

POST TENSIONING FORMAT FOR PSC GIRDER

General information:

Name & Location of Bridge: Construction Of 301.00m Long PSC Girder Bridge Over the River Kartoa at Ch 4500 on Chatra GC-Gilabari Ghat Via Nischintobati Primary School Road, Road ID : 185764034		District: Rangpur	Upazila: Pirganj
Span/Girder Ref: Span-2, Girder-2	Girder Length (m): 43m	Cable Ref. to be Stressed 01 of 04	
Girder Casting Date: 03-11-2025	Stressing Stage of Cable : 02	Jacking end Ref:	End 1: L709046
Date of Tensioning: 21-11-2025			End 2: L709047

Design information:

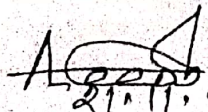
Dia of Strand (mm): 15.24mm	No. of Strand Cable: 19 nos	Anchorage Brand: Decomate	UTS of Strand (N/mm2): 1860	M. of Elasticity, E (MPA): 197000
Area of Strand (mm2): 140	Area of Cable, A (mm2): 2660	Design Jacking Force P: 3750 Kn		
Design Elongation Each end (mm):	Design Elongation for Gripping Length (mm): N/A	Actual Gripping Length (mm): 560	Corrected Elongation for Grip Length δ(mm): 4.00	
Design Cable Slip (mm): 6mm	Design Conc. Strength during Tensioning (N/mm2): 36 MPa	Actual Conc. Strength at the time of Tensioning (N/mm2): MPa		

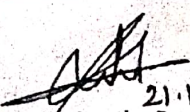
Stressing & Jack information:

Pump Model No. P1: 710570 P2: 710567	Pressure gauge Model: M1: MPC-237219E M2: MPC-256050C	Tensioning Ram Area (m2): TA1: TA2:	Blocking Ram Area (Cm2): BA1: BA2:
Actual Area of Cable, A1 (mm2): 2707.50	Modulus of Elasticity, E1(MPA): 200400	Corrected Elongation (mm) for Actual A1 & E1: $\delta * (A * E / A1 * E1)$: 4.14 mm	
Jack Pres. With Jack loss (BAR) Kg/cm2. J1: P/(TA1*efficiency): J2: P/(TA2*efficiency):	Calibrated Jack press. (Kg/cm2) CJ1: 438.61 CJ2: 442.07	Initial Jack Press. (Kg/cm2) ICJ1: 79.24 ICJ2: 87.25	Initial Marking: IRJ1: 38 IRJ2: 36
Actual calculated Elongation for Grip Length, δ1 (mm): 3.86 mm	Gross Slip of Cable (mm): (Final Elong. - Net Elong.)	Net Slip at Jack end after lock-off (mm): (Gross Slip - Calcul. Elong. δ 1 for Grip length)	
Blocking Pressure Kg/Cm2): E1: Auto Block E2: Auto Block	At end 1	At end 2	At end 1
	152-144=8	149-141=8	8-3.86=4.14 8-3.86=4.14

Record of Stressing & Elongation:

Avg. % of Design Load	Actual Applied Pressure		Calculated Gauge Pressure Kg/cm2		Reading for Elongation (mm)		Measured Elongation At both Jacking end (mm)			Corre ction Factor For ICJ	Final/Total Elongation. (mm)		Avera ge Elong ation At each End.	Remarks (Average Slip at each end)
	Col(1)		Col(2)		Col(3)		Col(4)=(Col 3-IRJ)				Col(6)=(4+5)			
	1	2			1	2	1	2	Avg.		1	2		
	KN	TON	Kg/cm2	Kg/cm2	-	-	-	-	-		-	-		
20	750	76.48	79.24	87.25	38	36	-	-	-					4.14+4.14
40	1500	152.96	169.08	175.96	63	61	25	25	25					2
60	2250	229.44	258.92	264.66	95	92	57	56	56.5					=4.14
80	3000	305.91	348.76	353.37	126	122	88	86	87					6
95	3562.5	363.27	416.15	419.90	148	145	110	109	109.5	29				OK
98	3675	374.75	429.62	433.20	152	149	114	113	113.5				1425	
100	3750	382.39	438.61	442.07										
102	3825	390.04	447.59	450.94										
105	3937.5	401.51	461.07	464.25										
Lock-off					144	141								

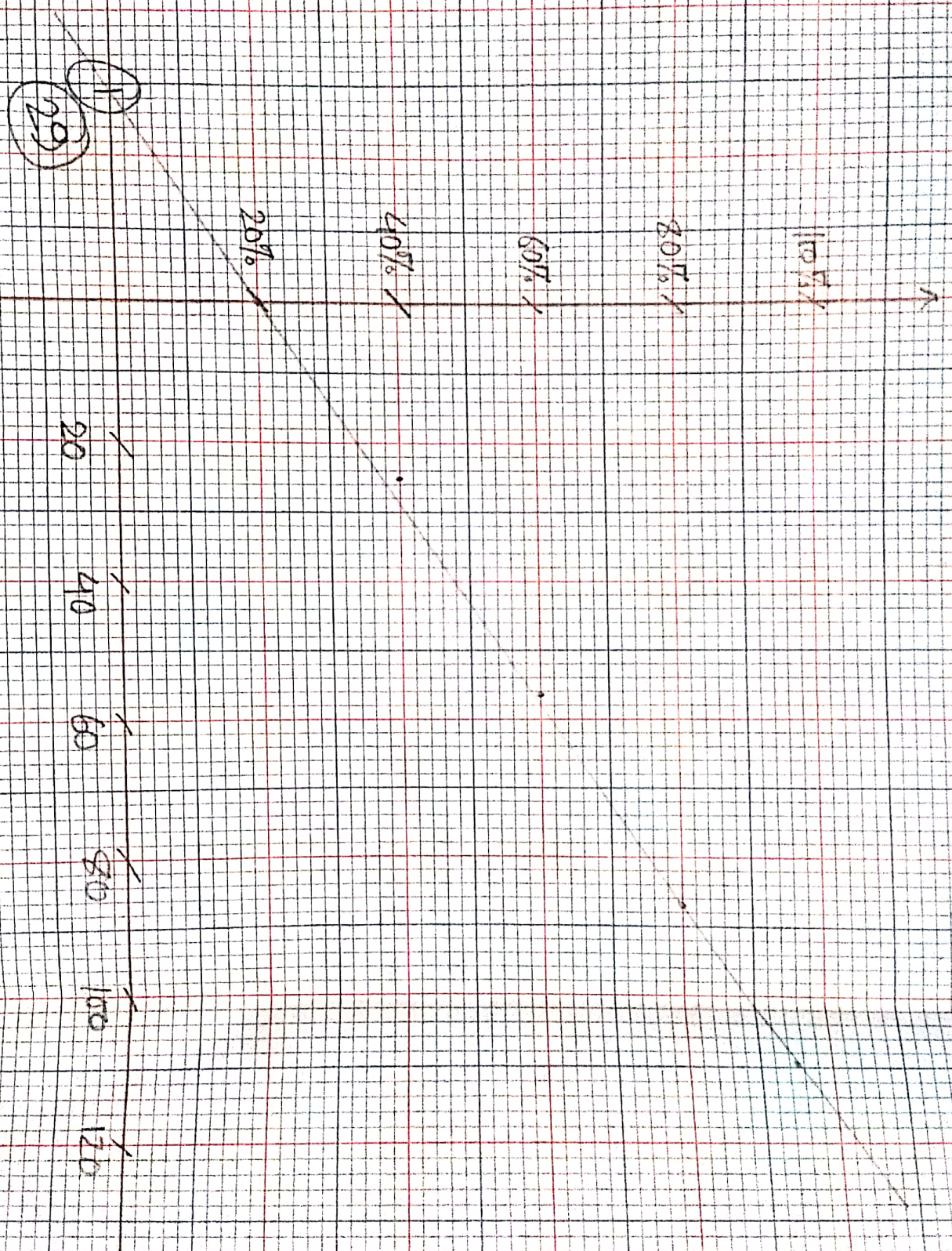

21.11.25
Client's Representative


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Consultant's Representative

Contractor's Representative

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General information:

Name & Location of Bridge: Construction Of 301.00m Long PSC Girder Bridge Over the River Kartoa at Ch 4500 on Chatra GC-Gilabari Ghat Via Nischintobati Primary School Road, Road ID : 185764034			District: Rangpur	Upazila: Pirganj
Span/Girder Ref: Span-2, Girder-2	Girder Length (m): 43m	Cable Ref. to be Stressed 02 of 04		
Girder Casting Date: 03-11-2025	Stressing Stage of Cable : 02	Jacking end Ref:	End 1: L709046	
Date of Tensioning:		end Ref:	End 2: L709047	

Design information:

Dia of Strand (mm): 15.24mm	No. of Strand Cable: 19 nos	Anchorage Brand: Decomate	UTS of Strand (N/mm²): 1860	M. of Elasticity, E (MPa): 197000
Area of Strand (mm²): 140	Area of Cable, A (mm²): 2660	Design Jacking Force P: 3750 Kn		
Design Elongation Each end (mm):	Design Elongation for Gripping Length (mm): N/A	Actual Gripping Length (mm): 560	Corrected Elongation for Grip Length δ(mm): 4.00	
Design Cable Slip (mm): 6mm	Design Conc. Strength during Tensioning (N/mm²): 36 MPa	Actual Conc. Strength at the time of Tensioning (N/mm²): MPa		

Stressing & Jack information:

Pump Model No. P1: 710570 P2: 710567	Pressure gauge Model: M1: MPC-237219E M2: MPC-256050C	Tensioning Ram Area (m²): TA1: TA2:	Blocking Ram Area (Cm²): BA1: BA2:	
Actual Area of Cable, A1 (mm²): 2707.50	Modulus of Elasticity, E1(MPA): 200400	Corrected Elongation (mm) for Actual A1 & E1 : $\delta * (A * E / A1 * E1)$: 143.93 mm		
Jack Pres. With Jack loss (BAR) Kg/cm². J1: P/(TA1*efficiency): J2: P/(TA2*efficiency):	Calibrated Jack press. (Kg/cm²) CJ1: 438.61 CJ2: 442.07	Initial Jack Press. (Kg/cm²) ICJ1: 79.24 ICJ2: 87.25	Initial Marking: IRJ1: IRJ2:	
Actual calculated Elongation for Grip Length, $\delta 1$ (mm): 3.86 mm	Gross Slip of Cable (mm): (Final Elong. - Net Elong.)		Net Slip at Jack end after lock-off (mm): (Gross Slip - Calcul. Elong. $\delta 1$ for Grip length)	
Blocking Pressure Kg/Cm²): E1: Auto Block E2: Auto Block	At end 1	At end 2	At end 1	At end 2
	146-139=7	153-145=8	7-3.86=3.14	8-3.86=4.14

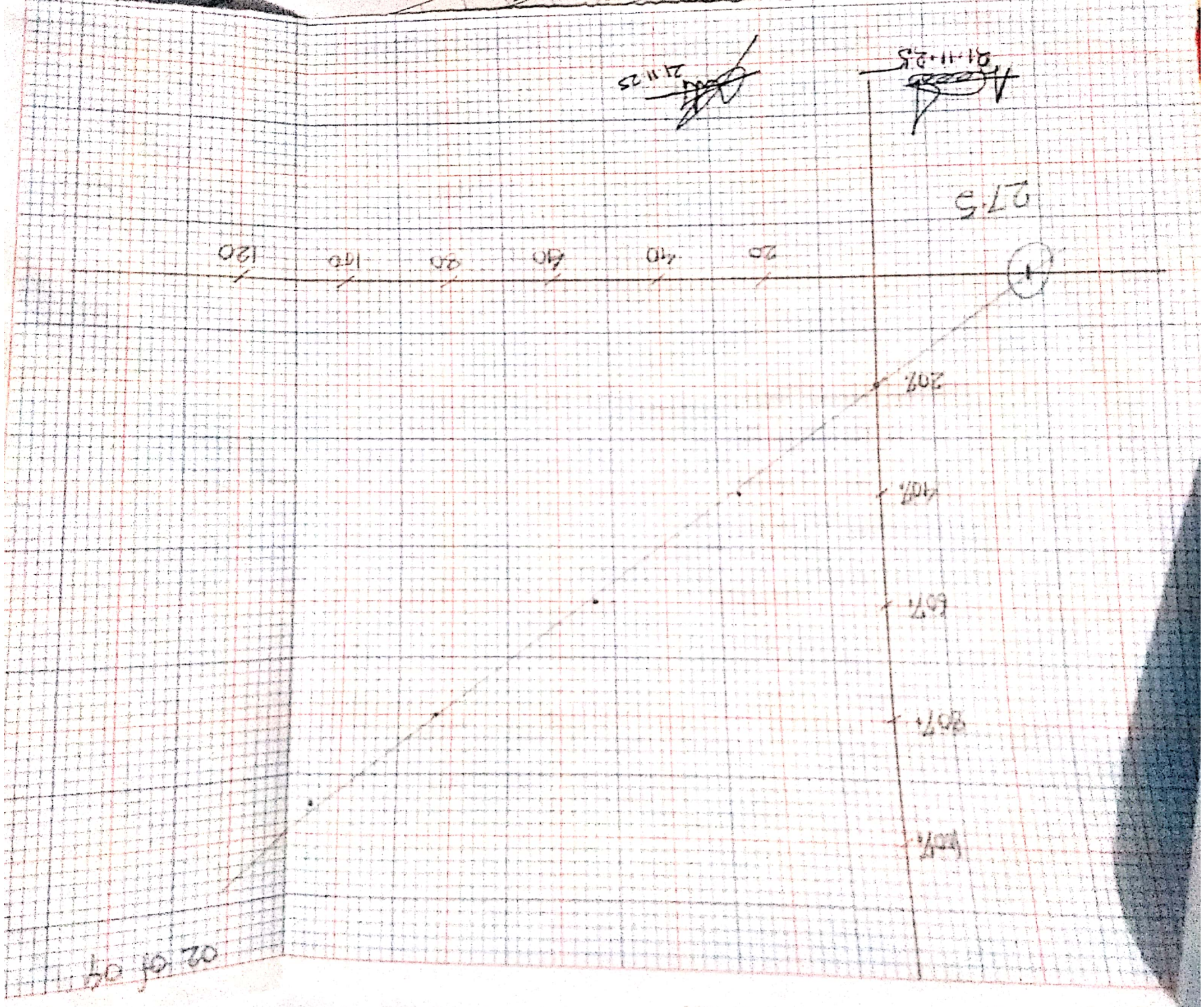
Record of Stressing & Elongation:

Avg. % of Design Load	Actual Applied Pressure		Calculated Gauge Pressure Kg/cm ²		Reading for Elongation (mm)		Measured Elongation At both Jacking end (mm)			Corre ction Factor For ICJ	Final/Total Elongation. (mm)		Avera ge Elong ation At each End.	Remarks (Average Slip at each end)	
	Col(1)		Col(2)		Col(3)		Col(4)=(Col 3-IRJ)				Col(5)	Col(6)=(4+5)			
	1	2	Kg/cm ²	Kg/cm ²	1	2	1	2	Avg.		1	2			
	KN	TON	Kg/cm ²	Kg/cm ²	-	-	-	-	-		-	-			
20	750	76.48	79.24	87.25	37	40	-	-	-					314+4.14	
40	1500	152.96	169.08	175.96	63	66	26	26	26					2	
60	2250	229.44	258.92	264.66	91	93	54	53	53.5					=3.64	
80	3000	305.91	348.76	353.37	120	123	83	83	83						
95	3562.5	363.27	416.15	419.90	142	146	105	106	105.5	27.5			138.5	< 6	
98	3675	374.75	429.62	433.20	146	153	109	113	111					OK	
100	3750	382.39	438.61	442.07											
102	3825	390.04	447.59	450.94											
105	3937.5	401.51	461.07	464.25											
Lock -off					139	145									

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Span/Girder Ref: Span-2, Girder-2	Girder Length (m): 43m	Cable Ref. to be Stressed 04 of 04	
Girder Casting Date: 03-11-2025	Stressing Stage of Cable : 02	Jacking end Ref:	End 1: L709046
Date of Tensioning: 21-11-2025			End 2: L709047

Design Information:

Dia of Strand (mm): 15.24mm	No. of Strand Cable: 19 nos	Anchorage Brand: Decomate	UTS of Strand (N/mm ²): 1860	M. of Elasticity, E (MPa): 197000
Area of Strand (mm ²): 140	Area of Cable, A (mm ²): 2660	Design Jacking Force P: 3750 Kn		
Design Elongation Each end (mm):	Design Elongation for Gripping Length (mm): N/A	Actual Gripping Length (mm): 560	Corrected Elongation for Grip Length δ (mm): 4.00	
Design Cable Slip (mm): 6mm	Design Conc. Strength during Tensioning (N/mm ²): 36 MPa	Actual Conc. Strength at the time of Tensioning (N/mm ²): MPa		

Stressing & Jack Information:

Pump Model No. P1: 710570 P2: 710567	Pressure gauge Model: M1: MPC-237219E M2: MPC-256050C	Tensioning Ram Area (m ²): TA1: TA2:	Blocking Ram Area (Cm ²): BA1: BA2:
Actual Area of Cable, A1 (mm²): 2707.50	Modulus of Elasticity, E1 (MPa): 200400	Corrected Elongation (mm) for Actual A1 & E1 : $\delta * (A * E / A1 * E1)$: 148.76 mm	
Jack Pres. With Jack loss (BAR) Kg/cm ² . J1: P/(TA1*efficiency): J2: P/(TA2*efficiency):	Calibrated Jack press. (Kg/cm ²) CJ1: 438.61 CJ2: 442.07	Initial Jack Press. (Kg/cm ²) ICJ1: 79.24 ICJ2: 87.25	Initial Marking: IRJ1: IRJ2:
Actual calculated Elongation for Grip Length, $\delta 1$ (mm): 3.86 mm	Gross Slip of Cable (mm): (Final Elong. - Net Elong.)	Net Slip at Jack end after lock-off (mm): (Gross Slip - Calcul. Elong. $\delta 1$ for Grip length)	
Blocking Pressure Kg/Cm ² : E1: Auto Block E2: Auto Block	At end 1 152-145=7	At end 2 155-147=8	At end 1 7-3.86=3.14
			At end 2 8-3.86=4.14

Record of Stressing & Elongation:

Avg. % of Design Load	Actual Applied Pressure		Calculated Gauge Pressure Kg/cm ²		Reading for Elongation (mm)		Measured Elongation At both Jacking end (mm)			Corre ction Factor For ICJ	Final/Total Elongation. (mm)		Avera ge Elong ation At each End.	Remarks (Average Slip at each end)
	Col(1)		Col(2)		Col(3)		Col(4)=(Col 3-IRJ)				Col(6)=(4+5)			
	1	2			1	2	1	2	Avg.		1	2		
	KN	TON	Kg/cm ²	Kg/cm ²	-	-	-	-	-		-	-		
20	750	76.48	79.24	87.25	38	40	-	-	-	28				3.14+4.14
40	1500	152.96	169.08	175.96	65	67	27	27	27					2
60	2250	229.44	258.92	264.66	94	96	56	56	56					= 3.64
80	3000	305.91	348.76	353.37	120	122	82	82	82					2.6
95	3562.5	363.27	416.15	419.90	142	144	104	104	104				142.5	OK
98	3675	374.75	429.62	433.20	147	151	109	111	110					
100	3750	382.39	438.61	442.07	152	155	114	115	114.5					
102	3825	390.04	447.59	450.94										
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Lock-off					145	147								

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Design Cable Slip (mm): 6mm	Design Conc. Strength during Tensioning (N/mm2): 36 MPa	Actual Conc. Strength at the time of Tensioning (N/mm2): MPa		

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Actual calculated Elongation for Grip Length, $\delta 1$ (mm): 3.86 mm	Gross Slip of Cable (mm): (Final Elong. - Net Elong.)	Net Slip at Jack end after lock-off (mm): (Gross Slip - Calcul. Elong. $\delta 1$ for Grip length)		
Blocking Pressure Kg/Cm2: E1: Auto Block E2: Auto Block	At end 1	At end 2	At end 1	At end 2
	167-159=8	170-162=8	8-3.86=4.14	8-3.86=4.14

Record of Stressing & Elongation:

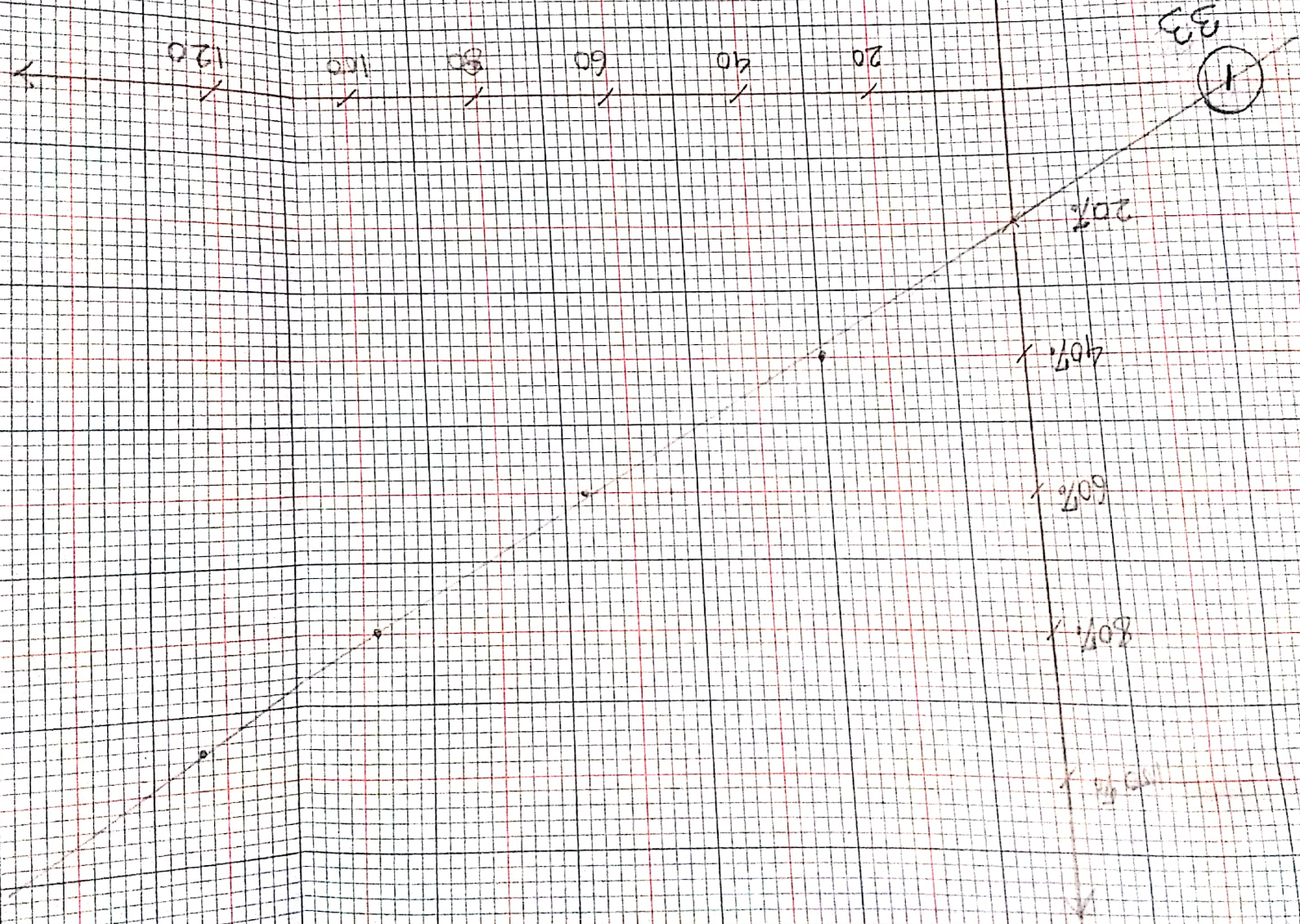
Avg. % of Design Load	Actual Applied Pressure		Calculated Gauge Pressure Kg/cm2		Reading for Elongation (mm)		Measured Elongation At both Jacking end (mm)			Correction Factor For ICJ	Final/Total Elongation. (mm)		Average Elongation At each End.	Remarks (Average Slip at each end)
	Col(1)		Col(2)		Col(3)		Col(4)=(Col 3-IRJ)				Col(6)=(4+5)			
	1	2	1	2	1	2	Avg.	1	2					
	KN	TON	Kg/cm2	Kg/cm2	-	-	-	-	-		-	-		4.14+4.14
20	750	76.48	79.24	87.25	46	45	-	-	-					2
40	1500	152.96	169.08	175.96	76	75	30	30	30					= 4.14
60	2250	229.44	258.92	264.66	113	112	67	67	67					
80	3000	305.91	348.76	353.37	144	143	98	98	98					
95	3562.5	363.27	416.15	419.90	167	170	121	125	123	33			156	< 6
98	3675	374.75	429.62	433.20										OK
100	3750	382.39	438.61	442.07										
102	3825	390.04	447.59	450.94										
105	3937.5	401.51	461.07	464.25										
Lock-off					159	162								

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