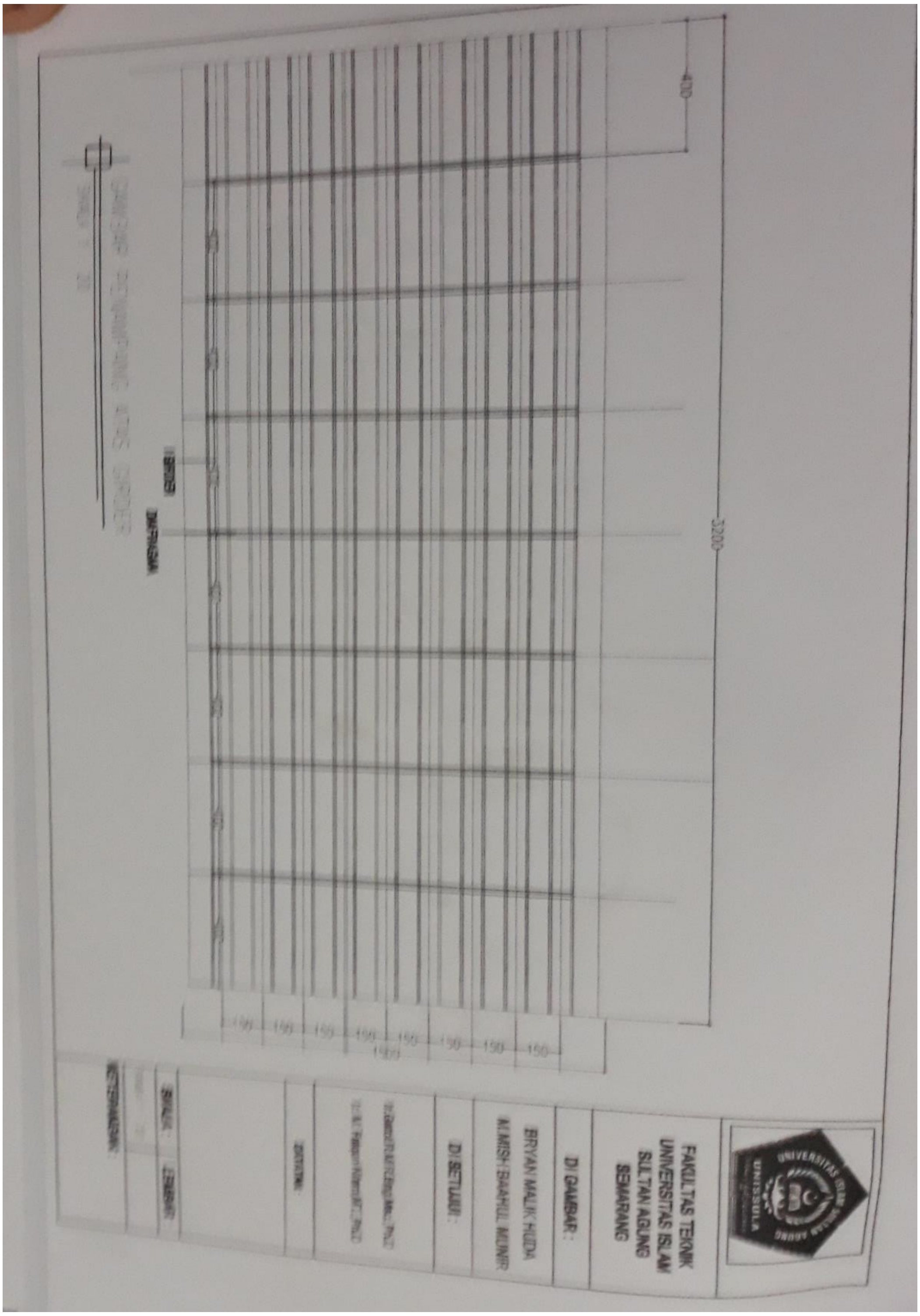
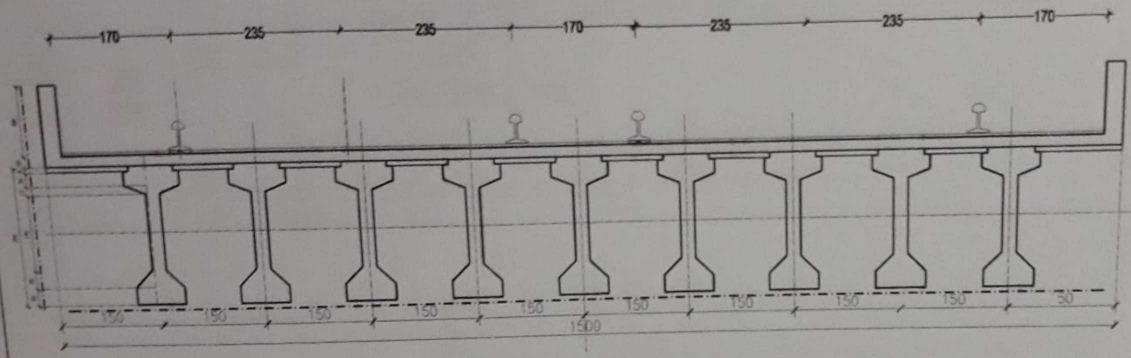
LAMPIRAN

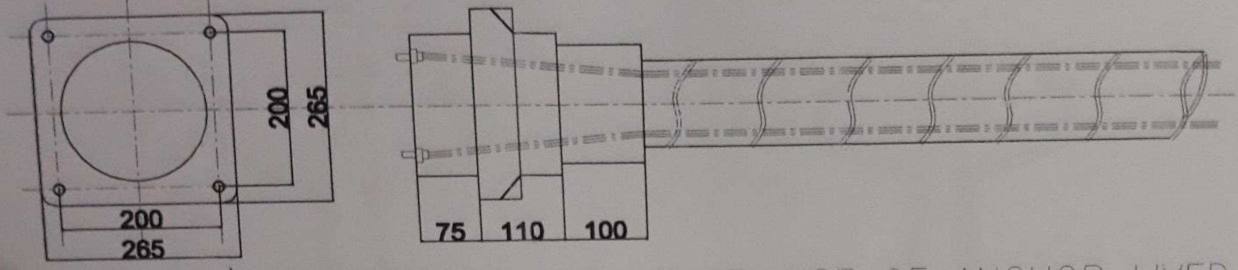




PENAMPANG GIRDER

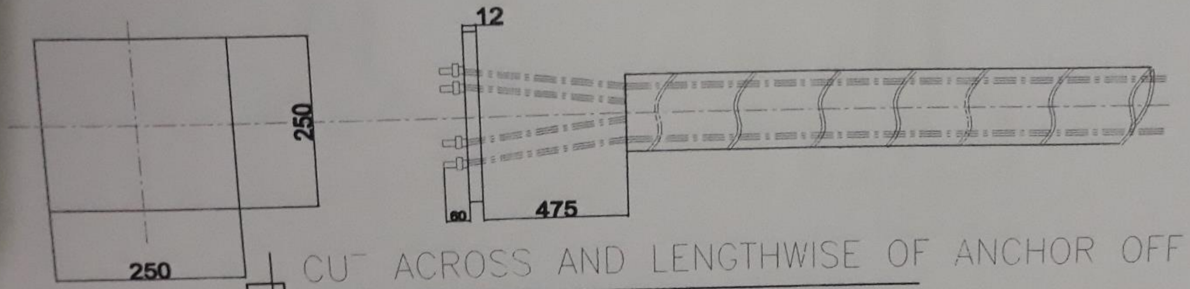
SKALA 1 : 20

FAKULTAS TEKNIK UNIVERSITAS ISLAM SULTAN AGUNG SEMARANG	
DI GAMBAR :	
BRYAN MALIK HUDA M.MISH BAAHUL MUNIR	
DI SETUJUI :	
Ir.Gatot.R.M.R.Eng,Msc.,Ph.D Ir. M. Faiqun Ni'am,MT.,Ph.D	
CATATAN :	
SKALA :	LEMBAR :
SKALA 1 : 20	
KETERANGAN :	



CUT ACROSS AND LENGTHWISE OF ANCHOR LIVED

SKALA 1 : 20



CUT ACROSS AND LENGTHWISE OF ANCHOR OFF

SKALA 1 : 20

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M.MISH BAAHUL MUNIR

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Ir.Gatot.R.M.R.Eng,Msc.,Ph.D

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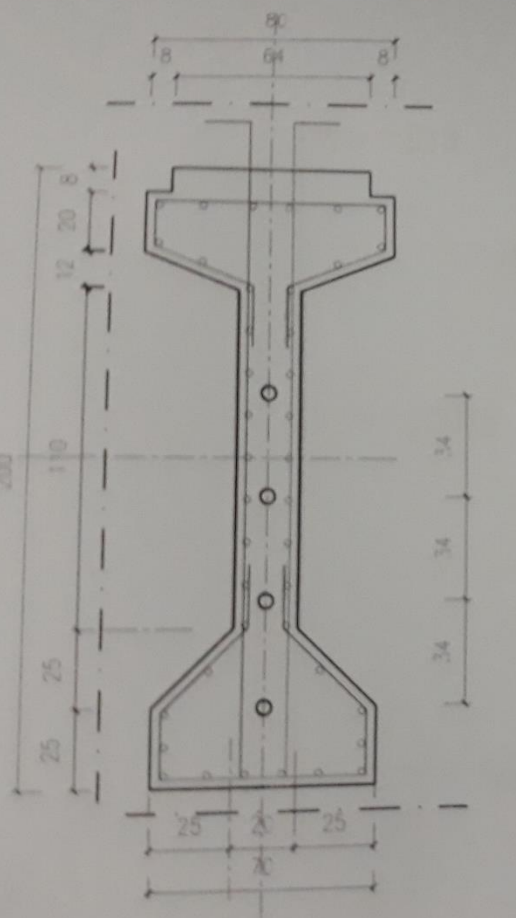
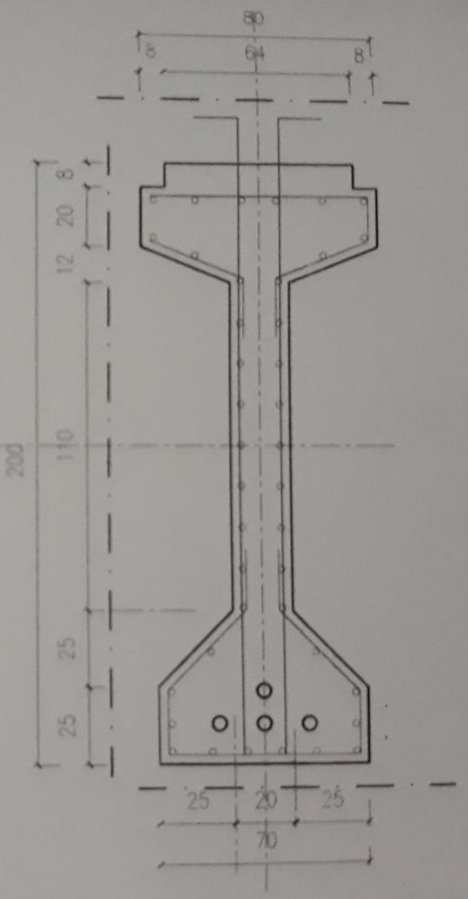
CATATAN :

SKALA :	LEMBAR :
SKALA 1 : 20	

KETERANGAN :



DETAIL PEMASANGAN TENDON
SKALA 1 : 20



DETAIL PEMASANGAN TENDON
SKALA 1 : 20

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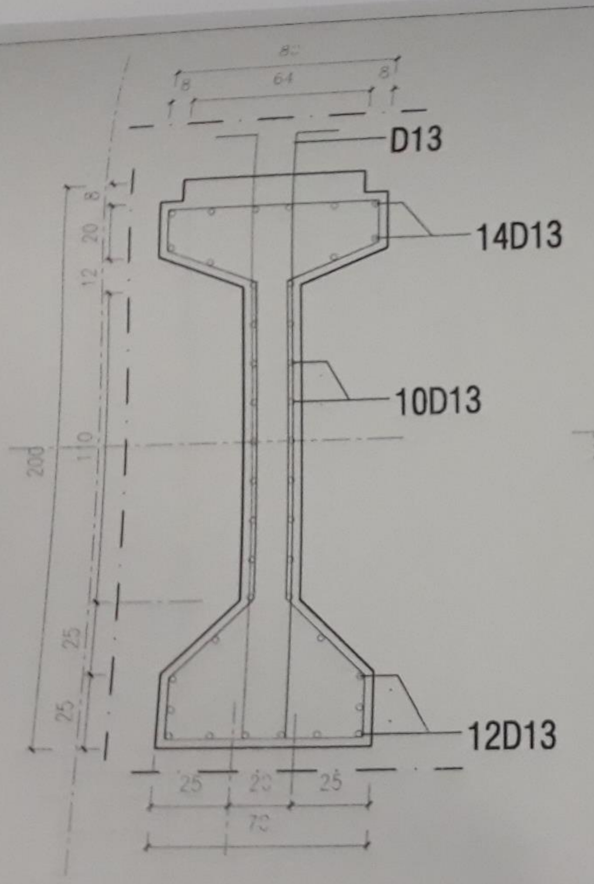
CATATAN :

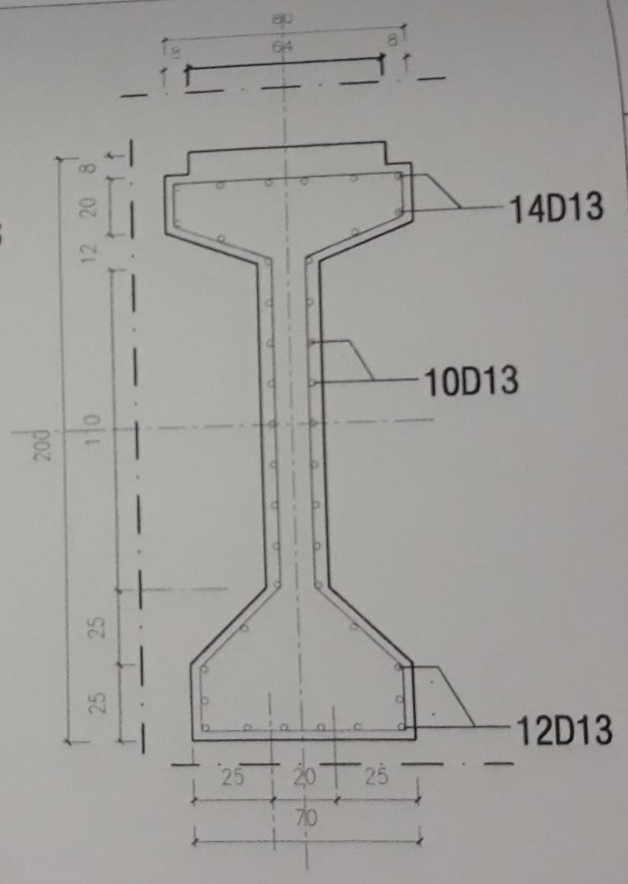
SKALA : SKALA 1 : 20

LEMBAR :

KETERANGAN :



DETAIL PEMBESIAN SHEAR CONNECTOR
SKALA 1 : 20



DETAIL PEMBESIAN PCI GIRDER
SKALA 1 : 20

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M.MISH BAAHUL MUNIR

DI SETUJUI :

Ir.Gatot R.M.R.Eng,Msc.,Ph.D
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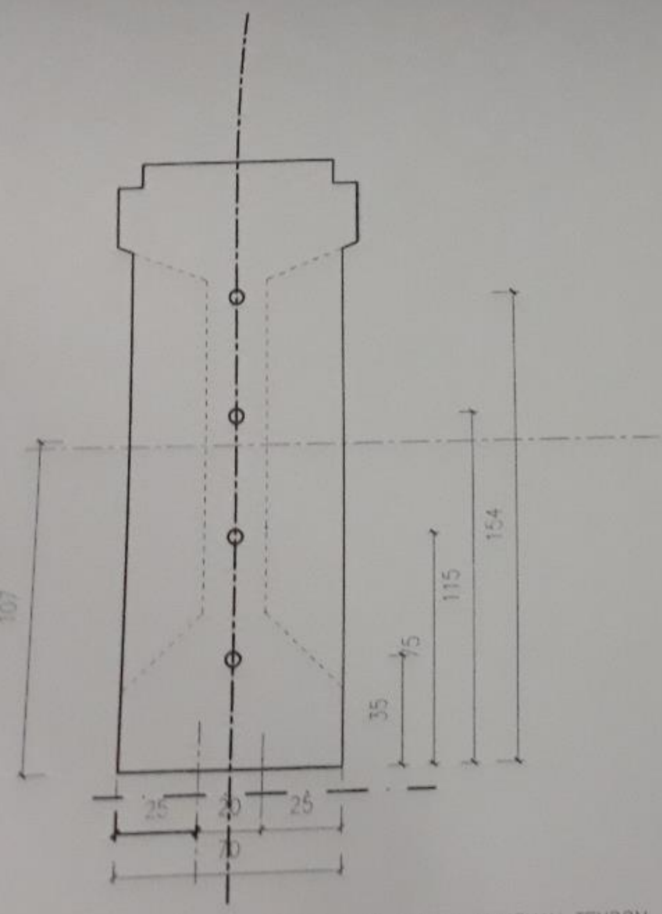
CATATAN :

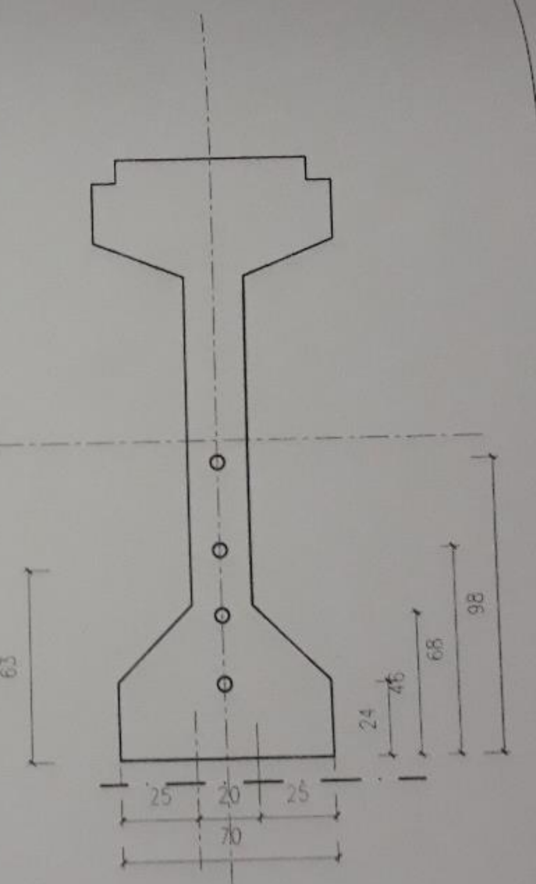
SKALA :	LEMBAR :

KETERANGAN :



DETAIL POSISI 0,00 M DARI TUMPUAN TENDON

SKALA 1 : 20



DETAIL POSISI 4 M DARI TUMPUAN TENDON

SKALA 1 : 20

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BRYAN MALIK HUDA
M.MISH BAAHUL MUNIR

DI SETUJUI :

Ir.Gatot.R.M.R.Eng,Msc.,Ph.D
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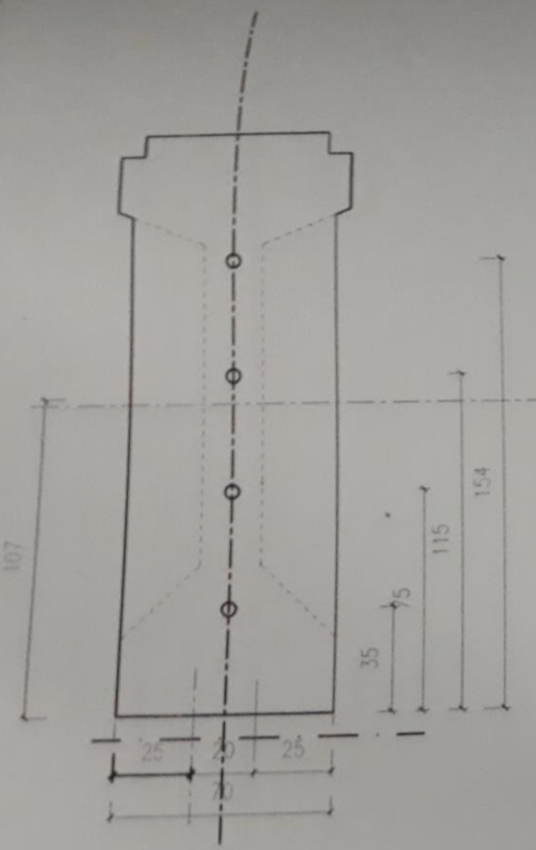
CATATAN :

SKALA : SKALA 1 : 20

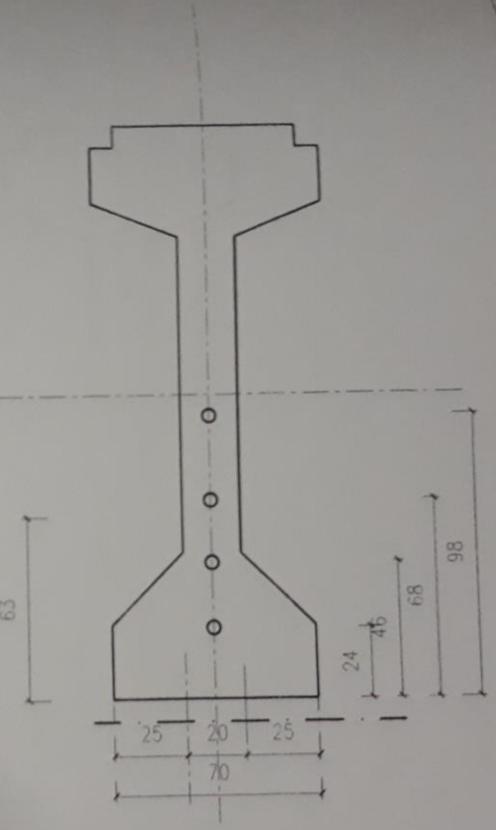
LEMBAR :

KETERANGAN :



DETAIL POSISI 0,00 M DARI TUMPUAN TENDON

SKALA 1 : 20



DETAIL POSISI 4 M DARI TUMPUAN TENDON

SKALA 1 : 20

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M.MISH BAAHUL MUNIR

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CATATAN :

SKALA : SKALA 1 : 20

LEMBAR :

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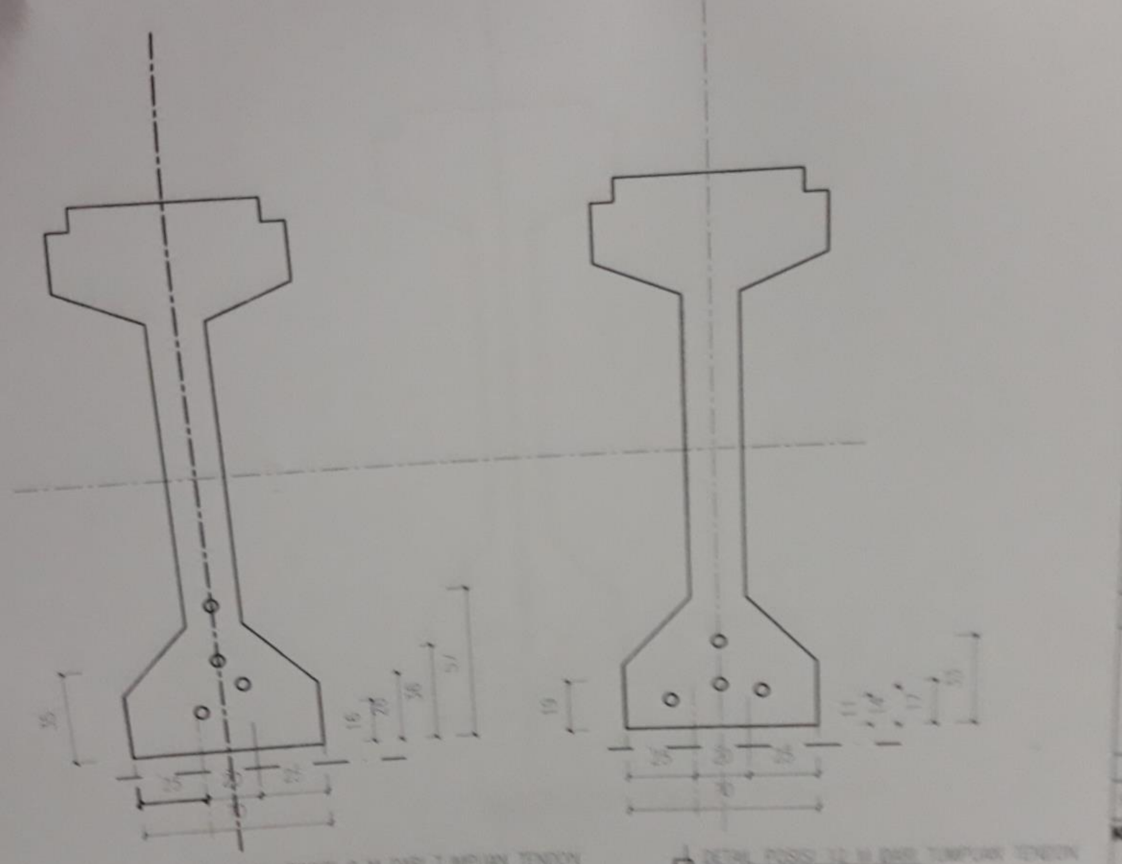

DETAIL POSISI 8 M DARI TUMPUAN TENDON
SKALA 1 : 30

DETAIL POSISI 12 M DARI TUMPUAN TENDON
SKALA 1 : 30

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M.MISH BAAHUL MUNIR

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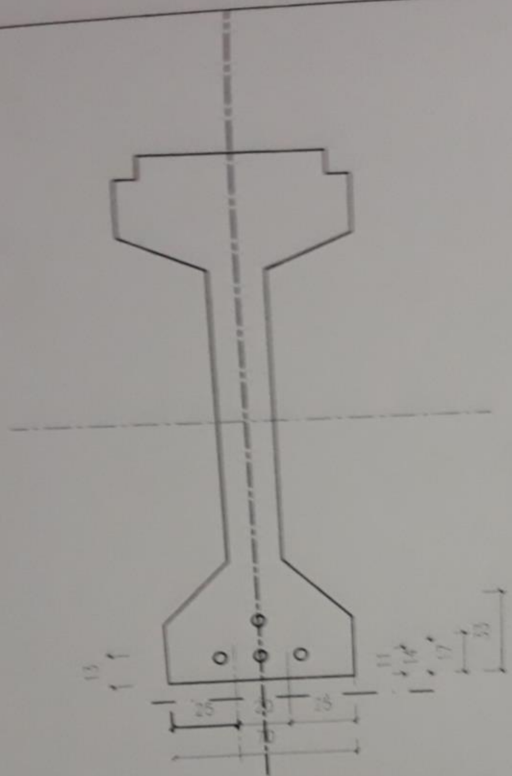
Ir. M. Faiqun Ni'am,MT.,Ph.D

SKALA :	LEMBAR :
SKALA 1 : 30	

KETERANGAN :



DETAIL POSISI 16 M DARI TUMPUAN TENDON
SKALA 1 : 20

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DI SETUJUI :
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CATATAN :

SKALA :	LEMBAR :
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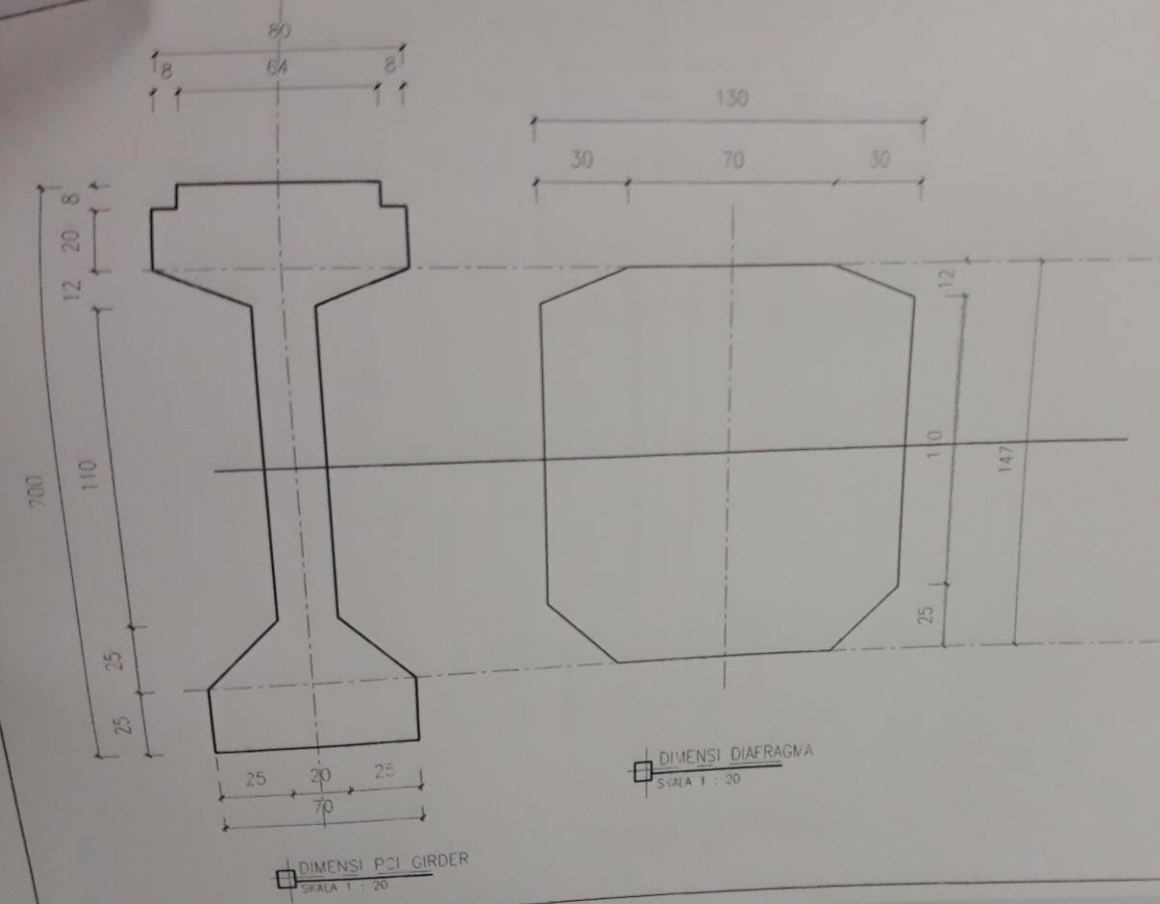
KETERANGAN :



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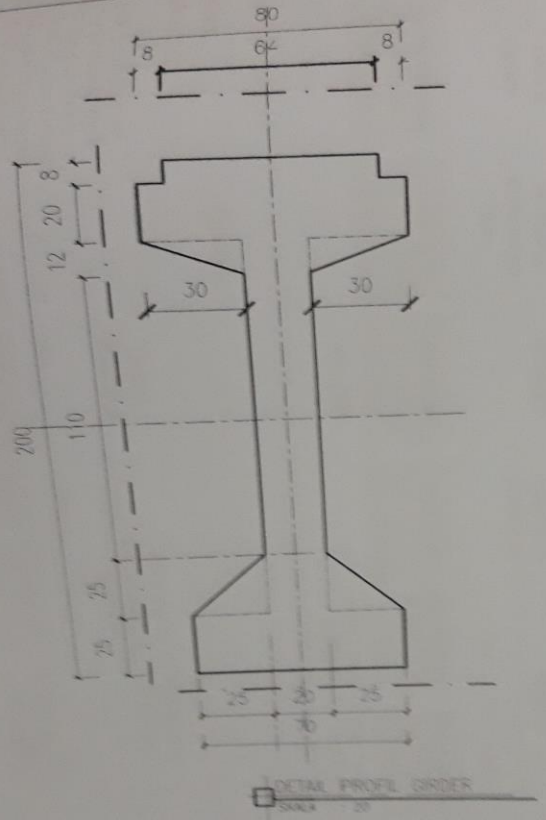
DI SETUJUI :	
Ir.Gatot.R.M R.Eng.Msc.,Ph.D Ir. M. Faiqun Ni'am,MT.,Ph.D	
CATATAN :	
SKALA :	LEMBAR :
SKALA 1 : 20	
KETERANGAN :	



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DI SETUJUI :

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Ir. M. Faiqun Ni'am,MT.,Ph.D

CATATAN :

SKALA : | LEMBAR :

KETERANGAN :

...on specifications

...ecifications after stress relieving

...ow relaxation ensures that no noticeable ...ss of tension will occur in time, therefore a ...ng lasting compressive force on concrete. ...rcelorMittal prestressing steel guarantees a ...ery low relaxation.

...eviated tension is current in post-tensioned ...tructures, stay-cables and even some ...refabrication methods. By strict adherence ...o manufacturing processes and routine ...estructive tests, WireSolutions' products ...xceed standard requirements.

- Stress corrosion and hydrogen embrittlement are known to be a threat for high-tensile structural steels, especially in environments containing chlorides. For several decades, WireSolutions has been producing wire and strands satisfying the most stringent demands in the industry in this field.

Maximum relaxation at 0.7 Rm (20°C) at 1 000 h	Reduction in area at rupture	Minimum elongation at maximum force	Deflected tensile test	Maximum curvature in a free state	Tension corrosion	
					1 test	6 tests
2.5 %	Ductile wire break visible to the naked eye	3.5 %	Post-tension < 28	< 25 mm/m	Strand < 9.3 mm [illegible]	Strand < 9.3 mm [illegible]
			Stay-cables < 20		Min. - strands ≥ 9.3 mm [illegible]	Min. - strands ≥ 9.3 mm [illegible]

...atigue behaviour, ...000 000 cycles for:

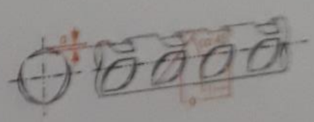
...atigue triggers quick, unexpected and ...ostly rupture in structural steels. This is ...specially true with stay-cable strands, ...ubmitted to high levels of stress variation. ...hoice of steel quality, specific production ...rocesses and control allow ArcelorMittal ...teel to reach a high fatigue resistance.

Upper limit of nominal tensile strenght %	Test range MPa
Stay-cables 45	Stay-cables 300
Strands 70	Strands Plain: 190 Indented: 170
Wire 70	Wire Plain: 200 Indented: 180

Options

Strand indentation					Resistance to low temperature, cryogenics*	Galvanisation [illegible]
Ø	a	a±	l	p		
< 12 ≥ 12	0.06 0.07	± 0.03	3.5 ± 0.5	5.5 ± 0.5	-170°C	From 190 to 350 g/m²

*Strands tested to customer's specifications



echnical data

re strands
0138 – BS 5896

Nominal diameter (mm)	Tensile strength (MPa)	Mass (g/m)	Cross sectional area (mm²)	Tolerance on mass (%)	Minimum breaking strength (kN)	Maximum breaking strength (kN)	Yield strength at 0.1 % elongation (kN)
6.85	2060	220.2	28.2	± 2	58.1	66.8	51.1
7	2060	234.3	30.0	± 2	61.8	71.1	54.4
8	1860	296.8	38.0	± 2	70.7	81.3	60.8
9.3	1860	406.1	52.0	± 2	96.7	111.0	83.2
9.6	1960	429.6	55.0	± 2	102.0	117.0	87.7
11.3	1860	585.8	75.0	± 2	140.0	161.0	120.0
12.5	1860	726.3	93.0	± 2	173.0	199.0	149.0
12.9	1860	781.0	100.0	± 2	186.0	214.0	160.0
15.2	1770	1086.0	139.0	± 2	246.0	283.0	212.0
15.2	1860	1086.0	139.0	± 2	259.0	298.0	223.0
15.3	1770	1093.0	140.0	± 2	248.0	285.0	213.0
15.7	1770	1172.0	150.0	± 2	266.0	306.0	229.0
15.7	1860	1172.0	150.0	± 2	279.0	321.0	240.0

re strands
A A 416/A 416 M

Nominal diameter		Diameter tolerance		Grade		Nominal weight		Nominal steel area		Minimum breaking strength		Yield strength minimum load at 1% extension	
inch	mm	inch	mm	ksi	MPa	lb/1000′	g/m	inch²	mm²	lbs	kN	lbs	kN
0.250	6.40	- 0.016/+ 0.016	- 0.40/+ 0.40	250	1725	122	182	0.036	23.2	9000	40.0	8100	36.0
0.313	7.90	- 0.016/+ 0.016	- 0.40/+ 0.40	250	1725	197	294	0.058	37.4	14500	64.5	13050	58.1
0.375	9.53	- 0.006/+ 0.0026	- 0.15/+ 0.65	270	1860	290	432	0.085	54.8	23000	102.3	20700	92.1
0.438	11.11	- 0.006/+ 0.0026	- 0.15/+ 0.65	270	1860	390	582	0.115	74.2	31000	137.9	27900	124.1
0.500	12.70	- 0.006/+ 0.0026	- 0.15/+ 0.65	270	1860	520	775	0.153	98.7	41300	183.7	37170	165.3
0.520	13.20	- 0.006/+ 0.0026	- 0.15/+ 0.65	270	1860	568	844	0.167	107.7	45000	200.2	40500	180.1
0.563	14.29	- 0.006/+ 0.0026	- 0.15/+ 0.65	270	1860	651	970	0.192	123.9	51700	230.0	46530	207.0
0.600	15.24	- 0.006/+ 0.0026	- 0.15/+ 0.65	270	1860	740	1102	0.217	140.0	58600	260.7	52740	234.6
0.700	17.78	- 0.006/+ 0.0026	- 0.15/+ 0.65	270	1860	1000	1487	0.294	189.7	79400	353.2	71500	318.0

re strands
0138

Nominal diameter (mm)	Tensile strength (MPa)	Mass (g/m)	Cross sectional area (mm²)	Tolerance on mass (%)	Minimum breaking strength (kN)	Maximum breaking strength (kN)	Yield strength at 0.1 % elongation (kN)
5.2	1960	106.2	13.6	± 2	26.7	30.7	23.8
5.2	2060	106.2	13.6	± 2	28.0	32.2	24.9
5.2	2160	106.2	13.6	± 2	29.4	33.8	28.2
6.3	1920	154.6	19.8	± 2	38.0	43.7	32.7
6.5	1860	165.5	21.2	± 2	39.4	45.3	33.9
6.5	1960	165.5	21.2	± 2	41.6	47.8	37.0
7.5	1860	226.5	29.0	± 2	53.9	62.0	48.4