

Lampiran 1. Spesifikasi Mobile Crane truck load crane TADANO super Z300



TRUCK LOADER CRANE

TM-ZE360/300

For Medium Size Vehicles



TECHNICAL SPECIFICATIONS

MODEL	TM-ZE363M	TM-ZE363MH*	TM-ZE364M	TM-ZE364MH*	TM-ZE365M	TM-ZE365MH*	TM-ZE366M	TM-ZE366MH*
CRANE CAPACITY	3,030 kg at 2.6 m (4-parts of line)		3,030 kg at 2.5 m (4-parts of line)		3,030 kg at 2.3 m (4-parts of line)		3,030 kg at 2.3 m (4-parts of line)	
BOOM	Fully powered telescoping boom of pentagonal box construction							
Number of sections	6							
Length	3.28 m / 7.71 s		3.34 m / 10.3 s		3.35 m / 12.3 s		3.65 m - 14.6 m	
Extending speed	4.43 m / 14.3 s		6.66 m / 14.3 s		6.73 m / 18 s		10.95 m / 19 s	
Elevating range (to end)	Approx. 9.2 m**							
Max. lifting height	Approx. 9.2 m**		Approx. 11.4 m**		Approx. 12.7 m**		Approx. 15.9 m**	
Max. load radius	7.5 m**		9.8 m**		12.1 m**		14.4 m**	
WINCH	Hydraulic motor driven. Spur gear speed reduction, provided with mechanical brake.							
Max. single line pull	7.45 kN (760 kgf)							
Max. single line speed	76 m/min. (at 4th layer)							
Wire rope (Diameter x length)	8 mm x 51 m		8 mm x 63 m		8 mm x 74 m		8 mm x 85 m	
SLEWING	Hydraulic motor driven. Worm gear speed reduction. Continuous 360° full circle slewing on ball bearing slew ring. Automatic slewing lock.							
Slewing speed	2.5 min ⁻¹ (rpm)							
OUTRIGGERS	Manually extended sliders and hydraulically extended jacks Integral with crane frame							
Extension width	Max. : 4.2 m, Mid. : 3.4 m / 2.7 m, Min. : 2.0 m							
HYDRAULIC SYSTEM	Multiple control valves with integral safety valves							
Control valves	•Load meter •Anti-two-block alarm •Hoisting limiter •P.T.O. indicator lamp •Hook safety latch •Hydraulic safety valves •Level gauge							
STANDARD SAFETY DEVICES	Gross vehicle mass 7,500 to 10,000 kg							
SUITABLE TRUCKS	* WITH HOOK STOWING DEVICE. Mechanically stows hook beneath boom head.							

IDEAL Cargo Crane, TADANO ZE

The ZE features all the Tadano Cargo Crane technologies that are recognized the world over. The key development concepts remain: EXCELLENT QUALITY, EASY OPERATION AND EASY MAINTENANCE. The TM-ZE360/300 series, with a lifting capacity of 3.03 tons, and a choice of 4 different lengths of the boom are available to meet your lifting requirements.

CENTRALIZED CONTROL PANELS

Installed on both sides of the slewing post are the centralized control panels where operating switches and the lifting charts needed for crane operation are grouped together and arranged on a single panel.



RESPONDING TO OPERATOR'S COMMAND

Equipped with optically matched, high-performance control valves, the operating levers provide improved responsiveness and fine-tuning control. Operation is fast or slow in accordance with the operator's command. The stainless steel, high-precision lifting operation levers are provided as standard.



QUICKER WORK WITH ADVANCED OUTRIGGER MECHANISM

The outrigger beams can be easily operated, using a grip-to-lock/release and extend/retract lever. The new lock system prevents the outrigger from extending during traveling. A level gauge is provided as standard equipment.



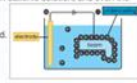
STRONGER AND LIGHTER BOOM

Tadano's unique pentagonal boom is made of high-tensile steel and the section of boom has a structure of banded one piece steel plate for lighter boom weight and powerful lifting capability. Special valves enable smooth boom extension and retraction for smoother operation to reduce a shock when telescoping the boom.



CATIONIC ELECTRO-DEPOSITION COATING

The crane is undercoated by Cationic Electro-deposition method. The parts are dipped in cationic solution, and even the narrow inner booms and frames are thoroughly undercoated.



STRONGER WINCH

The advantages of the enlarged winch drum and plunger motor are evident during start-up when maximum power is required. Re-hoisting with a load on the hook can also be handled with ease. The winch reduction gear comes equipped with a failsafe automatic brake. From the pitch of the drum grooves to the fitting of the guide sheave, cable winding has been improved in every detail so as to prevent the cable from winding off position.

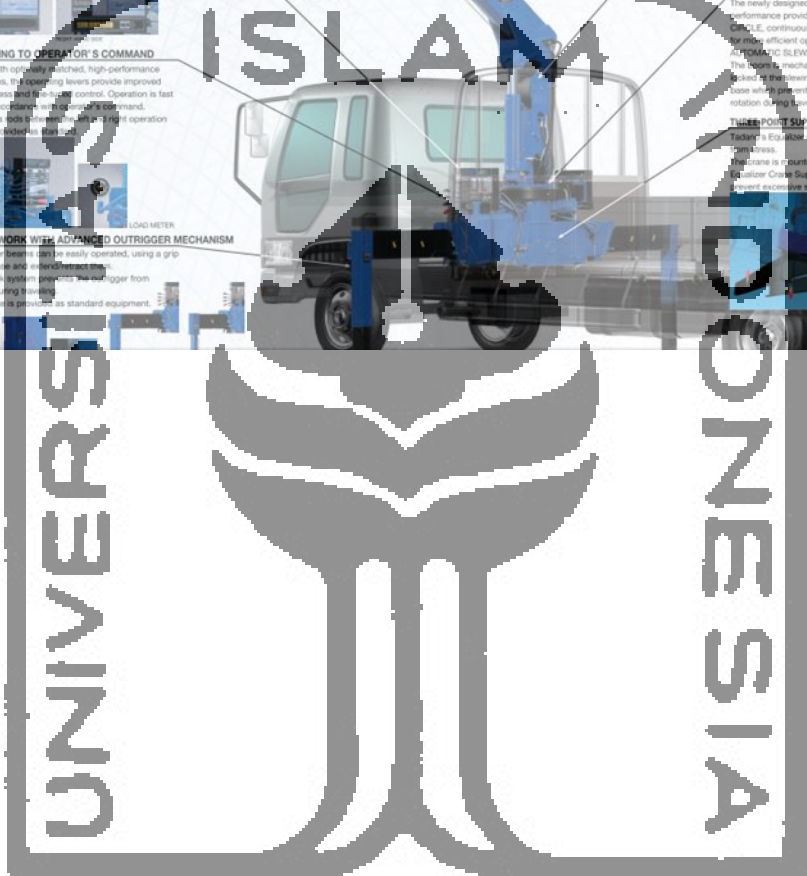
FULL CIRCLE, CONTINUOUS SLEWING

The newly designed compact slewing post improves performance providing FULL CIRCLE, continuous rotation for more efficient operations. AUTOMATIC SLEWING LOCK: The boom is mechanically locked to the slewing post base which prevents boom rotation during traveling.



THREE POINT SUPPORT SYSTEM (Equalizer Crane Support)

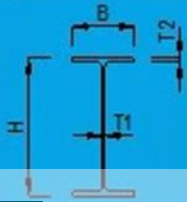
Tadano's Equalizer Crane Support protects the truck frame from stress. The crane is mounted to the truck chassis with the Equalizer Crane Support that evenly distributes the load to prevent excessive stress concentration at any one point.



Logo of Universitas Indonesia in Indonesian script.

Lampiran 2. Tabel Berat Baja WF

TABEL BERAT BAJA WF-BEAM
TABLE OF WEIGHT STEEL (WF-BEAM)



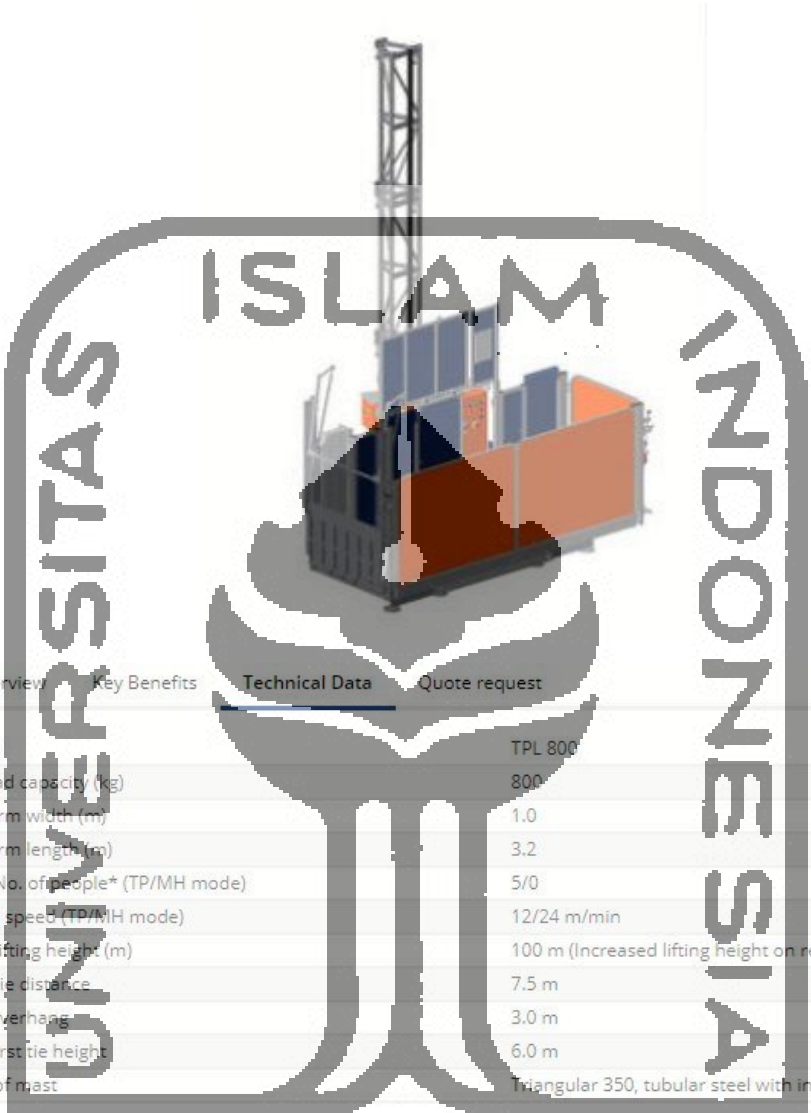
H	T	T1	T2	LENGTH	WEIGHT/Kg
100	50	5	7	12 M	112.00
125	60	6	8	12 M	158.40
148	100	6	9	12 M	258.20
150	75	5	7	12 M	168.00
175	90	5	8	12 M	217.20
198	99	4.5	7	12 M	218.40
200	100	3.2	4.5	12 M	143.00
200	100	5.5	8	12 M	256.00
248	124	5	8	12 M	308.40
250	125	6	9	12 M	355.20
298	149	6	8	12 M	384.00
300	150	6.5	9	12 M	440.40
346	174	6	9	12 M	497.00
350	175	7	11	12 M	595.20
396	199	7	11	12 M	679.50
400	200	8	13	12 M	792.00
446	199	8	12	12 M	794.40
450	200	9	14	12 M	912.00
496	199	9	14	12 M	954.00
500	200	10	16	12 M	1,075.00
588	300	12	20	12 M	1,812.00
596	199	9	14	12 M	1,135.00
600	200	11	17	12 M	1,272.00
700	300	13	24	12 M	2,220.00
800	300	14	26	12 M	2,520.00

KET : M = Meter

Lampiran 3. Contoh Mobile Crane Jenis *Truck Load Crane*



Lampiran 4. Gambar *Material Hoist (alimak)* dan Spesifikasi




Overview	Key Benefits	Technical Data	Quote request
Model			TPL 800
Payload capacity (kg)			800
Platform width (m)			1.0
Platform length (m)			3.2
Max. No. of people* (TP/MH mode)			5/0
Lifting speed (TP/MH mode)			12/24 m/min
Max. lifting height (m)			100 m (Increased lifting height on request)
Max. tie distance			7.5 m
Max overhang			3.0 m
Max first tie height			6.0 m
Type of mast			Triangular 350, tubular steel with integrated eye bolts

لَا إِلَهَ إِلَّا اللَّهُ مُحَمَّدٌ رَسُوْلُهُ

Lampiran 5. Validasi Penelitian dan Data Proyek

مؤسسة الأوقاف
الجامعة الإسلامية الإندونيسية
PENGURUS YAYASAN BADAN WAKAF
UNIVERSITAS ISLAM INDONESIA



Nomor : 206/INT-PYBW/III/2019
Hal : 1/1 Penelitian

UNIVERSITAS ISLAM INDONESIA

Kepada Yth :
Ketua Program Studi Teknik Sipil
Fakultas Teknik Sipil dan Perencanaan U.I.
Di Yogyakarta

Assalamu'alaikum Wr. Wb.

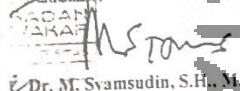
Memperhatikan surat Saudara nomor 85/Ka-Prodi PS, S 20 TA III/2019 tanggal 11 Maret 2019 perihal Permohonan Ijin Penelitian, Izin dan Pengambilan Data untuk T.A. Pengurus Yayasan Badan Wakaf U.I. tidak keberatan dan dapat memberikan Ijin mahasiswa a.n. Hafiz Farid Nurdiansyah Nomor Mahasiswa 12511146 untuk melaksanakan kegiatan penelitian pengambilan data di proyek pembangunan Gedung Fakultas Hukum U.I.

Ijin tersebut diberikan dalam rangka penyelesaian Tugas Akhir bagi mahasiswa FTSP U.I. Untuk pelaksanaannya mahasiswa yang bersangkutan dapat langsung berkoordinasi dengan Prof. Dr. Manager Pembangunan Gedung Fakultas Hukum U.I. Set. Arya Wirawan, ST.

Demikian, atas perhatiannya disampaikan terima kasih.

Wassalamu'alaikum Wr. Wb.

Yogyakarta, 26 Maret 2019 M
13 Rajab 1440 H

Ah. Ketua Umum.

Dr. M. Syamsudin, S.H., M.H.

Tembusan :

1. Ketua Umum PYBW U.I. sebagai laporan.
2. Project Manager Proyek Pembangunan Gedung FH U.I.
3. Sr. Hafiz Farid Nurdiansyah.

لَا إِلَهَ إِلَّا اللَّهُ مُحَمَّدٌ رَسُوْلُهُ

JL. CIRI DI TIRO NO. 1 YOGYAKARTA 55223 TELP. & FAX. (0274) 589604

Lampiran 6. Lembar Wawancara

LEMBAR WAWANCARA

Hari/Tanggal Wawancara : Selasa, 2 Juli 2019

Nama Narasumber : Pak Slamet

Jabatan : Pelaksana Struktur

No	Pertanyaan	Jawaban Narasumber
1.	Mengapa di proyek fakultas hukum uii alat berat angkut nya memakai <i>Alimak</i> ?	Karena untuk meminimalisir harga yang lumayan murah daripada alat berat angkut lain dan bisa mengangkut material-material lainnya.
2.	Mengapa Alat Berat <i>Mobile Crane</i> tidak dipakai di Proyek Fakultas Hukum UII ?	Di proyek Fakultas Hukum UII ini menyesuaikan kondisi lapangan, kondisi struktur, dan kondisi biaya operasional yang mahal.
3.	Apa kelebihan dan kekurangan <i>Alimak</i> dengan <i>mobile crane</i> ?	Biaya Operasional <i>alimak</i> yang murah menjadi kelebihan daripada <i>mobile crane</i> , kondisi dilapangan menjadi kekurangan <i>mobile crane</i> daripada <i>alimak</i> .
4.	Berapa biaya perbandingan biaya operasional <i>alimak</i> dengan <i>mobile crane</i> ?	<i>Alimak</i> biaya nya perbulan atau bisa sampai proyek selesai per bulan nya sekitar 6-8jt tergantung tinggi tower nya sedangkan <i>mobile crane</i> biaya nya harus per hari atau per 8 jam, sekitar 6jt per hari. Di tambah biaya bahan bakar, mobilisasi demobilisasi, dan operator alat <i>alimak</i> atau <i>mobile crane</i> .

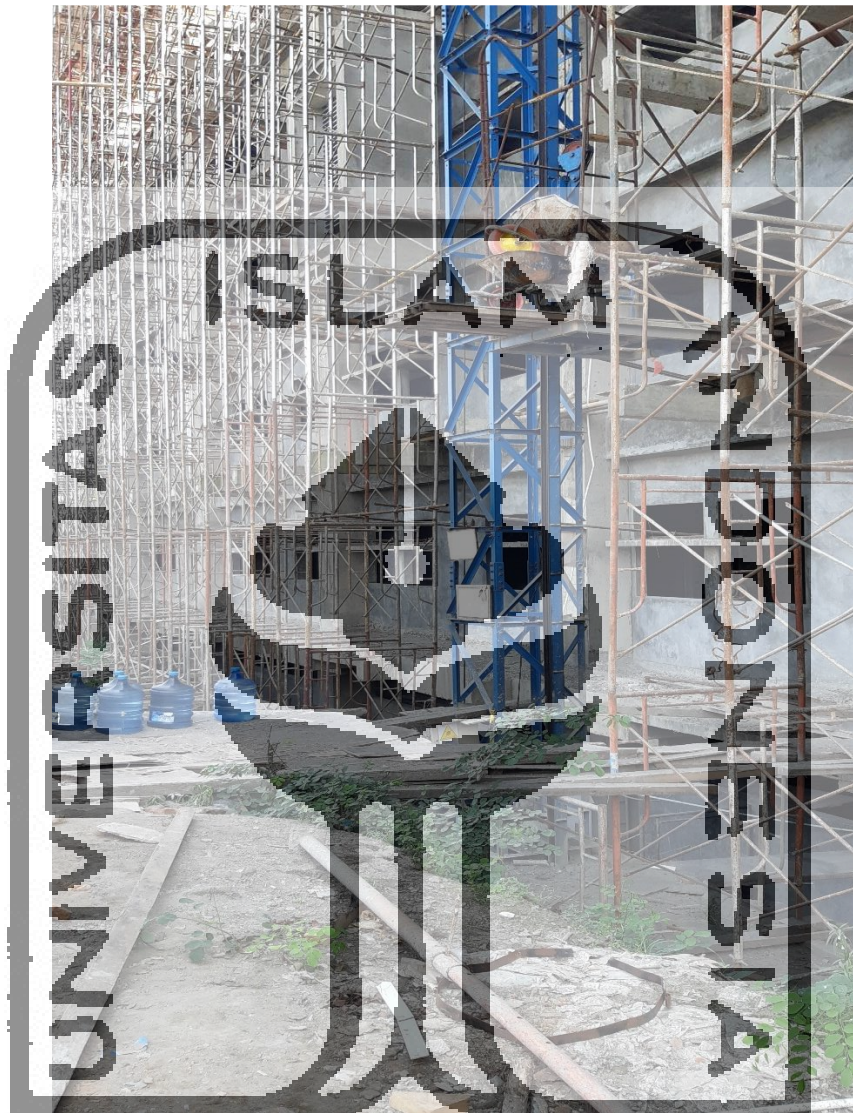
No.	Pertanyaan	Jawaban Narasumber
5.	Bagaimana cara pengangkutan baja di alimak untuk naik ke atas ?	Dengan bantuan tenaga kerja baja di posisikan miring memanjang kesamping kemudian di ikat di bagian ujung baja d Tarik ke bagian tengah alimak.

Yogyakarta, 2 Juli 2019

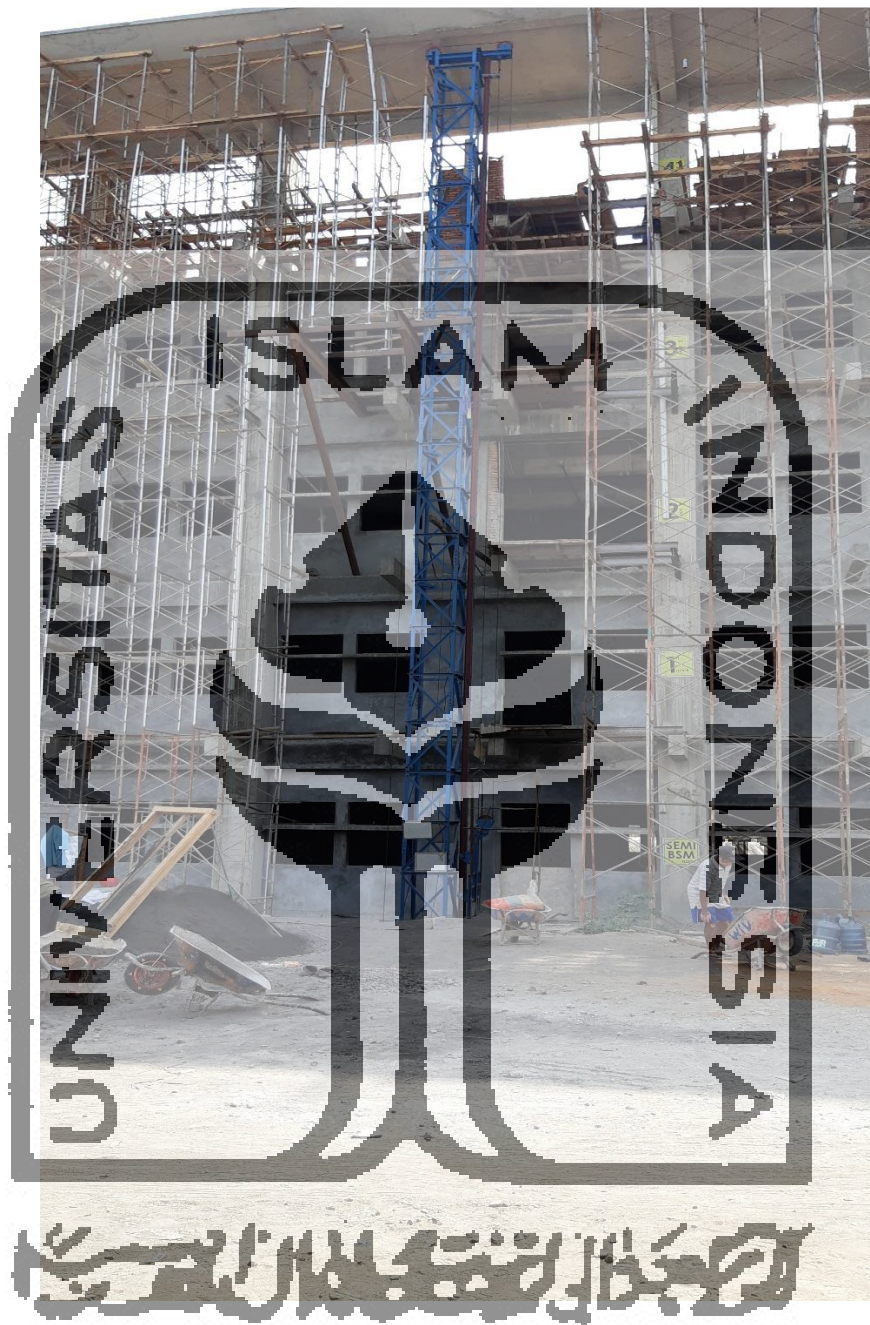

Pak Slamet

UNIVERSITAS ISLAM INDONESIA

Lampiran 7. *Material hoist* yang digunakan untuk pengangkutan



لَا إِلَهَ إِلَّا اللَّهُ مُحَمَّدٌ رَسُوْلُهُ

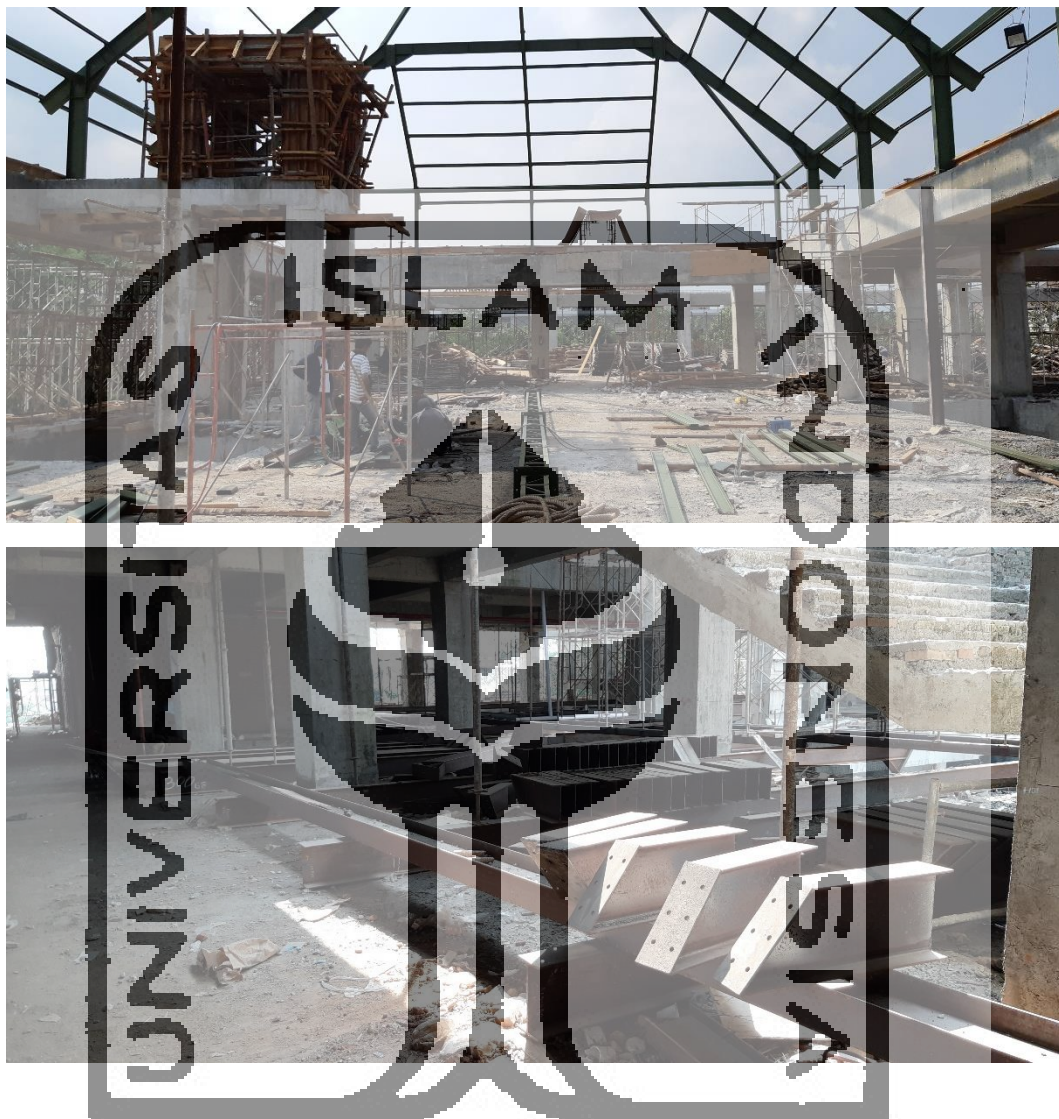


Lampiran 8. Mengukur detail baja



لَا إِلَهَ إِلَّا اللَّهُ مُحَمَّدٌ رَسُوْلُهُ

Lampiran 9. Kondisi Lantai 3 tempat menaruh baja



لَا إِلَهَ إِلَّا اللَّهُ مُحَمَّدٌ رَسُوْلُهُ

Lampiran 10. *Material Hoist* yang digunakan di Proyek FH UII

