



STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Assistant Engineer Buildings
 Public Health Engineering Division City-III
 Sewerage Sub Division Muzaffarabad
 (Construction of Remaining Works /Rehalitation Water Supply Scheme Muzaffarabad (Package-III))

Reference # CED/TFL **36753** (Dr. Usman Akmal)
 Reference of the request letter # 197-99/AE/City-III/2021

Dated: 13-07-2021
 Dated: 10-07-2021

Tension Test Report (Page – 1/3)

Date of Test 29-07-2021
 Gauge length 2 inches
 Description G.I Pipe Steel Strip Tensile and Bend Test

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)		(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	G.I Pipe	2	26.80x3.40	91.12	2600	4400	280	474	0.40	20.00	
2			26.70x3.35	89.45	3800	4400	417	483	0.25	12.50	
3	G.I Pipe	3	26.90x4.00	107.60	2600	3800	237	346	0.65	32.50	
4			26.90x4.10	110.29	2700	390	240	35	0.50	25.00	
5	G.I Pipe	8	26.80x9.40	251.92	10200	13800	397	537	0.55	27.50	
6			26.60x9.40	250.04	10000	13700	392	538	0.60	30.00	
Only Six Samples for Tensile and Three Samples for Bend Test											
Bend Test											
Strip Taken from G.I Pipe (2") Bend Test Through 180° is Satisfactory											
Strip Taken from G.I Pipe (3") Bend Test Through 180° is Satisfactory											
Strip Taken from G.I Pipe (8") Bend Test Through 180° is Satisfactory											

I/C Testing Laboratoires
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To,
Assistant Engineer Buildings
Public Health Engineering Division City-III
Sewerage Sub Division Muzaffarabad
(Construction of Remaining Works /Rehalitation Water Supply Scheme Muzaffarabad (Package-III))

Reference # CED/TFL **36753** (Dr. Usman Akmal)

Dated: 13-07-2021

Reference of the request letter # 197-99/AE/City-III/2021

Dated: 10-07-2021

Seamless/Flattening Test Report (Page – 2/3)

Date of Test 19-04-2021

Description G.I Pipe Seamless Test as per ASTM-A53-02

Sr. No.	Designation	Test Type	Observation/Results
1	Pipe 2"	Ductility	No crack was observed
		Soundness	No evidence of lamination noticed
2	Pipe 3"	Ductility	No crack was observed
		Soundness	No evidence of lamination noticed
3	Pipe 8"	Ductility	No crack was observed
		Soundness	No evidence of lamination noticed
-	-	-	-
-	-	-	-
-	-	-	-
Only Three Samples for Test			

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To,
Assistant Engineer Buildings
Public Health Engineering Division City-III
Sewerage Sub Division Muzaffarabad
(Construction of Remaining Works /Rehalitation Water Supply Scheme Muzaffarabad (Package-III))

Reference # CED/TFL **36753** (Dr. Usman Akmal)
Reference of the request letter # 197-99/AE/City-III/2021

Dated: 13-07-2021
Dated: 10-07-2021

Weight & Size Test Report (Page – 3/3)

Date of Test 19-04-2021
Description G.I Pipe Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	External Diameter	Internal Diameter	Wall Thickness	Remark
	(inch)	(g)	(mm)	(kg/m)	(mm)	(mm)	(mm)	
1	2	291	58.00	5.02	58.00	51.20	3.40	
2	3	506	58.00	8.72	86.00	77.80	4.10	
3	8	2948	58.60	50.31	219.00	200.20	9.40	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
Only Three Samples for Test								

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STRUCTURAL ENGINEERING DIVISION
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To,
 General manager
 New Mujahid Alcon Industries (Pvt) Ltd
 Naveena N31 Gulberg

Reference # CED/TFL **36764** (Dr. Qasim Khan)
 Reference of the request letter # Nil

Dated: 17-07-2021
 Dated: 14-07-2021

Tension Test Report (Page – 1/1)

Date of Test 29-07-2021
 Gauge length 2 inches
 Description Aluminum Rectangular Pipe and Aluminum Angle Strip Tensile Test

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)										
1	Rectangular Pipe	50x75x3	23.90x3.00	71.70	9.68	13.60	135.01	189.68	0.30	15.00	
2			24.00x3.00	72.00	9.94	12.60	138.06	175.00	0.35	17.50	
3	Angle	50x50x3	24.00x2.85	68.40	14.50	16.85	211.99	246.35	0.25	12.50	
4			24.00x2.85	68.40	14.23	16.70	208.04	244.15	0.30	15.00	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
Only Four Samples for Tensile Test											
Bend Test											

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,
 Resident Engineer (Sec-I)
 Finite – CPM (Jv)
 Improvement, Up Gradation and Widening of Jaglot Skardu Road Sec-I

Reference # CED/TFL **36778** (Dr. Usman Akmal)
 Reference of the request letter # FC/JV/JSR/2021/F-19

Dated: 16-07-2021
 Dated: 30-06-2021

Tension Test Report (Page – 1/4)

Date of Test 29-07-2021
 Gauge length 2 inches
 Description Guard Rail W Section Strip Tensile and Bend Test as per AASHTOO M-180

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	Guard Rail W Section	2.48x0.270	0.67	4000	5300	5974	7915	0.20	10.00	
2		2.49x0.265	0.66	3900	5100	5910	7729	0.20	10.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile and One Sample for Bend Test										
Bend Test										
Strip Taken from Guard Rail W Section Bend Test Through 180° is Satisfactory										

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Resident Engineer (Sec-I)
 Finite – CPM (Jv)
 Improvement, Up Gradation and Widening of Jaglot Skardu Road Sec-I

Reference # CED/TFL **36778** (Dr. Usman Akmal)
 Reference of the request letter # FC/JV/JSR/2021/F-19

Dated: 16-07-2021
 Dated: 30-06-2021

Tension Test Report (Page – 2/4)

Date of Test 29-07-2021
 Gauge length 2 inches
 Description Guard Rail Post (I-Section) Strip Tensile Test as per ASTM A36

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	Guard Rail Post (I-Section)	25.00x6.30	157.50	5300	9300	330	579	0.50	25.00	
2		24.80x6.20	153.76	5600	9300	357	593	0.50	25.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test										
Bend Test										

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To,
Resident Engineer (Sec-I)
Finite – CPM (Jv)
Improvement, Up Gradation and Widening of Jaglot Skardu Road Sec-I

Reference # CED/TFL **36778** (Dr. Usman Akmal)
Reference of the request letter # FC/JV/JSR/2021/F-19

Dated: 16-07-2021
Dated: 30-06-2021

Weight & Size Test Report (Page – 3/4)

Date of Test 29-07-2021
Description Guard Rail Post (I-Section) Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	Depth (d)	Flange Width (bf)	Flange Thickness (tf)	Web Thickness (tw)	Remark
		(g)	(cm)	(kg/m)	mm	mm	mm	mm	
1	Guard Rail Post (I-Section)	8911	61.4	14.51	152.600	100.00	5.20	6.20	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
Only One Sample for Test									

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To,
Resident Engineer (Sec-I)
Finite – CPM (Jv)
Improvement, Up Gradation and Widening of Jaglot Skardu Road Sec-I

Reference # CED/TFL **36778** (Dr. Usman Akmal)
Reference of the request letter # FC/JV/JSR/2021/F-19

Dated: 16-07-2021
Dated: 30-06-2021

Size Test Report (Page – 4/4)
Date of Test 29-07-2021
Description Guard Rail W Section thickness Test

Sr. No.	Designation	Thickness	Remark
1	Guard Rail W Section	3.00	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
Only One Sample for Test			

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Ref: CED/TFL/07/36791, 798

Dated: 27-07-2021

Dated of Test: 29-07-2021

To
M/S Condrill (Pvt) Ltd
Lahore

Subject: - CALIBRATION OF HYDRAULIC JACK WITH PRESSURE GAUGE
(MARK: TFL/07/36791) (Page # 1/1)

Reference to your Letter No. CD/Misc/2021/8575, dated: 27/07/2021 on the subject cited above. One Hydraulic with Pressure Gauge as received by us has been calibrated. The results are tabulated as under:

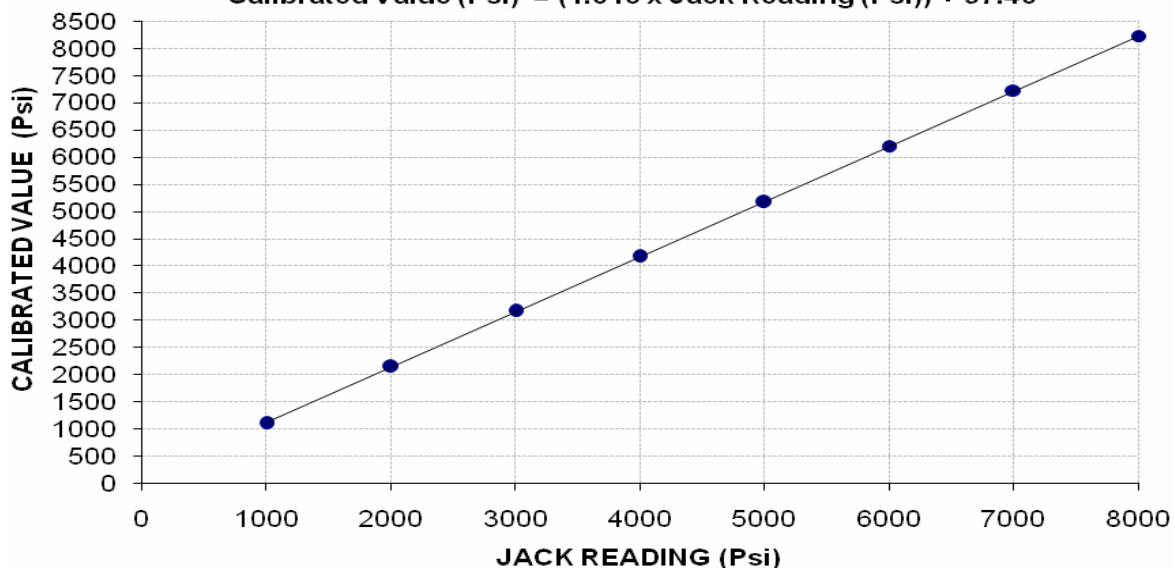
Total Range : Zero - 10000 (Psi)
Calibrated Range : Zero - 8000 (Psi)

Hydraulic Jack Reading (Psi)	1000	2000	3000	4000	5000	6000	7000	8000
Calibrated Load (kg)	10300	20100	29700	39100	48500	58200	67800	77200
Calibrated Pressure (Psi)	1097	2141	3164	4166	5167	6201	7223	8225

The Ram Area of Jack = 133.55 cm²

Calibration Curve For Jack

Calibrated Value (Psi) = (1.016 x Jack Reading (Psi)) + 97.40



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To,
 Manager Civil Works
 Nishat Mills Limited Lahore
 Construction of Nishat Apparel Garment Unit 2, Lahore

Reference # CED/TFL **36793** (Dr. Usman Akmal)
 Reference of the request letter # NA/GU/ST/004

Dated: 28-07-2021
 Dated: 24-07-2021

Tension Test Report (Page -1/1)

Date of Test 29-07-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.427	10	10.16	0.12	0.126	3900	5700	71650	68430	104719	100100	1.30	16.3	
2	0.417	10	10.03	0.12	0.123	3600	5100	66138	64760	93696	91800	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
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To,
 Resident Engineer
 Engineering Consultancy Services Punjab (Pvt) Ltd
 Supply, Construction, Installation and O & M of Surface Water Treatment Plant at Rural Area
 Okara, Sahiwal

Reference # CED/TFL **36795** (Dr. Usman Akmal)
 Reference of the request letter # ECSP/PAPA/CZ-RE-04

Dated: 28-07-2021
 Dated: 28-07-2021

Tension Test Report (Page -1/1)

Date of Test 29-07-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.379	3	0.377	0.11	0.111	3700	5100	74200	73150	102200	100900	1.10	13.8	
2	0.385	3	0.379	0.11	0.113	3800	5200	76200	74080	104200	101400	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,
Commercial Officer
Al Fazal Engineering Pakistan
NTDC 500kV Grid Station Faisalabad
WAPDA – NESPAK – Netracon Technologies (Pvt) Ltd

Reference # CED/TFL **36796** (Dr. M Rizwan Riaz)
Reference of the request letter # ALF-21-07-0007

Dated: 29-07-2021
Dated: 26-07-2021

Tension Test Report (Page – 1/1)

Date of Test 29-07-2021
Gauge length 2 inches
Description Sheet Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	2	21.40x2.10	44.94	1100	1700	240.12	371.09	0.80	40.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only One Sample for Tensile Test										
Bend Test										

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To,
 Resident Engineer
 NESPAK
 Construction of Bboys Hostel, Girls Hostel & Bachelor Faculty Hostel at New Campus of Ghazi University, Dera Ghazi Khan

Reference # CED/TFL **36797** (Dr. M Rizwan Riaz)
 Reference of the request letter # 4026/325/MU/Misc/11

Dated: 29-07-2021
 Dated: 28-07-2021

Tension Test Report (Page -1/1)

Date of Test 29-07-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.380	3	0.377	0.11	0.112	3100	4400	62200	61160	88200	86900	1.70	21.3	Mughal Steel
2	0.378	3	0.376	0.11	0.111	2900	4100	58200	57460	82200	81300	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

Witness by Muhammad Shehzad (Jr. Engr. NESPAK)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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