



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

To,
Engineer' Representative
Metroplan-Asian Jv
Resident Construction Supervision for Establishment of 200 Bedded Mother & Child Hospital
and Nursing College, District Attock

Reference # CED/TFL **2093** (Dr. Ali Ahmed)

Dated: 11-10-2022

Reference of the request letter # MetroplanAsian JV-MCH/Lab-RE-055

Dated: 06-10-2022

Tension Test Report (Page – 1/1)

Date of Test 12-10-2022

Gauge length 2 inches

Description GI Sheet (HVAC Ducts) 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	GI Sheet	S-1	22.60x0.60	13.56	-----	480	-----	347	0.30	15.00	
2	GI Sheet	S-2	25.80x0.60	15.48	-----	480	-----	304	0.50	25.00	
3	GI Sheet	S-3	28.20x0.90	25.38	-----	1000	-----	387	0.40	20.00	
4	GI Sheet	S-4	25.10x0.90	22.59	-----	720	-----	313	0.50	25.00	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
Only Four Sample for Tensile Test											
Bend Test											

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Ref: CED/TFL/10/2094

Dated: 11-10-2022

Dated of Test: 12-10-2022

To

Resident Engineer
Islam Barrage Consultants (IBC)
Rehabilitation and Modernization of Islam Barrage

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76 - 08a]** (Page -1/1)

Reference to your letter No. IBC/RE/UET/48, dated 10.10.2022 on the subject cited above. One R.C.C. Pipes as received by us have been tested. The results are tabulated as under.

Sr. No	Nominal Size	Total Length	Loaded Length	External Diameter	Internal Diameter	Wall Thickness	Proof load	Ultimate Load	Proof Stress	Ultimate Stress
	(inch)	(foot)	(foot)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	18	7.76	7.43	23.03	17.73	2.65	14000	23000	2810	4617

Witness by Shabbir Sundhu (Material Specialist, IBC) and Abdul Qayyum (I/C QAQC, Descon)

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UET Lahore, Pakistan.

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To,
Resident Engineer
ZEERUK – LOYA – MIHA jv
Construction of DHA Interchange on Islamabad Expressway

Reference # CED/TFL **2095** (Dr. Ali Ahmed)
Reference of the request letter # ZI/RE/DHA-Int/106

Dated: 11-10-2022
Dated: 16-09-2022

Tension Test Report (Page -1/3)

Date of Test 12-10-2022
Gauge length 640 mm
Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	771.0	18000	176.58	19800	194.24	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only one sample for Test										

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

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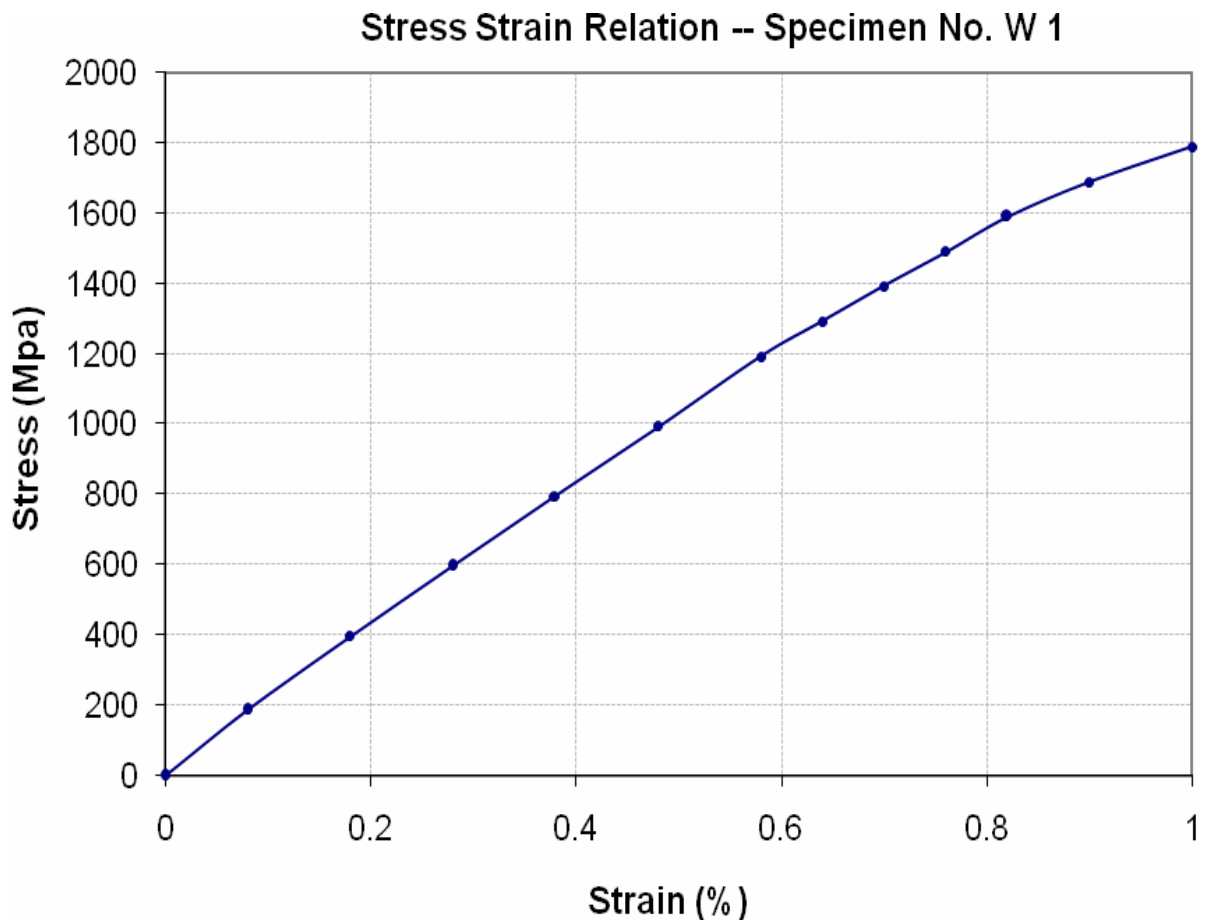
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Pakistan. Ph: 92-42-99029202

To,
Resident Engineer
ZEERUK – LOYA – MIHA jv
Construction of DHA Interchange on Islamabad Expressway

Reference # CED/TFL **2095** (Dr. Ali Ahmed)
Reference of the request letter # ZI/RE/DHA-Int/106

Dated: 11-10-2022
Dated: 16-09-2022

Graph (Page – 2/3)



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To,
Resident Engineer
ZEERUK – LOYA – MIHA jv
Construction of DHA Interchange on Islamabad Expressway

Reference # CED/TFL **2095** (Dr. Ali Ahmed)
Reference of the request letter # ZI/RE/DHA-Int/68

Dated: 11-10-2022
Dated: 28-06-2022

Size Test Report (Page –3/3)
Date of Test 12-10-2022
Description Corrugated Sheath Pipe Size Test

Sr. No.	Designation	External Diameter	Wall Thickness	Remark
1	Corrugated Sheath Pipe	65.75	0.55	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only One Sample for Test				

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To,
 Senior Manager (Civil)
 Systems Limited, Lahore
 Real Tower Systems Limited.

Reference # CED/TFL **2099** (Dr. Ali Ahmed)
 Reference of the request letter # SYS-RT-UET-011

Dated: 11-10-2022
 Dated: 11-10-2022

Tension Test Report (Page -1/1)

Date of Test 12-10-2022
 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	0.384	3	0.379	0.11	0.113	3500	4600	70200	68400	92200	89900	1.20	15.0	
2	0.383	3	0.379	0.11	0.113	3400	4600	68200	66530	92200	90100	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Resident Engineer
 NESPAK
 Construction of Flyover at Rajjar Railway Crossing Sarai Alamgir District Gujrat

Reference # CED/TFL **2103** (Dr. Asif Hameed) Dated: 12-10-2022
 Reference of the request letter # SA-4376F/103/Raj/ML/Lab/04 Dated: 11-10-2022

Tension Test Report (Page -1/1)

Date of Test 12-10-2022
 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	4.152	10	1.247	1.27	1.221	39200	52600	68100	70790	91300	95000	1.50	18.8	
2	4.192	10	1.253	1.27	1.232	41400	55000	71900	74060	95500	98400	1.40	17.5	
3	4.264	10	1.263	1.27	1.253	43200	55400	75000	75970	96200	97500	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and three samples for bend test														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														

Witness by Shamim Zafar (Advisor, Material + Quality Control, H& TED, NESPAK)

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To,
 Construction Manager
 Zameen Quadrangle
 Construction of Zameen Quadrangle at Plot No. 49 Gulberg-V, Zafar Ali Road, Lahore

Reference # CED/TFL **2105** (Dr. Ali Ahmed)
 Reference of the request letter # ZD/ZQ/GSW/030

Dated: 12-10-2022
 Dated: 12-10-2022

Tension Test Report (Page -1/1)

Date of Test 12-10-2022
 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	0.381	3	0.378	0.11	0.112	3600	5500	72200	70860	110200	108300	0.80	10.0	SJ Steel
2	0.396	3	0.385	0.11	0.116	3800	5600	76200	71920	112300	106000	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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,
 Resident Engineer
 Dongil Engineering Consultants Co., Ltd.
 Central Asia Regional Economic Cooperation (CAREC) Corridor Development Program – Tranche-1 Project
 Construction of Additional 2-Lane Carriageway from Ratodero to Shikarpur Section-2 (N-55) from km 0+000 to km 43+400 (43.4km)

Reference # CED/TFL **2108** (Dr. Asif Hameed) Dated: 12-10-2022
 Reference of the request letter # RE/RS/S-2/N55/LB/846/A Dated: 04-10-2022

Tension Test Report (Page -1/1)

Date of Test 12-10-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	4.316	32	32.28	1.25	1.269	31000	41200	54674	53850	72664	71600	1.50	18.8	SJ Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

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