958195
350	19	4.72%	12.7148	1.126685
420	21	5.67%	14.0532	1.232937
490	22	6.61%	14.7224	1.278713
560	23	7.56%	15.3916	1.323314
630	24.5	8.50%	16.3954	1.395212
700	25	9.45%	16.73	1.408987
770	26	10.39%	17.3992	1.450059
840	27	11.34%	18.0684	1.489956
910	27.5	12.28%	18.403	1.501379
980	27.5	13.23%	18.403	1.485211
1050	26	14.17%	17.3992	1.388912
1120	25.5	15.11%	17.0646	1.34721
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.50138 kg/cm²
 α = 60 °
 Angle Of Internal friction, φ = 30 °
 Cohesion = 0.433 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT disturbed 6% - 1

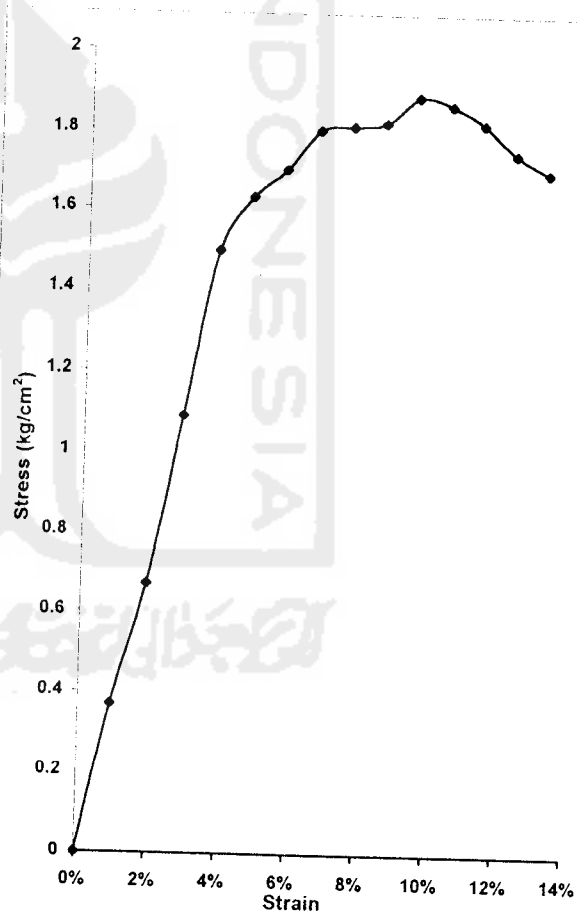
Date : November 19th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	156.8
Wet Unit wt (gr/cm ³)	1.96804
Dry Unit wt (gr/cm ³)	1.48182

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	54.30	56.41
Wt of Cup + Dry soil, gr	46.35	47.96
Water Content %	32.80	32.83
Average water content %	32.81	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (ΔL/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	6	0.94%	4.0152	0.369906
140	11	1.89%	7.3612	0.671694
210	18	2.83%	12.0456	1.088553
280	25	3.78%	16.73	1.49718
350	27.5	4.72%	18.403	1.630729
420	29	5.67%	19.4068	1.702627
490	31	6.61%	20.7452	1.801823
560	31.5	7.56%	21.0798	1.812364
630	32	8.50%	21.4144	1.822318
700	33.5	9.45%	22.4182	1.888042
770	33.5	10.39%	22.4182	1.868346
840	33	11.34%	22.0836	1.821058
910	32	12.28%	21.4144	1.74706
980	31.5	13.23%	21.0798	1.701241
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.88804 kg/cm²
 α = 54 °
 Angle Of Internal friction, φ = 18 °
 Cohesion = 0.686 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT disturbed 6% - 2

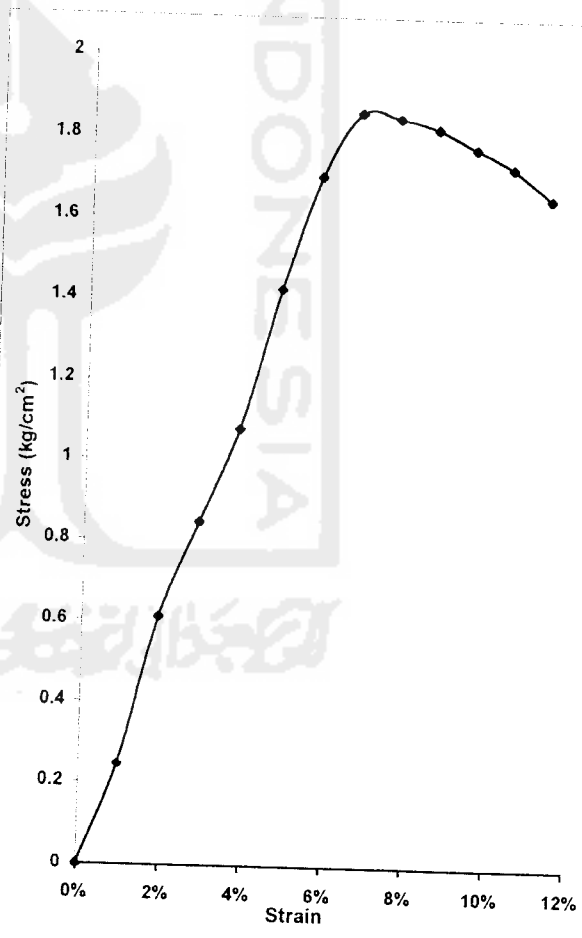
Date : November 19th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	158.03
Wet Unit wt (gr/cm ³)	1.98348
Dry Unit wt (gr/cm ³)	1.4931

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	54.30	56.41
Wt of Cup + Dry soil, gr	46.32	47.98
Water Content %	32.96	32.73
Average water content %	32.84	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	4	0.94%	2.6768	0.246604
140	10	1.89%	6.692	0.610631
210	14	2.83%	9.3688	0.846652
280	18	3.78%	12.0456	1.077969
350	24	4.72%	16.0608	1.423182
420	29	5.67%	19.4068	1.702627
490	32	6.61%	21.4144	1.859947
560	32.1	7.56%	21.48132	1.846886
630	32	8.50%	21.4144	1.822318
700	31.5	9.45%	21.0798	1.775323
770	31	10.39%	20.7452	1.728917
840	30	11.34%	20.076	1.655507
910				
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.85995 kg/cm²
 α = 52.5°
 Angle Of Internal friction, φ = 15°
 Cohesion = 0.714 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT disturbed 6% - 3

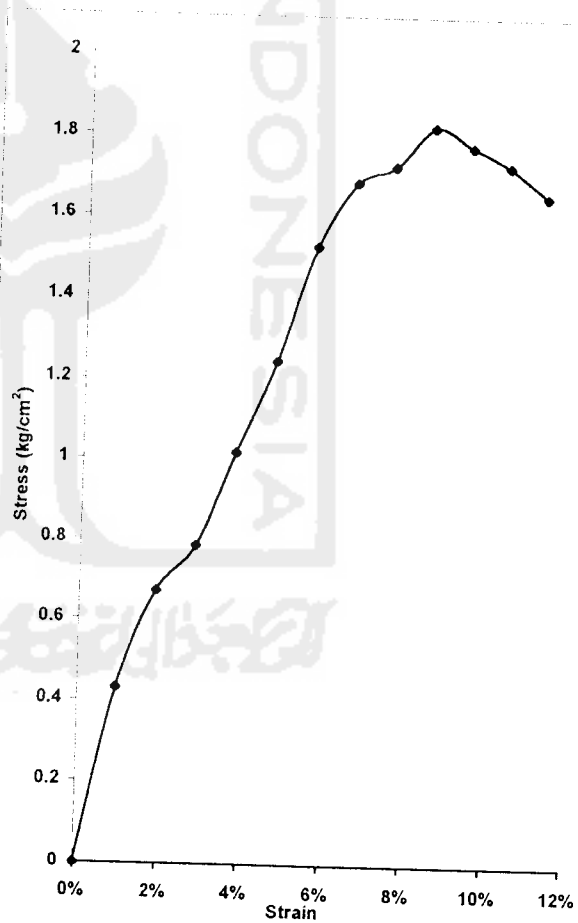
Date : November 19th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	159
Wet Unit wt (gr/cm ³)	1.99566
Dry Unit wt (gr/cm ³)	1.50149

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	54.30	56.41
Wt of Cup + Dry soil, gr	46.38	47.89
Water Content %	32.63	33.19
Average water content %	32.91	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	7	0.94%	4.6844	0.431557
140	11	1.89%	7.3612	0.671694
210	13	2.83%	8.6996	0.786177
280	17	3.78%	11.3764	1.018082
350	21	4.72%	14.0532	1.245284
420	26	5.67%	17.3992	1.526493
490	29	6.61%	19.4068	1.685577
560	30	7.56%	20.076	1.726061
630	32	8.50%	21.4144	1.822318
700	31.5	9.45%	21.0798	1.775323
770	31	10.39%	20.7452	1.728917
840	30	11.34%	20.076	1.655507
910				
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu =	1.82232 kg/cm ²
α =	56 °
Angle Of Internal friction, φ =	22 °
Cohesion =	0.615 kg/cm ²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT disturbed 9% - 1

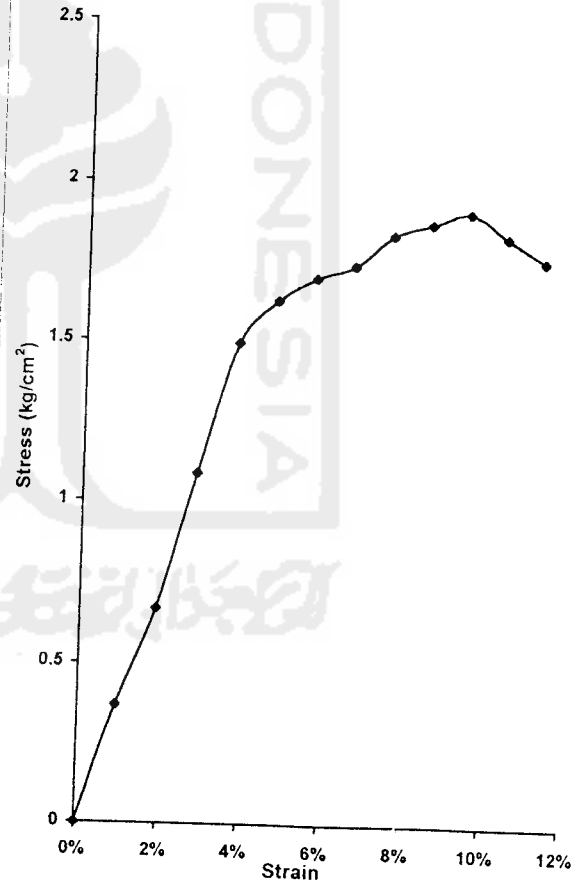
Date : November 19th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	156.8
Wet Unit wt (gr/cm ³)	1.96804
Dry Unit wt (gr/cm ³)	1.48182

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	54.30	56.41
Wt of Cup + Dry soil, gr	46.35	47.96
Water Content %	32.80	32.83
Average water content %	32.81	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (ΔL/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	6	0.94%	4.0152	0.369906
140	11	1.89%	7.3612	0.671694
210	18	2.83%	12.0456	1.088553
280	25	3.78%	16.73	1.49718
350	27.5	4.72%	18.403	1.630729
420	29	5.67%	19.4068	1.702627
490	30	6.61%	20.076	1.7437
560	32	7.56%	21.4144	1.841132
630	33	8.50%	22.0836	1.879265
700	34	9.45%	22.7528	1.916222
770	33	10.39%	22.0836	1.84046
840	32	11.34%	21.4144	1.765874
910				
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.91622 kg/cm²
 α = 54 °
 Angle Of Internal friction, φ = 18 °
 Cohesion = 0.696 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT disturbed 9% - 2

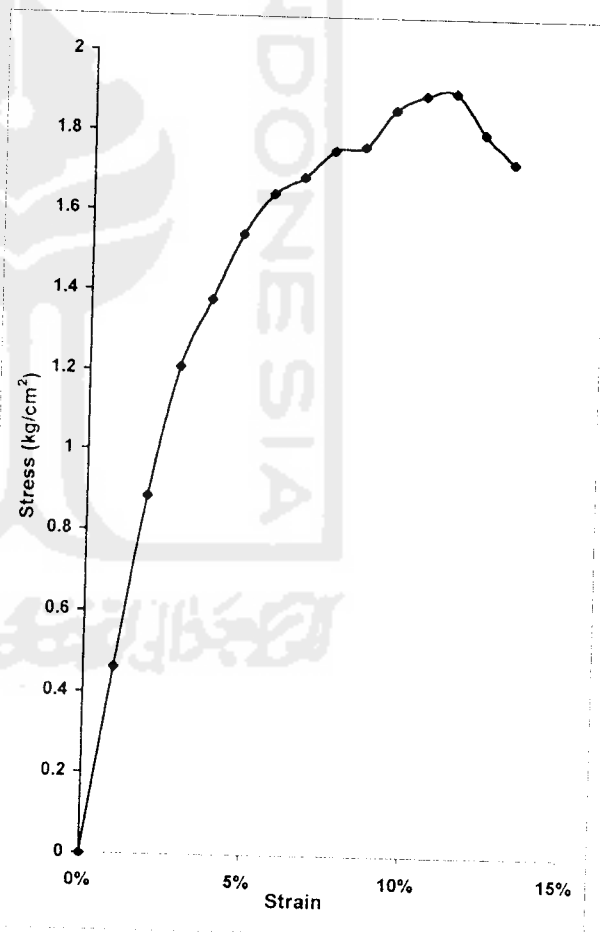
Date : November 19th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	155.13
Wet Unit wt (gr/cm ³)	1.94708
Dry Unit wt (gr/cm ³)	1.45828

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	54.41	56.34
Wt of Cup + Dry soil, gr	46.43	47.64
Water Content %	32.81	34.23
Average water content %	33.52	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (ΔL/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	7.5	0.94%	5.019	0.462383
140	14.5	1.89%	9.7034	0.885415
210	20	2.83%	13.384	1.209503
280	23	3.78%	15.3916	1.377405
350	26	4.72%	17.3992	1.54178
420	28	5.67%	18.7376	1.643916
490	29	6.61%	19.4068	1.685577
560	30.5	7.56%	20.4106	1.754829
630	31	8.50%	20.7452	1.76537
700	33	9.45%	22.0836	1.859863
770	34	10.39%	22.7528	1.896232
840	34.5	11.34%	23.0874	1.903833
910	33	12.28%	22.0836	1.801655
980	32	13.23%	21.4144	1.728245
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.90383 kg/cm²
 α = 59°
 Angle Of Internal friction, φ = 28°
 Cohesion = 0.572 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT disturbed 9% - 3

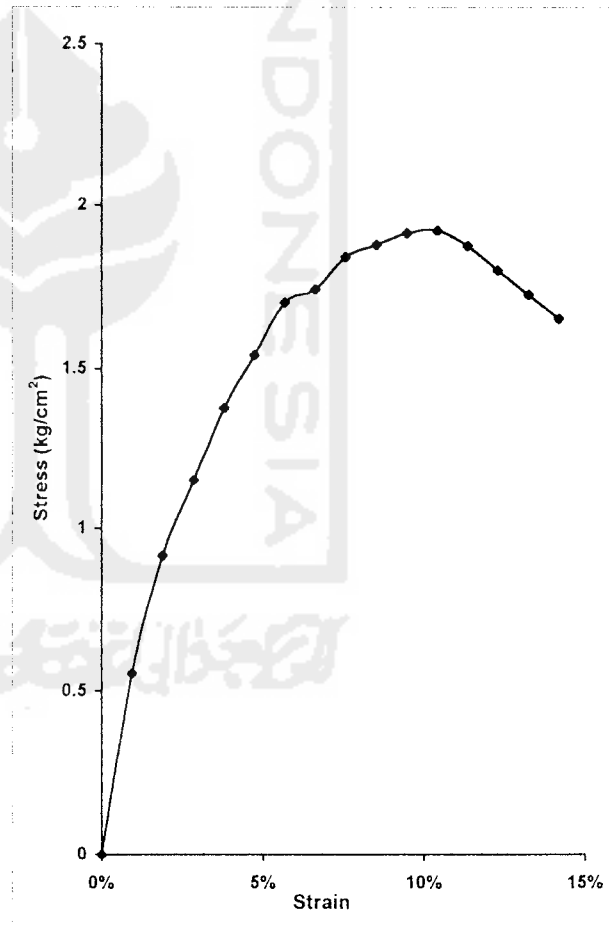
Date : November 19th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	155.69
Wet Unit wt (gr/cm ³)	1.95411
Dry Unit wt (gr/cm ³)	1.46377

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	54.40	56.34
Wt of Cup + Dry soil, gr	46.43	47.64
Water Content %	32.77	34.23
Average water content %	33.50	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	9	0.94%	6.0228	0.554859
140	15	1.89%	10.038	0.915946
210	19	2.83%	12.7148	1.149028
280	23	3.78%	15.3916	1.377405
350	26	4.72%	17.3992	1.54178
420	29	5.67%	19.4068	1.702627
490	30	6.61%	20.076	1.7437
560	32	7.56%	21.4144	1.841132
630	33	8.50%	22.0836	1.879265
700	34	9.45%	22.7528	1.916222
770	34.5	10.39%	23.0874	1.924117
840	34	11.34%	22.7528	1.876241
910	33	12.28%	22.0836	1.801655
980	32	13.23%	21.4144	1.728245
1050	31	14.17%	20.7452	1.656011
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu =	1.92412 kg/cm ²
α =	57 °
Angle Of Internal friction, φ =	24 °
Cohesion =	0.625 kg/cm ²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT disturbed 12% - 1

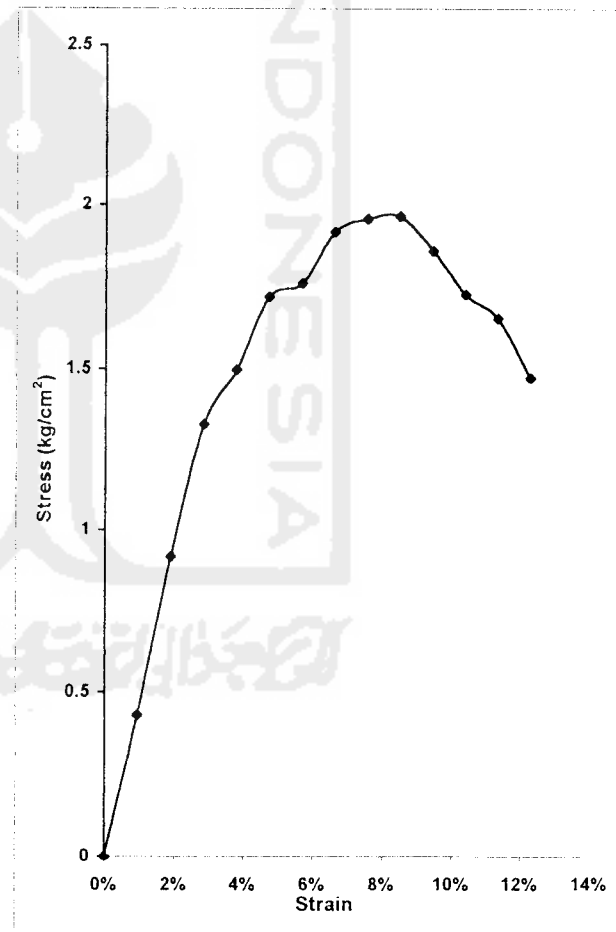
Date : November 19th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	154.15
Wet Unit wt (gr/cm ³)	1.93478
Dry Unit wt (gr/cm ³)	1.44063

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	55.13	56.14
Wt of Cup + Dry soil, gr	46.53	47.65
Water Content %	35.22	33.39
Average water content %	34.30	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (ΔL/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	7	0.94%	4.6844	0.431557
140	15	1.89%	10.038	0.915946
210	22	2.83%	14.7224	1.330453
280	25	3.78%	16.73	1.49718
350	29	4.72%	19.4068	1.719678
420	30	5.67%	20.076	1.761338
490	33	6.61%	22.0836	1.91807
560	34	7.56%	22.7528	1.956203
630	34.5	8.50%	23.0874	1.964686
700	33	9.45%	22.0836	1.859863
770	31	10.39%	20.7452	1.728917
840	30	11.34%	20.076	1.655507
910	27	12.28%	18.0684	1.474082
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.96469 kg/cm²
 α = 57°
 Angle Of Internal friction, φ = 24°
 Cohesion = 0.638 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT disturbed 12% - 2

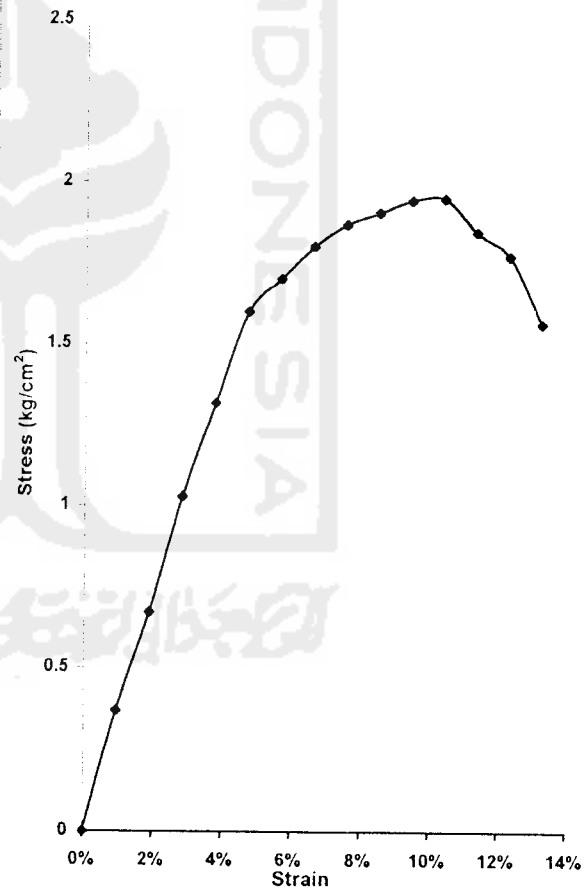
Date : November 19th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	155.36
Wet Unit wt (gr/cm ³)	1.94997
Dry Unit wt (gr/cm ³)	1.45149

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	55.12	56.13
Wt of Cup + Dry soil, gr	46.51	47.64
Water Content %	35.29	33.40
Average water content %	34.34	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (ΔL/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	6	0.94%	4.0152	0.369906
140	11	1.89%	7.3612	0.671694
210	17	2.83%	11.3764	1.028077
280	22	3.78%	14.7224	1.317518
350	27	4.72%	18.0684	1.601079
420	29	5.67%	19.4068	1.702627
490	31	6.61%	20.7452	1.801823
560	32.5	7.56%	21.749	1.8699
630	33.5	8.50%	22.4182	1.907739
700	34.5	9.45%	23.0874	1.944402
770	35	10.39%	23.422	1.952003
840	33.5	11.34%	22.4182	1.848649
910	32.5	12.28%	21.749	1.774357
980	29	13.23%	19.4068	1.566222
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu =	1.95200 kg/cm ²
α =	58.5 °
Angle Of Internal friction, φ =	27 °
Cohesion =	0.598 kg/cm ²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT disturbed 12% - 3

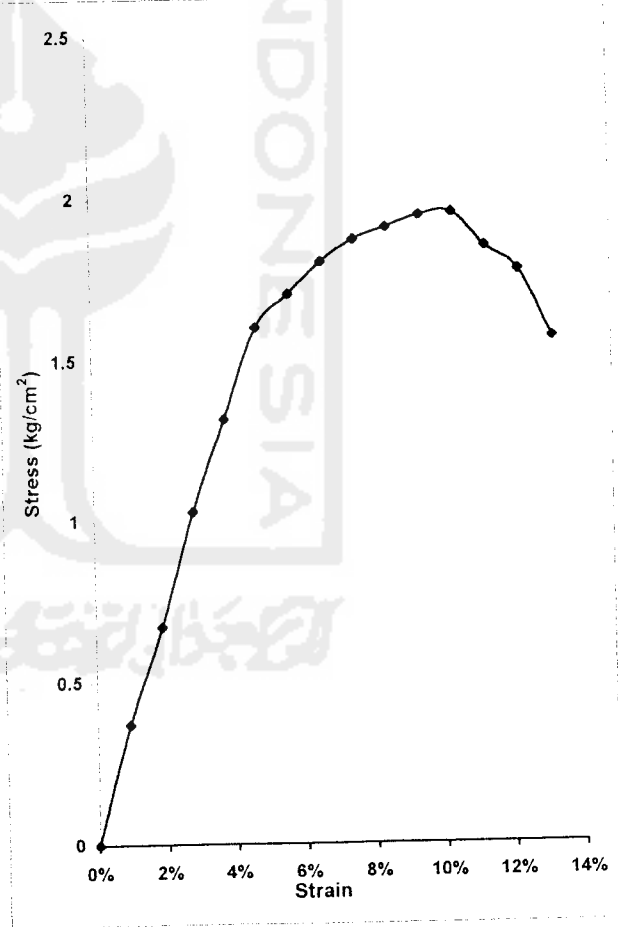
Date : November 19th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	155.36
Wet Unit wt (gr/cm ³)	1.94997
Dry Unit wt (gr/cm ³)	1.45149

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	55.12	56.13
Wt of Cup + Dry soil, gr	46.51	47.64
Water Content %	35.29	33.40
Average water content %	34.34	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%\L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	6	0.94%	4.0152	0.369906
140	11	1.89%	7.3612	0.671694
210	17	2.83%	11.3764	1.028077
280	22	3.78%	14.7224	1.317518
350	27	4.72%	18.0684	1.601079
420	29	5.67%	19.4068	1.702627
490	31	6.61%	20.7452	1.801823
560	32.5	7.56%	21.749	1.8699
630	33.5	8.50%	22.4182	1.907739
700	34.5	9.45%	23.0874	1.944402
770	35	10.39%	23.422	1.952003
840	33.5	11.34%	22.4182	1.848649
910	32.5	12.28%	21.749	1.774357
980	29	13.23%	19.4068	1.566222
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.95200 kg/cm²
 α = 58.5 °
 Angle Of Internal friction, ϕ = 27 °
 Cohesion = 0.598 kg/cm²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT disturbed 15% - 2

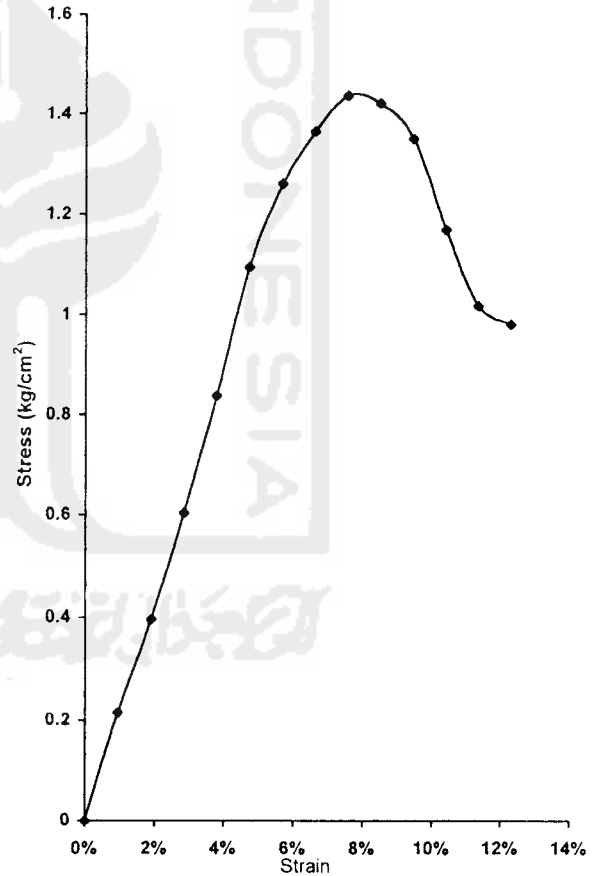
Date : November 20th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	154.88
Wet Unit wt (gr/cm ³)	1.94394
Dry Unit wt (gr/cm ³)	1.44036

Water Content		
Wt Container (cup), gr	22.11	22.22
Wt of Cup + Wet soil, gr	55.14	56.17
Wt of Cup + Dry soil, gr	46.54	47.42
Water Content %	35.20	34.72
Average water content %	34.96	

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (ΔL/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	3.5	0.94%	2.3422	0.215779
140	6.5	1.89%	4.3498	0.39691
210	10	2.83%	6.692	0.604751
280	14	3.78%	9.3688	0.838421
350	18.5	4.72%	12.3802	1.097036
420	21.5	5.67%	14.3878	1.262293
490	23.5	6.61%	15.7262	1.365898
560	25	7.56%	16.73	1.438384
630	25	8.50%	16.73	1.423686
700	24	9.45%	16.0608	1.352627
770	21	10.39%	14.0532	1.171202
840	18.5	11.34%	12.3802	1.020896
910	18	12.28%	12.0456	0.982721
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu =	1.43838 kg/cm ²
α =	57.5 °
Angle Of Internal friction, φ =	25 °
Cohesion =	0.458 kg/cm ²



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth : 1.00 m
 Sample No : UCT disturbed 15% - 3

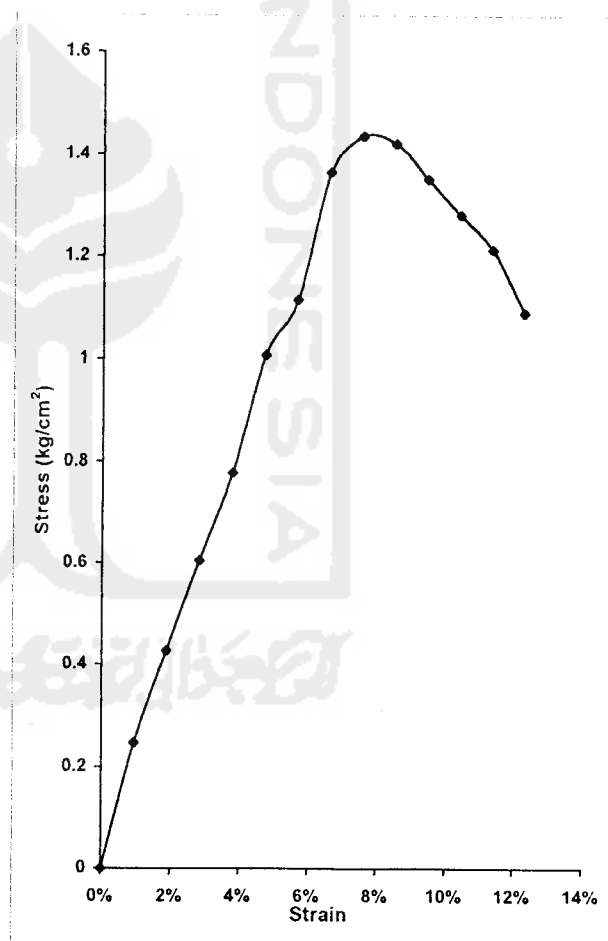
Date : November 20th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	155.25
Wet Unit wt (gr/cm ³)	1.94859
Dry Unit wt (gr/cm ³)	1.44409

Water Content			
Wt Container (cup), gr	22.11	22.22	
Wt of Cup + Wet soil, gr	55.14	56.17	
Wt of Cup + Dry soil, gr	46.54	47.43	
Water Content %	35.20	34.67	
Average water content %	34.94		

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (% L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	4	0.94%	2.6768	0.246604
140	7	1.89%	4.6844	0.427442
210	10	2.83%	6.692	0.604751
280	13	3.78%	8.6996	0.778533
350	17	4.72%	11.3764	1.008087
420	19	5.67%	12.7148	1.115514
490	23.5	6.61%	15.7262	1.365898
560	25	7.56%	16.73	1.438384
630	25	8.50%	16.73	1.423686
700	24	9.45%	16.0608	1.352627
770	23	10.39%	15.3916	1.282745
840	22	11.34%	14.7224	1.214038
910	20	12.28%	13.384	1.091912
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu = 1.43838 kg/cm²
 α = 56 °
 Angle Of Internal friction, φ = 22 °
 Cohesion = 0.485 kg/cm²



LAMPIRAN 6



LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAxIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir

Location : Sedayu, Kabupaten Bantul

Description of soil : Clay

Sample No. : 12%,0 hari

Date : Desember 17th, 2002

Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.74
No. Of cell			Diameter	D cm	3.835
No. of Proving ring			Cross area	A cm ²	11.5510
Coeff. proving ring K =	0.2049		Volume	V cm ³	89.4050
k = K / A	0.017738682		Weight	W gram	153.1900
Cell pessusre	0.50		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain			Reading of proving ring	Pore pressure	
	Axial deformation	Strain %			u	
				kg/cm ²	kg/cm ²	kg/cm ²
0	0	0	1	0	0	
	40	0.517	0.995	4.5	0.07941154	
	80	1.034	0.990	31	0.54421542	
	120	1.550	0.984	52	0.908110495	
	160	2.067	0.979	65	1.129179388	
	200	2.584	0.974	77	1.330584472	
	240	3.101	0.969	92	1.581355344	
	280	3.618	0.964	104	1.778085116	
	320	4.134	0.959	111	1.887588244	
	360	4.651	0.953	121	2.046548833	
	400	5.168	0.948	129	2.170032059	
	440	5.685	0.943	136	2.27531824	
	480	6.202	0.938	144	2.39595961	
	520	6.718	0.933	150	2.482040344	
	560	7.235	0.928	157	2.583476268	
	600	7.752	0.922	163	2.667265183	
	640	8.269	0.917	167	2.71741019	
	680	8.786	0.912	171	2.766821815	
	720	9.302	0.907	172	2.767234343	
	760	9.819	0.902	178	2.847448019	
	800	10.336	0.897	183	2.910656397	
	840	10.853	0.891	186	2.94132094	
	880	11.370	0.886	186.5	2.932130744	
	920	11.886	0.881	186.5	2.915033772	
	960	12.403	0.876	186.5	2.897936799	
	1000	12.920	0.871	185	2.857669534	
	1040	13.437	0.866	183	2.809999691	
	1080	13.953	0.860	180	2.747433023	
	1120	14.470	0.855	173	2.624729016	
	1160	14.987	0.850	157	2.367586886	



LABORATORIUM MEKANIKA TANAH
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UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir
 Location Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;0 hari
 Date : Desember 17th, 2002
 Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.645
No. Of cell			Diameter	D cm	3.79
No. of Proving ring			Cross area	A cm ²	11.2815
Coeff. proving ring K =	0.2049		Volume	V cm ³	86.2474
k = K / A	0.0181624		Wight	W gram	162.2800
Cell pessure	2.00		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain		Reading of proving ring	Pore pressure	
	Axial deformation	Strain		u	
		%		kg/cm ²	kg/cm ²
0	0	0	1	0	0
	40	0.517	0.995	8	0.141176071
	80	1.034	0.990	44	0.77243479
	120	1.550	0.984	135	2.357594554
	160	2.067	0.979	188	3.265934231
	200	2.584	0.974	225	3.888071508
	240	3.101	0.969	255	4.383104486
	280	3.618	0.964	275	4.701667374
	320	4.134	0.959	292	4.965547452
	360	4.651	0.953	302	5.10791527
	400	5.168	0.948	312	5.248449632
	440	5.685	0.943	321	5.370420257
	480	6.202	0.938	325	5.40754773
	520	6.718	0.933	333	5.510129564
	560	7.235	0.928	336	5.528968319
	600	7.752	0.922	340	5.563620627
	640	8.269	0.917	344	5.597539553
	680	8.786	0.912	346	5.598364608
	720	9.302	0.907	349	5.614911544
	760	9.819	0.902	353	5.646905342
	800	10.336	0.897	355	5.646355305
	840	10.853	0.891	356	5.629625024
	880	11.370	0.886	358	5.628433278
	920	11.886	0.881	360	5.626874841
	960	12.403	0.876	361	5.609411177
	1000	12.920	0.871	363	5.607211031
	1040	13.437	0.866	363.5	5.581611409
	1080	13.953	0.860	363.5	5.548288356
	1120	14.470	0.855	362	5.492207537
	1160	14.987	0.850	361	5.443941821



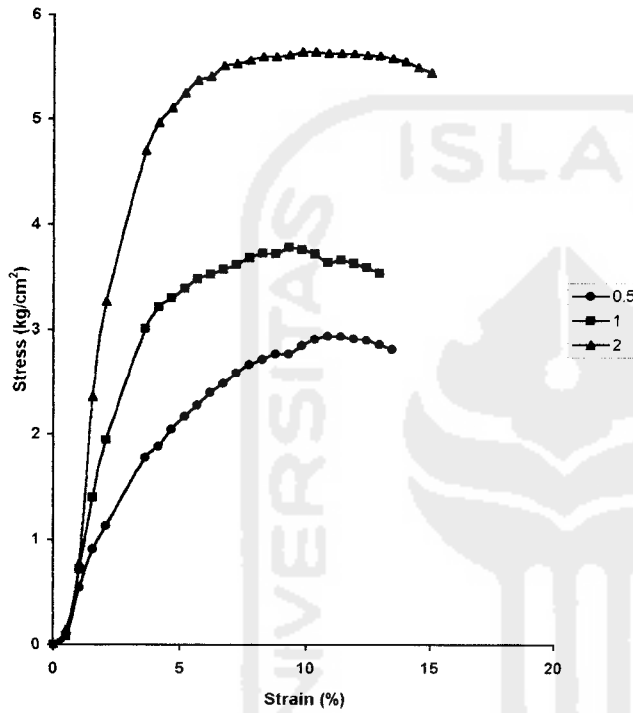
LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESSION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

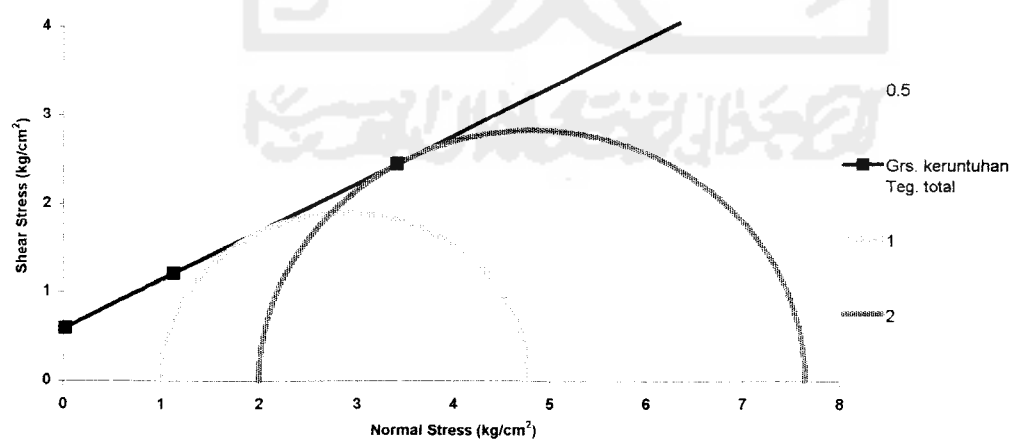
Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%:0 HARI
 Date : Desember 17th, 2002
 Tested by : Marwan Hamdono Prasadja



Piece No :	1	2	3
H cm	7.74	7.7	7.645
D cm	3.835	3.83	3.79
A cm ²	11.55	11.52	11.28
V cm ³	89.40	88.71	86.25
Wt gram	153.19	163.39	162.28
Water Content			
Wt Container (cup), gr	14.43	21.67	
Wt of Cup + Wet soil, gr	31.43	39.62	
Wt of Cup + Dry soil, gr	27.37	35.52	
Water Content %	31.38	29.60	
Average water content %	30.49		
γ_b gram/cm ³	1.71344	1.841821	1.881565
γ_d gram/cm ³	1.313089	1.411473	1.441931

σ_3	0.5	1	2
$\sigma_1 - \sigma_3 = P/A$	2.941321	3.780814	5.646905
$\sigma_1 + \sigma_3$	3.441321	4.780814	7.646905
$(\sigma_1 + \sigma_3)/2$	1.97066	2.890407	4.823453
$(\sigma_1 - \sigma_3)/2$	1.47066	1.890407	2.823453
Angle of shearing resistance (ϕ)	28.50096		
Apperen cohesion (kg/cm ²)	0.592692		





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TRIAXIAL COMPRESSION TEST LOADING DATA

Project : Tugas Akhir

Location : Sedayu, Kabupaten Bantul

Description of soil : Clay

Sample No. : 12%;7 hari

Date : Desember 21th, 2002

Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.74
No. Of cell			Diameter	D cm	3.835
No. of Proving ring			Cross area	A cm ²	11.5510
Coeff. proving ring K =	0.2049		Volume	V cm ³	89.4050
k = K / A	0.017738682		Weight	W gram	147.8000
Cell pressure	0.50		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain			Reading of proving ring	Pore pressure	
	Axial deformation	Strain %			u kg/cm ²	kg/cm ²
0	0	0	1	0	0	
	40	0.517	0.995	11	0.194117098	
	80	1.034	0.990	20	0.351106723	
	120	1.550	0.984	34	0.593764554	
	160	2.067	0.979	67	1.163923369	
	200	2.584	0.974	97	1.676190828	
	240	3.101	0.969	138	2.372033016	
	280	3.618	0.964	180	3.077455008	
	320	4.134	0.959	201	3.418065198	
	360	4.651	0.953	218	3.687170625	
	400	5.168	0.948	235	3.953159178	
	440	5.685	0.943	250	4.182570293	
	480	6.202	0.938	260	4.326038184	
	520	6.718	0.933	270	4.467672619	
	560	7.235	0.928	279	4.591018336	
	600	7.752	0.922	285	4.663623173	
	640	8.269	0.917	284	4.621224515	
	680	8.786	0.912	283	4.579009203	
	720	9.302	0.907	282	4.536977236	
	760	9.819	0.902	281	4.495128615	
	800	10.336	0.897	280	4.453463339	
	840	10.853	0.891			
	880	11.370	0.886			
	920	11.886	0.881			
	960	12.403	0.876			
	1000	12.920	0.871			
	1040	13.437	0.866			
	1080	13.953	0.860			
	1120	14.470	0.855			
	1160	14.987	0.850			



LABORATORIUM MEKANIKA TANAH
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Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESSION TEST LOADING DATA

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;7 hari
 Date : Desember 21th, 2002
 Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Hight	H cm	7.7
No. Of cell			Diameter	D cm	3.83
No. of Proving ring			Cross area	A cm ²	11.5209
Coeff. proving ring K =	0.2049		Volume	V cm ³	88.7111
k = K / A	0.017785		Wight	W gram	147.7000
Cell pessure	1.00		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain			Reading of proving ring		Pore pressure	
	Axial deformation	Strain %			kg/cm ²	u kg/cm ²	kg/cm ²
0	0	0	1	0	0		
	40	0.517	0.995	21	0.370587187		
	80	1.034	0.990	22	0.386217395		
	120	1.550	0.984	46	0.803328515		
	160	2.067	0.979	80	1.389759247		
	200	2.584	0.974	122	2.108198773		
	240	3.101	0.969	156	2.681428627		
	280	3.618	0.964	195	3.333909592		
	320	4.134	0.959	225	3.826192386		
	360	4.651	0.953	270	4.566679215		
	400	5.168	0.948	315	5.298915493		
	440	5.685	0.943	355	5.939249817		
	480	6.202	0.938	380	6.322671192		
	520	6.718	0.933	390	6.453304894		
	560	7.235	0.928	395	6.499828827		
	600	7.752	0.922	398	6.512708852		
	640	8.269	0.917	400	6.508766922		
	680	8.786	0.912	399	6.455917569		
	720	9.302	0.907	397	6.387162988		
	760	9.819	0.902	396	6.334771998		
	800	10.336	0.897	395	6.282564354		
	840	10.853	0.891	394	6.230540055		
	880	11.370	0.886				
	920	11.886	0.881				
	960	12.403	0.876				
	1000	12.920	0.871				
	1040	13.437	0.866				
	1080	13.953	0.860				
	1120	14.470	0.855				
	1160	14.987	0.850				



LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir
 Location Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;7 hari
 Date : Desember 21th, 2002
 Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.645
No. Of cell			Diameter	D cm	3.79
No. of Proving ring			Cross area	A cm ²	11.2815
Coeff. proving ring K =	0.2049		Volume	V cm ³	86.2474
k = K / A	0.0181624		Wight	W gram	159.8500
Cell pessure	2.00		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain		Reading of proving ring	Pore pressure	
	Axial defor- mation	Strain %		u	
				kg/cm ²	kg/cm ²
0	0	0	1	0	0
	40	0.517	0.995	22	0.388234196
	80	1.034	0.990	60	1.053320168
	120	1.550	0.984	160	2.794186138
	160	2.067	0.979	260	4.516717553
	200	2.584	0.974	345	5.961709646
	240	3.101	0.969	415	7.133287692
	280	3.618	0.964	480	8.206546689
	320	4.134	0.959	530	9.012808732
	360	4.651	0.953	574	9.708421738
	400	5.168	0.948	594	9.992240645
	440	5.685	0.943	610	10.20547152
	480	6.202	0.938	625	10.39913025
	520	6.718	0.933	635	10.50730412
	560	7.235	0.928	640	10.53136823
	600	7.752	0.922	644	10.53815201
	640	8.269	0.917	646	10.51165858
	680	8.786	0.912	647	10.46861821
	720	9.302	0.907	648	10.4253945
	760	9.819	0.902	650	10.39798434
	800	10.336	0.897	655	10.41792317
	840	10.853	0.891	650	10.27880973
	880	11.370	0.886	646	10.15633491
	920	11.886	0.881	645	10.08148409
	960	12.403	0.876		
	1000	12.920	0.871		
	1040	13.437	0.866		
	1080	13.953	0.860		
	1120	14.470	0.855		
	1160	14.987	0.850		



LABORATORIUM MEKANIKA TANAH
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UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;0 hari
 Date : Desember17th, 2002
 Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Hight	H cm	7.7
No. Of cell			Diameter	D cm	3.83
No. of Proving ring			Cross area	A cm ²	11.5209
Coeff. proving ring K =	0.2049		Volume	V cm ³	88.7111
k = K / A	0.017785		Wight	W gram	163.3900
Cell pessure	1.00		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain			Reading of proving ring		Pore pressure	
	Axial defor- mation	Strain %				u	
				kg/cm ²		kg/cm ²	
0	0	0	1	0	0		
	40	0.517	0.995	4.5	0.07941154		
	80	1.034	0.990	41	0.719768782		
	120	1.550	0.984	80	1.397093069		
	160	2.067	0.979	112	1.945662946		
	200	2.584	0.974	138	2.384683859		
	240	3.101	0.969	165	2.836126432		
	280	3.618	0.964	176	3.009067119		
	320	4.134	0.959	189	3.214001604		
	360	4.651	0.953	195	3.298157211		
	400	5.168	0.948	201.5	3.38962372		
	440	5.685	0.943	208	3.479898484		
	480	6.202	0.938	212	3.527384981		
	520	6.718	0.933	216	3.574138095		
	560	7.235	0.928	220	3.620157828		
	600	7.752	0.922	225	3.681807768		
	640	8.269	0.917	229	3.726269063		
	680	8.786	0.912	230	3.721456243		
	720	9.302	0.907	235	3.780814363		
	760	9.819	0.902	235	3.759271262		
	800	10.336	0.897	234	3.721822934		
	840	10.853	0.891	230	3.637117291		
	880	11.370	0.886	233	3.663198195		
	920	11.886	0.881	232	3.626208231		
	960	12.403	0.876	231	3.589401612		
	1000	12.920	0.871	229	3.537331477		
	1040	13.437	0.866	220	3.378141706		
	1080	13.953	0.860	217	3.312183145		
	1120	14.470	0.855	212	3.216430933		
	1160	14.987	0.850	205	3.091435106		



LABORATORIUM MEKANIKA TANAH
JURUSAN TEKNIK SIPIL-FTSP
UNIVERSITAS ISLAM INDONESIA

UNCONFINED COMPRESSION TEST

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Depth. : 1.00 m
 Sample No : UCT disturbed 15% - 1

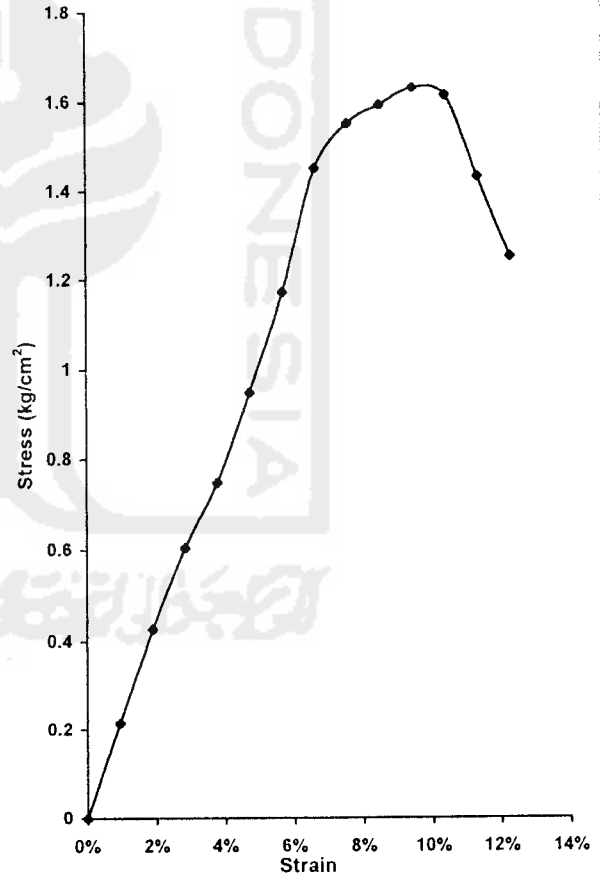
Date : November 20th, 2002
 Tested by : Marwan Hamdono Prasadja

Sample data	
diam (mm)	3.7
Area (mm ²)	10.7521
Ht,Lo (mm)	7.41
Vol (mm ³)	79.6731
Wt (gr)	155
Wet Unit wt (gr/cm ³)	1.94545
Dry Unit wt (gr/cm ³)	1.44204

Water Content			
Wt Container (cup), gr	22.11	22.22	
Wt of Cup + Wet soil, gr	55.13	56.14	
Wt of Cup + Dry soil, gr	46.54	47.41	
Water Content %	35.16	34.66	
Average water content %	34.91		

LRC = 0.6692 kg/div

Deformation dial rading (x 10 ⁻²)	Load dial (unit)	Unit Strain (%L/Lo)	Total load on sample (kg)	Sample stress (kg/cm ²)
0	0	0.00%	0	0
70	3.5	0.94%	2.3422	0.215779
140	7	1.89%	4.6844	0.427442
210	10	2.83%	6.692	0.604751
280	12.5	3.78%	8.365	0.74859
350	16	4.72%	10.7072	0.948788
420	20	5.67%	13.384	1.174226
490	25	6.61%	16.73	1.453083
560	27	7.56%	18.0684	1.553455
630	28	8.50%	18.7376	1.594528
700	29	9.45%	19.4068	1.634425
770	29	10.39%	19.4068	1.617374
840	26	11.34%	17.3992	1.434773
910	23	12.28%	15.3916	1.255699
980				
1050				
1120				
1190				
1260				
1330				
1400				
1470				
1540				
1610				
1680				
1750				
1820				
1890				
1960				



qu =	1.63442 kg/cm ²
α =	58 °
Angle Of Internal friction, φ =	26 °
Cohesion =	0.511 kg/cm ²



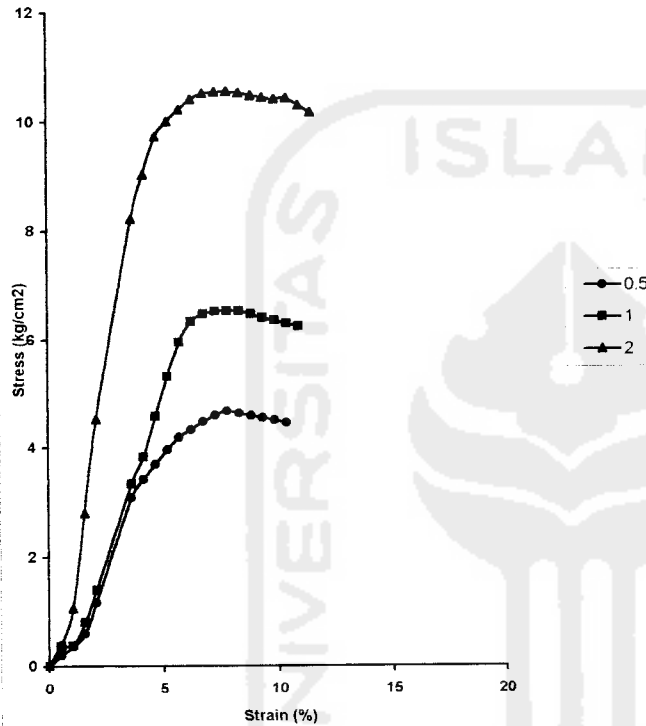
LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESSION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;7 HARI
 Date : Desember 21th, 2002
 Tested by : Marwan Hamdono Prasadja

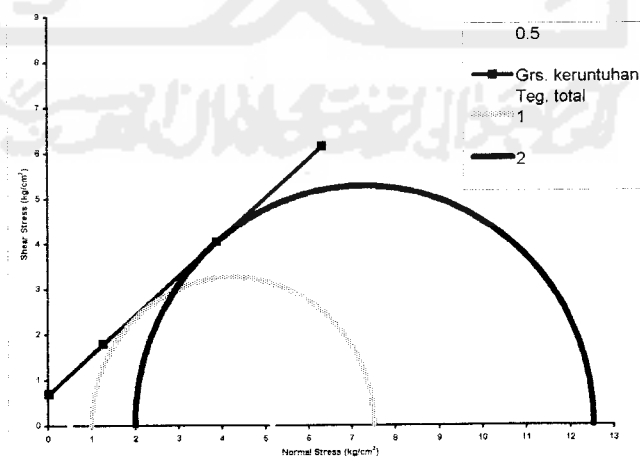


Piece No :	1	2	3
H cm	7.74	7.7	7.645
D cm	3.835	3.83	3.79
A cm ²	11.55	11.52	11.28
V cm ³	89.40	88.71	86.25
Wt gram	153.19	163.39	162.28

Wt Container (cup), gr	14.43	21.67
Wt of Cup + Wet soil, gr	31.43	39.62
Wt of Cup + Dry soil, gr	27.37	35.99
Water Content %	31.38	25.35
Average water content %		

γ_b gram/cm ³	1.653152	1.664954	1.85339
γ_d gram/cm ³	1.287879	1.297074	1.443873

σ_3	0.5	1	2
$\sigma_1 - \sigma_3 = P/A$	4.663623	6.512709	10.53815
$\sigma_1 + \sigma_3$	5.163623	7.512709	12.53815
$(\sigma_1 + \sigma_3)/2$	2.831812	4.256354	7.269076
$(\sigma_1 - \sigma_3)/2$	2.331812	3.256354	5.269076
Angle of shearing resistance (ϕ)	40.75745		
Apperen cohesion (kg/cm ²)	0.690367		





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TRIAXIAL COMPRESSION TEST LOADING DATA

Project : Tugas Akhir

Location : Sedayu, Kabupaten Bantul

Description of soil : Clay

Sample No. : 12%;14 hari

Date : Desember 14th, 2002

Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.74
No. Of cell			Diameter	D cm	3.835
No. of Proving ring			Cross area	A cm ²	11.5510
Coeff. proving ring K =	0.2049		Volume	V cm ³	89.4050
k = K / A	0.017738682		Weight	W gram	147.0000
Cell pessure	0.50		Wet density	gr/cm ³	1.6442
		Rate of compression : 0.5 %			

Time	Strain		Reading of proving ring	Pore pressure	
	Axial deform- ation	Strain %		u	
				kg/cm ²	kg/cm ²
0	0	0	1	0	
	40	0.517	0.995	25	0.441175223
	80	1.034	0.990	43	0.754879454
	120	1.550	0.984	64	1.117674455
	160	2.067	0.979	82	1.424503228
	200	2.584	0.974	154	2.661168944
	240	3.101	0.969	177	3.042390172
	280	3.618	0.964	205	3.504879315
	320	4.134	0.959	228	3.877208285
	360	4.651	0.953	251	4.245320307
	400	5.168	0.948	270	4.541927566
	440	5.685	0.943	287	4.801590697
	480	6.202	0.938	298	4.958305303
	520	6.718	0.933	304	5.030268431
	560	7.235	0.928	306	5.035310433
	600	7.752	0.922	307	5.023622154
	640	8.269	0.917	307.5	5.003614572
	680	8.786	0.912	306	4.951154827
	720	9.302	0.907	305.5	4.915058672
	760	9.819	0.902	305	4.879054191
	800	10.336	0.897	304.5	4.843141382
	840	10.853	0.891	303	4.791506692
	880	11.370	0.886		
	920	11.886	0.881		
	960	12.403	0.876		
	1000	12.920	0.871		
	1040	13.437	0.866		
	1080	13.953	0.860		
	1120	14.470	0.855		
	1160	14.987	0.850		



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UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAxIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;21 hari
 Date : Desember 20th, 2002
 Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.74
No. Of cell			Diameter	D cm	3.835
No. of Proving ring			Cross area	A cm ²	11.5510
Coeff. proving ring K =	0.2049		Volume	V cm ³	89.4050
k = K / A	0.017738682		Weight	W gram	139.0000
Cell pessure	0.40		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain		Reading of proving ring	Pore pressure	
	Axial deformation	Strain %		u kg/cm ²	kg/cm ²
0	0	0	1	0	0
	40	0.517	0.995	18	0.31764616
	80	1.034	0.990	54	0.947988151
	120	1.550	0.984	99	1.728902673
	160	2.067	0.979	132	2.293102758
	200	2.584	0.974	163	2.816691804
	240	3.101	0.969	188	3.231465268
	280	3.618	0.964	205	3.504879315
	320	4.134	0.959	228	3.877208285
	360	4.651	0.953	246	4.160752173
	400	5.168	0.948	263	4.424173888
	440	5.685	0.943	279	4.667748448
	480	6.202	0.938	290	4.825196436
	520	6.718	0.933	297	4.914439881
	560	7.235	0.928	303	4.985944645
	600	7.752	0.922	306	5.007258564
	640	8.269	0.917	302	4.914119026
	680	8.786	0.912	298	4.821712871
	720	9.302	0.907	297	4.778305812
	760	9.819	0.902	296	4.7350821
	800	10.336	0.897	294	4.676136506
	840	10.853	0.891	293	4.633371157
	880	11.370	0.886		
	920	11.886	0.881		
	960	12.403	0.876		
	1000	12.920	0.871		
	1040	13.437	0.866		
	1080	13.953	0.860		
	1120	14.470	0.855		
	1160	14.987	0.850		



LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir

Sample No. : 12%;21 hari

Location Sedayu, Kabupaten Bantul

Date : Desember 20th 2002

Description of soil : Clay

Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Hight	H cm	7.645
No. Of cell			Diameter	D cm	3.79
No. of Proving ring			Cross area	A cm ²	11.2815
Coeff. proving ring K =	0.2049		Volume	V cm ³	86.2474
k = K / A	0.0181624		Wight	W gram	142.0000
Cell pessusre	1.50		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain			Reading of proving ring		Pore pressure	
	Axial deformation	Strain				u	
		%		kg/cm ²	kg/cm ²	kg/cm ²	
0	0	0	1	0	0		
	40	0.517	0.995	33	0.582351294		
	80	1.034	0.990	99	1.737978277		
	120	1.550	0.984	205	3.580050989		
	160	2.067	0.979	270	4.690437459		
	200	2.584	0.974	335	5.788906468		
	240	3.101	0.969	384	6.600439696		
	280	3.618	0.964	421	7.197825325		
	320	4.134	0.959	467	7.941474864		
	360	4.651	0.953	497	8.40607248		
	400	5.168	0.948	532	8.9492795		
	440	5.685	0.943	556	9.302036333		
	480	6.202	0.938	578	9.617115655		
	520	6.718	0.933	594	9.828879762		
	560	7.235	0.928	615	10.11998665		
	600	7.752	0.922	635	10.3908797		
	640	8.269	0.917	648	10.54420241		
	680	8.786	0.912	656	10.61424041		
	720	9.302	0.907	661	10.63454593		
	760	9.819	0.902	660	10.55795333		
	800	10.336	0.897	659	10.48154407		
	840	10.853	0.891	658	10.40531816		
	880	11.370	0.886	657	10.3292756		
	920	11.886	0.881	655	10.23778617		
	960	12.403	0.876				
	1000	12.920	0.871				
	1040	13.437	0.866				
	1080	13.953	0.860				
	1120	14.470	0.855				
	1160	14.987	0.850				



LABORATORIUM MEKANIKA TANAH
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UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;21 hari
 Date : Desember 20th, 2002
 Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Hight	H cm	7.7
No. Of cell			Diameter	D cm	3.83
No. of Proving ring			Cross area	A cm ²	11.5209
Coeff. proving ring K =	0.2049		Volume	V cm ³	88.7111
k = K / A	0.017785		Wight	W gram	150.0000
Cell pessure	0.95		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain		Reading of proving ring	Pore pressure	
	Axial defor- mation	Strain %		u	kg/cm ²
			kg/cm ²	kg/cm ²	kg/cm ²
0	0	0	1	0	0
	40	0.517	0.995	30	0.529410267
	80	1.034	0.990	80	1.404426891
	120	1.550	0.984	190	3.318096039
	160	2.067	0.979	230	3.995557835
	200	2.584	0.974	270	4.66568581
	240	3.101	0.969	290	4.984707062
	280	3.618	0.964	312	5.334255348
	320	4.134	0.959	335	5.696775331
	360	4.651	0.953	367	6.207301007
	400	5.168	0.948	375	6.30823273
	440	5.685	0.943	389	6.508079377
	480	6.202	0.938	392	6.522334493
	520	6.718	0.933	408	6.751149736
	560	7.235	0.928	412	6.779568296
	600	7.752	0.922	424	6.938162194
	640	8.269	0.917	438	7.12709978
	680	8.786	0.912	449	7.264929795
	720	9.302	0.907	455	7.32030015
	760	9.819	0.902	454	7.262592139
	800	10.336	0.897	453	7.205067474
	840	10.853	0.891	451	7.131912601
	880	11.370	0.886	449	7.059124419
	920	11.886	0.881	447	6.986702927
	960	12.403	0.876		
	1000	12.920	0.871		
	1040	13.437	0.866		
	1080	13.953	0.860		
	1120	14.470	0.855		
	1160	14.987	0.850		



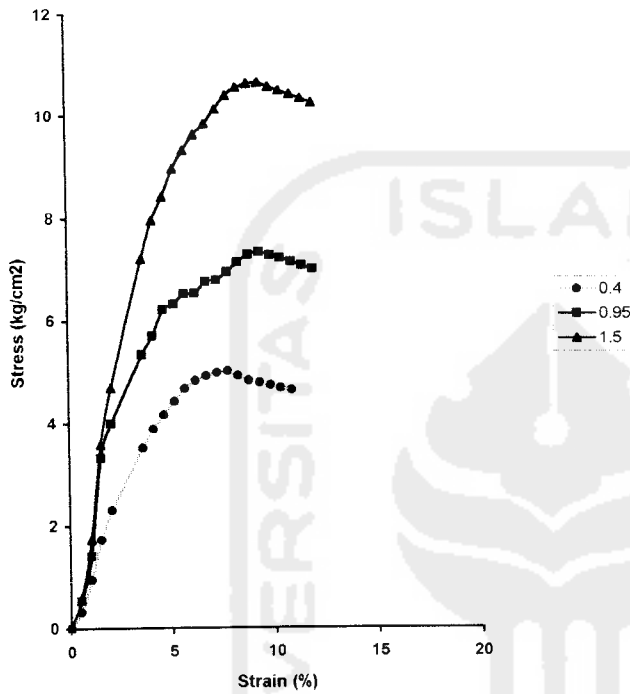
LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESSION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%:21 HARI
 Date : Desember 20th, 2002
 Tested by : Marwan Hamdono Prasadja

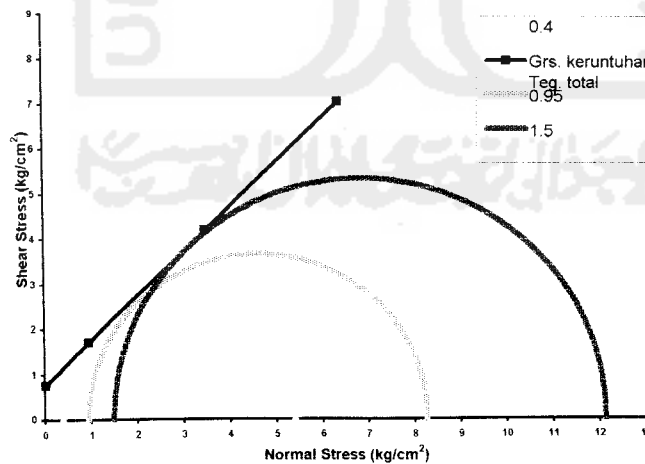


Piece No :	1	2	3
H cm	7.74	7.7	7.645
D cm	3.835	3.83	3.79
A cm ²	11.55	11.52	11.28
V cm ³	89.40	88.71	86.25
Wt gram	153.19	163.39	162.28

Water Content		
Wt Container (cup), gr	22.01	21.64
Wt of Cup + Wet soil, gr	43.25	39.81
Wt of Cup + Dry soil, gr	39.00	36.00
Water Content %	25.01	26.53
Average water content %	25.77	

γ_b gram/cm ³	1.554724	1.690881	1.646427
γ_d gram/cm ³	1.236131	1.344387	1.309043

σ_3	0.4	0.95	1.5
$\sigma_1 - \sigma_3 = P/A$	5.007259	7.3203	10.63455
$\sigma_1 + \sigma_3$	5.407259	8.2703	12.13455
$(\sigma_1 + \sigma_3)/2$	2.903629	4.61015	6.817273
$(\sigma_1 - \sigma_3)/2$	2.503629	3.66015	5.317273
Angle of shearing resistance (ϕ)	44.65061		
Apperen cohesion (kg/cm ²)	0.761139		



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3.101
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5.685
6.202
6.718
7.235
7.752
8.269
8.786
9.303
9.819
10.336
10.853
11.370
11.886
12.403
12.920

13.437
13.954
14.471



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TRIAxIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir

Location : Sedayu, Kabupaten Bantul

Description of soil : Clay

Sample No. : 12%;28 hari

Date : Desember 28th, 2002

Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.7
No. Of cell			Diameter	D cm	3.83
No. of Proving ring			Cross area	A cm ²	11.5209
Coeff. proving ring K =	0.2049		Volume	V cm ³	88.7111
k = K / A	0.017785		Wight	W gram	155.2000
Cell pessure	1.00		Wet density	gr/cm ³	1.7495
		Rate of compression : 0.5 %			

Time	Strain			Reading of proving ring	Pore pressure	
	Axial deformation	Strain %			u	kg/cm ²
0	0	0	1	0	0	
	40	0.517	0.995	22	0.388234196	
	80	1.034	0.990	135	2.369970378	
	120	1.550	0.984	240	4.191279207	
	160	2.067	0.979	320	5.559036988	
	200	2.584	0.974	385	6.652922359	
	240	3.101	0.969	425	7.305174143	
	280	3.618	0.964	454	7.76202541	
	320	4.134	0.959	470	7.992490762	
	360	4.651	0.953	485	8.20310896	
	400	5.168	0.948	490	8.242757434	
	440	5.685	0.943	492	8.231298338	
	480	6.202	0.938	495	8.236111158	
	520	6.718	0.933	496	8.207280071	
	560	7.235	0.928	494	8.12889985	
	600	7.752	0.922	492	8.050886319	
	640	8.269	0.917	491	7.989511397	
	680	8.786	0.912	490	7.928319821	
	720	9.302	0.907	489	7.86731159	
	760	9.819	0.902			
	800	10.336	0.897			
	840	10.853	0.891			
	880	11.370	0.886			
	920	11.886	0.881			
	960	12.403	0.876			
	1000	12.920	0.871			
	1040	13.437	0.866			
	1080	13.953	0.860			
	1120	14.470	0.855			
	1160	14.987	0.850			



LABORATORIUM MEKANIKA TANAH
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TRIAXIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir
 Location Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;28 hari
 Date : Desember 28th 2002
 Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Hight	H cm	7.645
No. Of cell			Diameter	D cm	3.79
No. of Proving ring			Cross area	A cm ²	11.2815
Coeff. proving ring K =	0.2049		Volume	V cm ³	86.2474
k = K / A	0.0181624		Wight	W gram	144.1000
Cell pessure	2.00		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain		Reading of proving ring	Pore pressure	
	Axial deformation	Strain %		kg/cm ²	u
0	0	0	0	0	
	40	0.517	55	0.97058549	
	80	1.034	210	3.686620589	
	120	1.550	380	6.636192078	
	160	2.067	530	9.207155012	
	200	2.584	635	10.97300181	
	240	3.101	710	12.20393798	
	280	3.618	768	13.1304747	
	320	4.134	810	13.77429259	
	360	4.651	825	13.95374204	
	400	5.168	839	14.11361936	
	440	5.685	845	14.13708759	
	480	6.202	855	14.22601018	
	520	6.718	861	14.24691157	
	560	7.235	871	14.33253395	
	600	7.752	880	14.39995927	
	640	8.269	875	14.23792764	
	680	8.786	874	14.14153372	
	720	9.302	872	14.02923457	
	760	9.819	870	13.91730212	
	800	10.336	863	13.72621022	
	840	10.853			
	880	11.370			
	920	11.886			
	960	12.403			
	1000	12.920			
	1040	13.437			
	1080	13.953			
	1120	14.470			
	1160	14.987			



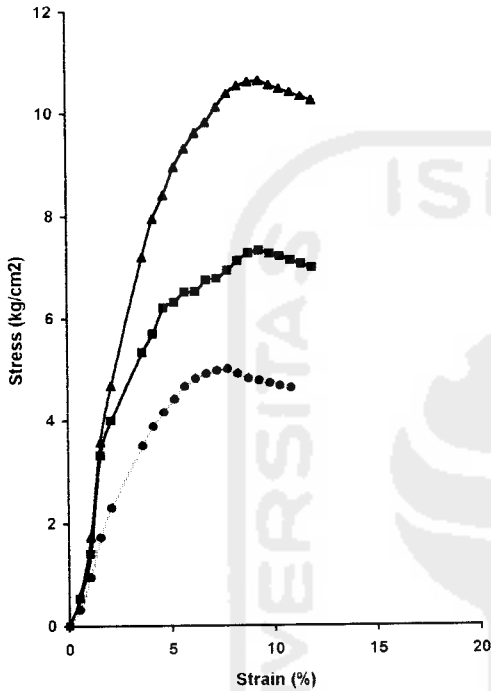
LABORATORIUM MEKANIK TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAxIAL COMPRESSION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%:21 HARI
 Date : Desember 20th, 2002
 Tested by : Marwan Hamdono Prasadja

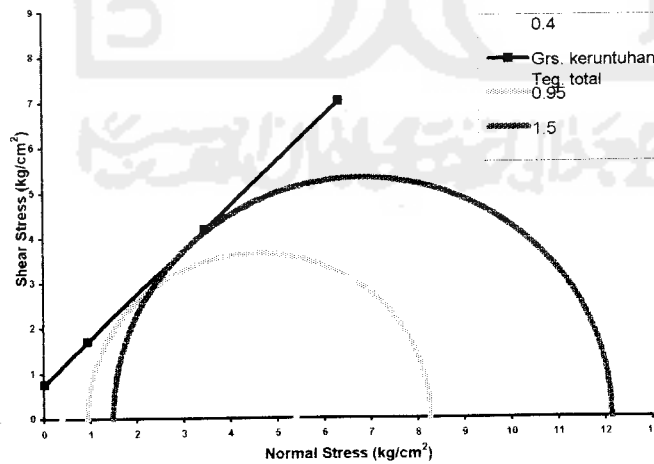


Piece No :	1	2	3
H cm	7.74	7.7	7.645
D cm	3.835	3.83	3.79
A cm ²	11.55	11.52	11.28
V cm ³	89.40	88.71	86.25
Wt gram	153.19	163.39	162.28

Water Content	
Wt Container (cup), gr	22.01 21.64
Wt of Cup + Wet soil, gr	43.25 39.81
Wt of Cup + Dry soil, gr	39.00 36.00
Water Content %	25.01 26.53
Average water content %	25.77

γ_b gram/cm ³	1.554724	1.690881	1.646427
γ_d gram/cm ³	1.236131	1.344387	1.309043

σ_3	0.4	0.95	1.5
$\sigma_1 - \sigma_3 = P/A$	5.007259	7.3203	10.63455
$\sigma_1 + \sigma_3$	5.407259	8.2703	12.13455
$(\sigma_1 + \sigma_3)/2$	2.903629	4.61015	6.817273
$(\sigma_1 - \sigma_3)/2$	2.503629	3.66015	5.317273
Angle of shearing resistance (θ)	44.65061		
Apperen cohesion (kg/cm ²)	0.761139		



Projec
 Locatic
 Descri:
 Type of
 No. Of c
 No. of P
 Coeff. p
 k = K / A
 Cell pe

Time



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FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

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TRIAxIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;14 hari
 Date : Desember 14th, 2002
 Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.74
No. Of cell			Diameter	D cm	3.835
No. of Proving ring			Cross area	A cm ²	11.5510
Coeff. proving ring K =	0.2049		Volume	V cm ³	89.4050
k = K / A	0.017738682		Weight	W gram	147.0000
Cell pessure	0.50		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain		Reading of proving ring	Pore pressure	
	Axial deformation	Strain %		u kg/cm ²	kg/cm ²
0	0	0	1	0	0
0	40	0.517	0.995	25	0.441175223
	80	1.034	0.990	43	0.754879454
	120	1.550	0.984	64	1.117674455
	160	2.067	0.979	82	1.424503228
	200	2.584	0.974	154	2.661168944
	240	3.101	0.969	177	3.042390172
	280	3.618	0.964	205	3.504879315
	320	4.134	0.959	228	3.877208285
	360	4.651	0.953	251	4.245320307
	400	5.168	0.948	270	4.541927566
	440	5.685	0.943	287	4.801590697
	480	6.202	0.938	298	4.958305303
	520	6.718	0.933	304	5.030268431
	560	7.235	0.928	306	5.035310433
	600	7.752	0.922	307	5.023622154
	640	8.269	0.917	307.5	5.003614572
	680	8.786	0.912	306	4.951154827
	720	9.302	0.907	305.5	4.915058672
	760	9.819	0.902	305	4.879054191
	800	10.336	0.897	304.5	4.843141382
	840	10.853	0.891	303	4.791506692
	880	11.370	0.886		
	920	11.886	0.881		
	960	12.403	0.876		
	1000	12.920	0.871		
	1040	13.437	0.866		
	1080	13.953	0.860		
	1120	14.470	0.855		
	1160	14.987	0.850		



LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir

Sample No. : 12%;14 hari

Location Sedayu, Kabupaten Bantul

Date : Desember 14th, 2002

Description of soil : Clay

Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.645
No. Of cell			Diameter	D cm	3.79
No. of Proving ring			Cross area	A cm ²	11.2815
Coeff. proving ring K =	0.2049		Volume	V cm ³	86.2474
k = K / A	0.0181624		Wight	W gram	159.0000
Cell pessure	2.00	Rate of compression : 0.5 %	Wet density	gr/cm ³	1.8435

Time	Strain		Reading of proving ring	Pore pressure	
	Axial defor- mation	Strain		u	
		%		kg/cm ²	kg/cm ²
0	0	0	1	0	0
	40	0.517	0.995	45	0.794115401
	80	1.034	0.990	90	1.579980252
	120	1.550	0.984	145	2.532231188
	160	2.067	0.979	235	4.082417788
	200	2.584	0.974	308	5.322337887
	240	3.101	0.969	365	6.27385544
	280	3.618	0.964	411	7.026855602
	320	4.134	0.959	438	7.448321179
	360	4.651	0.953	468	7.915577305
	400	5.168	0.948	505	8.495086743
	440	5.685	0.943	530	8.867049022
	480	6.202	0.938	548	9.117957403
	520	6.718	0.933	566	9.365565565
	560	7.235	0.928	589	9.692149821
	600	7.752	0.922	604	9.883608408
	640	8.269	0.917	620	10.08858873
	680	8.786	0.912	635	10.27445528
	720	9.302	0.907	650	10.45757164
	760	9.819	0.902	650	10.39798434
	800	10.336	0.897	649	10.32249181
	840	10.853	0.891	648	10.24718263
	880	11.370	0.886	647	10.17205679
	920	11.886	0.881	645	10.08148409
	960	12.403	0.876	643	9.991278081
	1000	12.920	0.871		
	1040	13.437	0.866		
	1080	13.953	0.860		
	1120	14.470	0.855		
	1160	14.987	0.850		



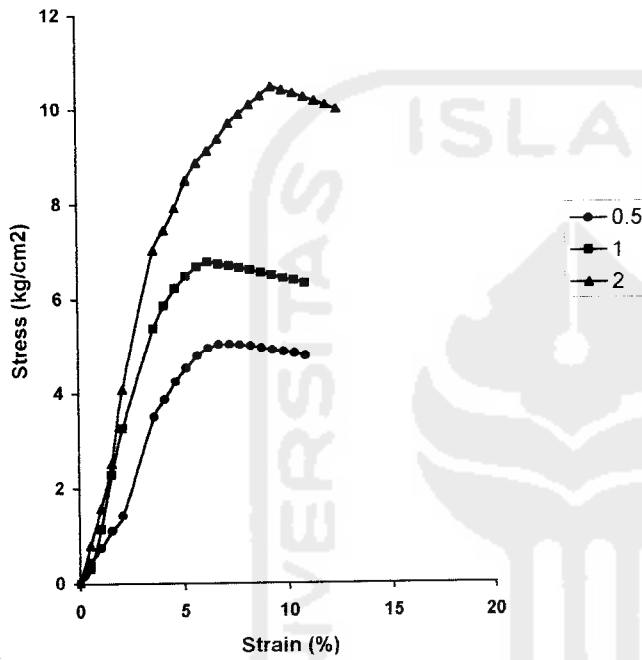
LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAXIAL COMPRESSION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

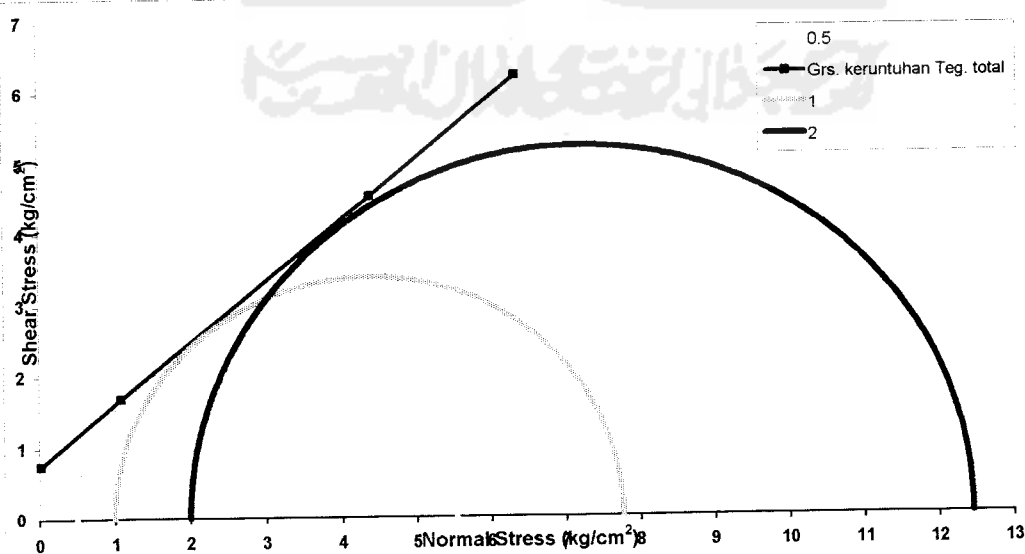
Sample No. : 12%;14 HARI
 Date : Desember 14th, 2002
 Tested by : Marwan Hamdono Prasadja



Piece No :	1	2	3
H cm	7.74	7.7	7.645
D cm	3.835	3.83	3.79
A cm ²	11.55	11.52	11.28
V cm ³	89.40	88.71	86.25
Wt gram	153.19	163.39	162.28
Water Content			
Wt Container (cup), gr	14.43	21.67	
Wt of Cup + Wet soil, gr	31.43	39.62	
Wt of Cup + Dry soil, gr	27.83	35.99	
Water Content %	26.87	25.35	
Average water content %	26.11		

γ_b gram/cm ³	1.644204	1.690881	1.843535
γ_d gram/cm ³	1.303812	1.340826	1.461877

σ_3	0.5	1	2
$\sigma_1 - \sigma_3 = P/A$	5.03531	6.771914	10.45757
$\sigma_1 + \sigma_3$	5.53531	7.771914	12.45757
$(\sigma_1 + \sigma_3)/2$	3.017655	4.385957	7.228786
$(\sigma_1 - \sigma_3)/2$	2.517655	3.385957	5.228786
Angle of shearing resistance (ϕ)			40.82067
Apperen cohesion (kg/cm ²)			0.743938





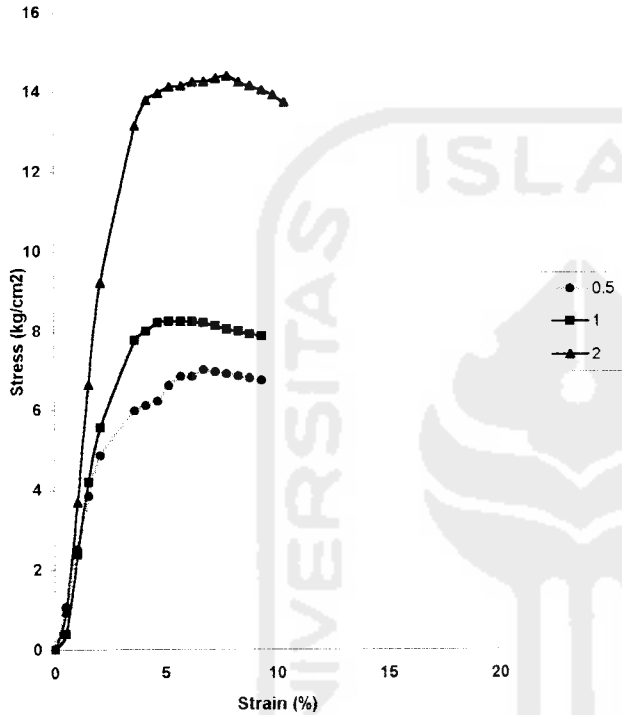
LABORATORIUM MEKANIKA TANAH
FAKULTAS TEKNIK SIPIL DAN PERENCANAAN
UNIVERSITAS ISLAM INDONESIA

Jl. Kaliurang KM. 14,4 Telp. (0274) 895042, 895707 fax 895330 Yogyakarta 55584.

TRIAxIAL COMPRESSION TEST RESULT
UNCONSOLIDATED UNDRAINED (TXUU)

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;28 HARI
 Date : Desember 28th, 2002
 Tested by : Marwan Hamdono Prasadja

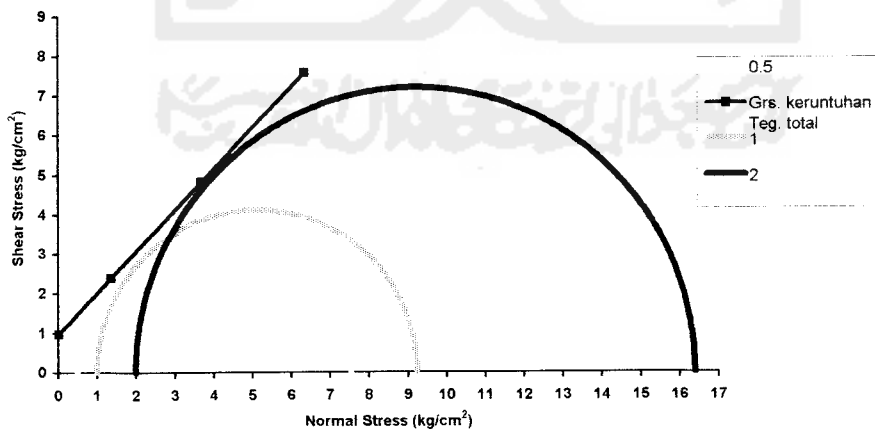


Piece No :	1	2	3
H cm	7.74	7.7	7.645
D cm	3.835	3.83	3.79
A cm ²	11.55	11.52	11.28
V cm ³	89.40	88.71	86.25
Wt gram	153.19	163.39	162.28

Water Content		
Wt Container (cup), gr	22.01	21.64
Wt of Cup + Wet soil, gr	43.25	39.81
Wt of Cup + Dry soil, gr	39.25	36.00
Water Content %	23.20	26.53
Average water content %	24.87	

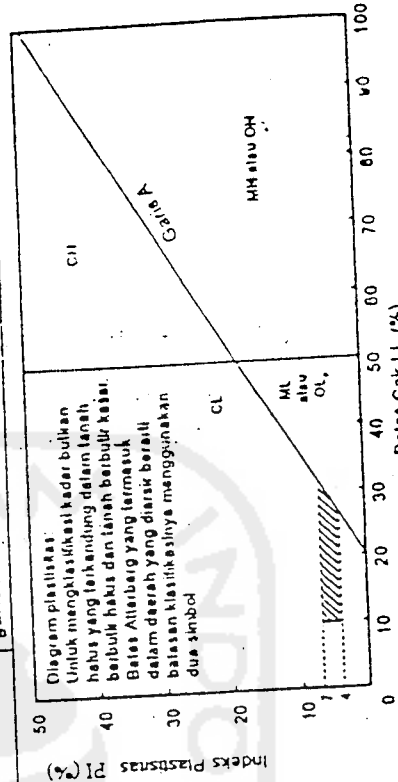
γ_b gram/cm ³	1.646441	1.749498	1.670776
γ_d gram/cm ³	1.318557	1.40109	1.338045

σ_3	0.5	1	2
$\sigma_1 - \sigma_3 = P/A$	7.032448	8.242757	14.39996
$\sigma_1 + \sigma_3$	7.532448	9.242757	16.39996
$(\sigma_1 + \sigma_3)/2$	4.016224	5.121379	9.19998
$(\sigma_1 - \sigma_3)/2$	3.516224	4.121379	7.19998
Angle of shearing resistance (ϕ)	46.18026		
Apperen cohesion (kg/cm ²)	0.978241		

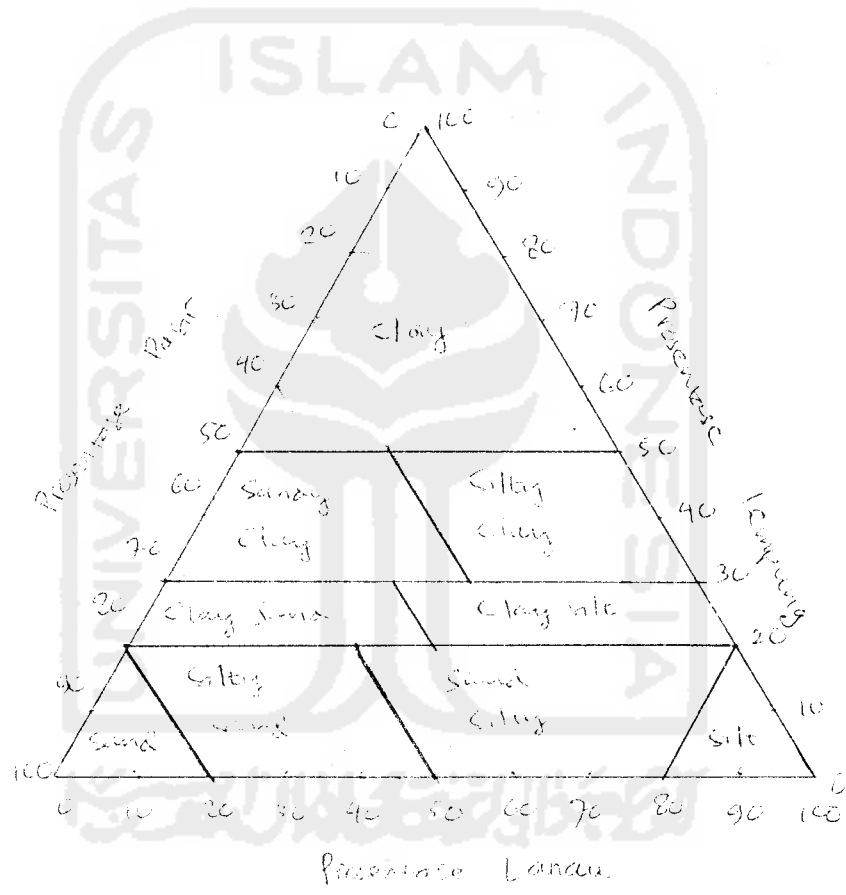


Klasifikasi tanah sistem Unified

Divisi Utama		Simbol kelompok	Nama Jenis	Kriteria Klasifikasi
Tanah berbutir kasar 50% butiran terahan saringan no. 200 (0,075 mm)	Kerikil berakir (sedikit atau tak ada butiran halus)	GW	Kerikil gradasi baik dan campuran pasir-kerikil, sedikit atau tidak mengandung butiran halus	$C_u = \frac{D_{60}}{D_{10}} > 4$; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ antara 1 dan 3 Tidak memenuhi kedua kriteria untuk GW Batas-batas Atterberg di bawah garis A atau $PI < 4$ Batas-batas Atterberg di atas garis A atau $PI > 7$ $C_u = \frac{D_{60}}{D_{10}} > 6$; $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ antara 1 dan 3
		GP	Kerikil gradasi buruk dan campuran pasir-kerikil atau tidak mengandung butiran halus	
Tanah berbutir halus 50% atau lebih (0,075 mm)	Kerikil banyak kandungan butiran halus	GM	kerikil berlanau, campuran kerikil pasir-lanau	Tidak memenuhi kedua kriteria untuk SW Batas-batas Atterberg di bawah garis A atau $PI < 4$ Batas-batas Atterberg di atas garis A atau $PI > 7$
		GC	Kerikil berlempung, campuran kerikil pasir-lempung	
Pasir lebih dari 50% fraksi kasar blos dan fraksi kasar saringan no. 4 (4,75 mm)	Pasir berakir (sedikit atau tak ada butiran halus)	SW	Pasir gradasi baik, pasir berkerikil, sedikit atau tidak mengandung butiran halus	Tidak memenuhi kedua kriteria untuk SW Batas-batas Atterberg di bawah garis A atau $PI < 4$ Batas-batas Atterberg di atas garis A atau $PI > 7$
		SP	Pasir gradasi buruk, pasir kerikil, sedikit atau tidak mengandung butiran halus	
Pasir lebih dari 50% fraksi kasar blos dan fraksi kasar saringan no. 4 (4,75 mm)	Pasir banyak kandungan butiran halus	SM	Pasir berlanau, campuran pasir-lanau	Tidak memenuhi kedua kriteria untuk SW Batas-batas Atterberg di bawah garis A atau $PI < 4$ Batas-batas Atterberg di atas garis A atau $PI > 7$
		SC	Pasir berlanau, campuran pasir-lempung	
Tanah dan lempung batas cair 50% atau kurang	Lanau dan lempung	ML	Lanau tak organik dan pasir sangat halus, serbuk batuan atau pasir halus berlanau atau berlempung	Diagram plastisitas: Untuk mengklasifikasi kadar bukan halus yang terkandung dalam tanah, berbutir halus dan tanah berbutir kasar, Batas Atterberg yang termasuk dalam daerah yang ditarik berakir di bagian klasifikasinya menggunakan dua simbol
		CL	Lempung tak organik dengan plastisitas rendah sampai sedang, lempung berkerikil, lempung berpasir, lempung berlanau, lempung kurus ('clean clays')	
Tanah berbutir halus 50% atau lebih (0,075 mm)	Lanau dan lempung batas cair > 50%	OL	Lanau organik dan lempung berlanau organik dengan plastisitas rendah	Batas Cak LL (%) Garis A: $PI = 0,73 (LL - 20)$
		MH	Lanau tak organik atau pasir halus diatomae, lanau elastis.	
Tanah dengan kadar organik tinggi	Lanau dan lempung batas cair > 50%	CH	Lempung tak organik dengan plastisitas tinggi, lempung gemuk ('fat clays')	Manual untuk identifikasi secara visual dapat dilihat di ASTM Designation D-2488
		OH	Lempung organik dengan plastisitas sedang sampai tinggi	
		PI	Gambut ('peat'), dan tanah lain dengan kandungan organik tinggi	



KLASIFIKASI BERDASARKAN TEKSTUR OLEH USCS
(Unified Soil Classification System)





LAMPIRAN 8

P.T. SUPERINTENDING COMPANY OF INDONESIA

CORRESPONDENTS OF:
SOCIÉTÉ GÉNÉRALE DE SURVEILLANCE S.A., GENEVA

REPORT
OF

CABLE ADDRESS: "SUCOFINOO"
TELEX NO. 1 44733-44370 SUCOF IKT.
BRANCH OFFICES/AGENTS:
IN ALL MAIN PORTS OF INDONESIA

OFFICE:
PT. JEN. S. PARMAN 101
JOL-JAKARTA 11440 P.O. BOX 3377
TEL 576111 (4 LINES)

R : 505/EXT/VIII/87/SM.

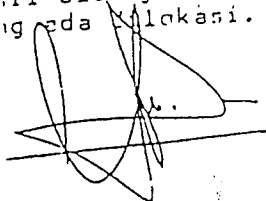
ANALYSIS
=====

No 008332

SUBJECT : LINE
TESTED FOR : Full analysis.
DESCRIPTION OF SAMPLE : Packing : Unsealed plastic bag.
1 (One) sample received on 19th August 1987.
SAMPLE MARKS : -
PRINCIPALS : P.T. IGA. Jl. Pucang Anom Timur V/27, Surabaya.
RESULTS OF TESTING :

Moisture	content	:	1.20	%
Insoluble matter in Hcl		:	1.19	%
Fe ₂ O ₃ + Al ₂ O ₃	content	:	3.49	%
Total CaO		:	59.07	%
CaO active		:	25.39	%
MgO	content	:	0.89	%
SO ₄	content	:	Traces	
Pb	content	:	63	ppm
Cu	content	:	12	ppm
As	content	:	Undetectable	
Loss On Ignition 900 °C		:	34.93	%
P	content	:	44	ppm

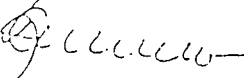
oil slurry kering
pada plastikasi.



Surabaya, 27th August 1987

ANALYTICAL LABORATORIES

OF:
P.T. SUPERINTENDING COMPANY OF INDONESIA


DJOHAN
ASSISTANT MANAGER

This Report subject to the analysis results on samples submitted to us only, and does not constitute a guarantee of quality or quantity, unless the standard was specified and valid within 60 days from the date of issue.

Form : JKU/11
DR 30bl-9-85.

"All inspections are carried out to the best of our knowledge and ability and in accordance with practices and standards generally accepted in trade. Our responsibility is limited to the exercise of reasonable care and due diligence. This certificate is issued on the understanding that it does not release parties from their contractual obligations."



DEPARTEMEN PERINDUSTRIAN
BADAN PENELITIAN DAN PENGEMBANGAN INDUSTRI
BALAI BESAR PENELITIAN DAN PENGEMBANGAN
INDUSTRI BAHAN DAN BARANG TEKNIK

Jalan Sangkuriang No. 14 Telp. 82027 - 82028 Bandung
Alamat Kawat b. b. bt. Kotak Pos 32

Laporan No. : S 9/87/258. Bandung, 23 Juli 1987.
Report Nr.

Komoditi : Dolan / Kapur.
Material

DIBUAT UNTUK P.T. I G A MURNI SEJAPTERA
Executed for Jl. Raya Katon Km. 12, Sodayu - YOGYAKARTA.

Contoh diterima tanggal : 13 Juli 1987.
Sample received on

FASIL PENGUJIAN

FASIL ANALISA KIMIA KAMI CONTO KURUP (105°C) DALAM BERAT :

URAIAN :

Silika	(SiO ₂)	2,70
Besi Oksida	(Fe ₂ O ₃)	0,41
Aluminium Oksida	(Al ₂ O ₃)	1,19
Kalsium Oksida	(CaO)	61,95
Magnesium Oksida	(MgO)	0,75
Sulfat	(SO ₃)	nil
Pilau, piler termasuk CO ₂	(IP)	33,55
Ca (OH) ₂		42,72

BALAI BESAR JAHAN DAN BARANG TEKNIK
KEPALA
H. SUPRATNO WONGSOWINOTO
NIP. : 690003332

RND/Ib.

DAFTAR PUSTAKA

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Sipil, Fakultas Teknik Sipil dan Perencanaan, Universitas Islam Indonesia, Yogyakarta.

Bambang Supriyanto dan Rimananda Dwi Astika, 2002, **Stabilisasi Tanah Lempung Dengan Limbah Padat Industri Tekstil (*sludge*) + zeolit sebagai Subgrade Jalan Raya**, Tugas Akhir, Jurusan Teknik Sipil, Fakultas Teknik Sipil dan Perencanaan, Universitas Islam Indonesia, Yogyakarta.



NO. 12
12

JUDUL: TUGAS AKHIR

MAKSAUDUDHARAH

- No. 1. Pendaftaran
2. Penentuan Dosen Pembimbing
3. Pembukaan Promosi
4. Seminar Promosi
5. Konsultasi Pembimbing I & II
6. Sidang Sidang
7. Pendaftaran

DC SEN PEMERINTAH
DC SEN PEMERINTAH



Catatan:

- Semula
- Soking
- Pendaftaran



CATATAN KONSULTASI TUGAS AKHIR

NO	TANGGAL	ISI KONSULTASI	TANDA TANGAN
1	2017/09/20	Review proposal Material handbook dan lain-lain (lihat di atas) (lihat di atas)	
2	2017/09/21	Review proposal dan lain-lain	
3	2017/09/22	Review proposal dan lain-lain	
4	2017/09/23	Review proposal dan lain-lain	
5	2017/09/24	Review proposal dan lain-lain	
6	2017/09/25	Review proposal dan lain-lain	
7	2017/09/26	Review proposal dan lain-lain	





LABORATORIUM MEKANIKA TANAH
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TRIAXIAL COMPRESSION TEST LOADING DATA

Project : Tugas Akhir

Location : Sedayu, Kabupaten Bantul

Description of soil : Clay

Sample No. : 12%;28 hari

Date : Desember 28th, 2002

Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Height	H cm	7.74
No. Of cell			Diameter	D cm	3.835
No. of Proving ring			Cross area	A cm ²	11.5510
Coeff. proving ring K =	0.2049		Volume	V cm ³	89.4050
k = K / A	0.017738682		Weight	W gram	147.2000
Cell pressure	0.50		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain			Reading of proving ring		Pore pressure	
	Axial deformation	Strain %			kg/cm ²	u kg/cm ²	kg/cm ²
0	0	0	1	0	0		
	40	0.517	0.995	60	1.058820535		
	80	1.034	0.990	143	2.510413067		
	120	1.550	0.984	220	3.84200594		
	160	2.067	0.979	280	4.864157365		
	200	2.584	0.974	325	5.61610329		
	240	3.101	0.969	335	5.758196089		
	280	3.618	0.964	349	5.966843322		
	320	4.134	0.959	359	6.104902519		
	360	4.651	0.953	367	6.207301007		
	400	5.168	0.948	394	6.627849855		
	440	5.685	0.943	410	6.859415281		
	480	6.202	0.938	412	6.855106661		
	520	6.718	0.933	425	7.032447641		
	560	7.235	0.928	424	6.97703145		
	600	7.752	0.922	423	6.921798604		
	640	8.269	0.917	422	6.866749103		
	680	8.786	0.912	421	6.811882948		
	720	9.303	0.907	420	6.757200139		
	760	9.819	0.902				
	800	10.336	0.897				
	840	10.853	0.892				
	880	11.370	0.886				
	920	11.886	0.881				
	960	12.403	0.876				
	1000	12.920	0.871				
	1080	13.952	0.860				
	1120	14.469	0.855				
	1160	14.986	0.850				



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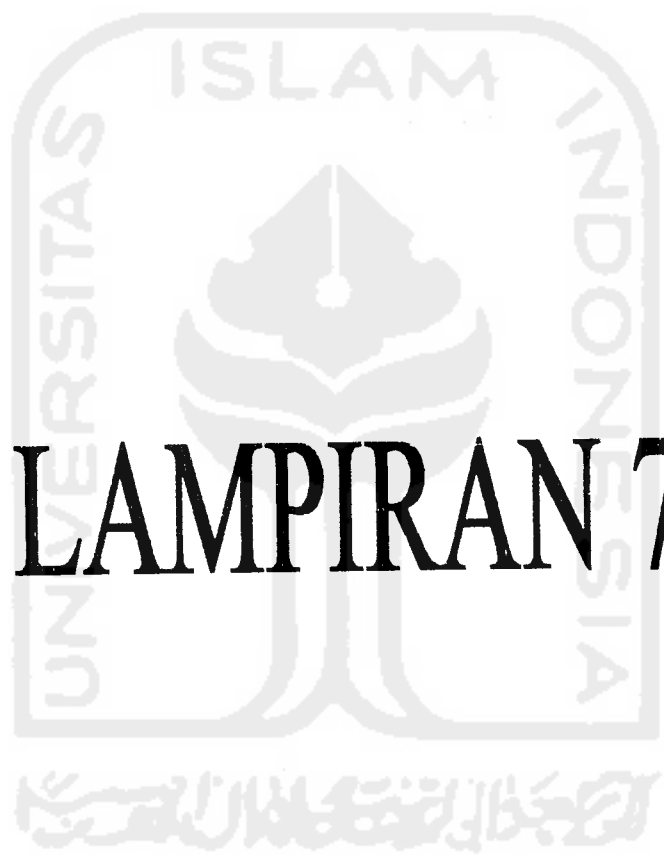
TRIAxIAL COMPRESION TEST LOADING DATA

Project : Tugas Akhir
 Location : Sedayu, Kabupaten Bantul
 Description of soil : Clay

Sample No. : 12%;14 hari
 Date : Desember 14th, 2002
 Tested by : Marwan Hamdono Prasadja

Type of test apparatus		Dimension of test piece	Hight	H cm	7.7
No. Of cell			Diameter	D cm	3.83
No. of Proving ring			Cross area	A cm ²	11.5209
Coeff. proving ring K =	0.2049		Volume	V cm ³	88.7111
k = K / A	0.017785		Wight	W gram	150.0000
Cell pessure	1.00		Rate of compression : 0.5 %	Wet density	gr/cm ³

Time	Strain			Reading of proving ring		Pore pressure	
	Axial deformation	Strain %			kg/cm ²	u kg/cm ²	kg/cm ²
0	0	0	1	0	0		
	40	0.517	0.995	18	0.31764616		
	80	1.034	0.990	65	1.141096849		
	120	1.550	0.984	131	2.2877399		
	160	2.067	0.979	188	3.265934231		
	200	2.584	0.974	235	4.060874687		
	240	3.101	0.969	285	4.898763837		
	280	3.618	0.964	315	5.385546264		
	320	4.134	0.959	345	5.866828326		
	360	4.651	0.953	368	6.224214633		
	400	5.168	0.948	385	6.47645227		
	440	5.685	0.943	399	6.675382188		
	480	6.202	0.938	407	6.771913619		
	520	6.718	0.933	407	6.7346028		
	560	7.235	0.928	407	6.697291981		
	600	7.752	0.922	406.5	6.651799367		
	640	8.269	0.917	406	6.606398426		
	680	8.786	0.912	405	6.552999036		
	720	9.302	0.907	403.5	6.491738705		
	760	9.819	0.902	402	6.430753392		
	800	10.336	0.897	401	6.377995711		
	840	10.853	0.891	400	6.325421375		
	880	11.370	0.886				
	920	11.886	0.881				
	960	12.403	0.876				
	1000	12.920	0.871				
	1040	13.437	0.866				
	1080	13.953	0.860				
	1120	14.470	0.855				
	1160	14.987	0.850				



LAMPIRAN 7