Client Reference No.: AsCE/PRSWSSP/CS1/SITE-066 **Dated:** 11-03-2024

SOM Lab Ref: CED/SOM/3808 **Dated:** 15-03-2024

Test Type: Load Test of RPC Manhole Cover

Test Standard: Non-standard test was performed as per requirement of the client [Application of load at the center of the Manhole Cover through circular thick steel plate of 380mm diameter]

Test Performed by: Dr. Asad Ali Gillani

Asif Nadeem Khawar,
RE Asian Consulting Engineers
House # 21-B,New City Housing,
Tehsil & Distt, Bahawalnagar.
(PRSWSSP Project Bahawalnagar "BWR-01")

This is with reference to your above-mentioned letter and SOM receipt No. 3808 dated: 15-03-2024. The sample of RPC Manhole Cover submitted in the Laboratory has been tested and the result is provided below.

Load Test Result

Diameter of Manhole Cover	Average Thickness of Manhole Cover	Maximum Load	Observations/Remarks
645 mm	72.0mm	10000 kg	The sample was cracked at this load

Test Performed by: S. Asad Ali Gillani

Malik Riaz
Manager Technical
Bin Tariq Pvt Ltd.
Lahore. (Project: Fiberglass Tube-Well Pipes for Thar Coal Field Block-I)

Client Reference No.: BTPL/Sales/UET-Civil Lab/24-177 Dated: 14-03-2024

SOM Lab Ref: CED/SOM/3811(Page 1/2) Dated: 15-03-2024

Test Type: Axial Tension

Sample Type: 1-Fiberglass Strainer Pipe
2-FRP Pipe Joint Fiberglass Nylon Coupling Joint
(Nominal Diameter 400mm (16") Wall Thickness 12mm)

Load Test Results

Sr No.	Sample Type	Proof Load (kN)	Remarks
1	Fiberglass Strainer Pipe (Axial Tension)	177.0	No crack occurs at this load
2	FRP Pipe Joint Fiberglass Nylon Coupling Joint (Axial Tension)	177.0	Joint remains safe at this load without showing any crack

Note: Please always confirm the results on web www.uet-civil.edu.pk

Test Performed by: S. Asad Ali Gillani

Malik Riaz
Manager Technical
Bin Tariq Pvt Ltd.
Lahore. (Project: Fiberglass Tube-Well Pipes for Thar Coal Field Block-I)

Client Reference No.: BTPL/Sales/UET-Civil Lab/24-177 Dated: 14-03-2024

SOM Lab Ref: CED/SOM/3811(Page 2/2) Dated: 15-03-2024

Test: Stiffness Test

Sample Type: Fiberglass Strainer Pipe

Stiffness Test (Parallel Plate Loading Test as per ASTM-D-2412)

Total Length = 312 mm, External Diameter = 422mm, Wall Thickness = 12.13 mm

Percentage Reduction in Diameter of Sample	Compression Load, P (kN)	Stiffness (Corrected)			Remarks
		Pipe Stiffness (kN/m^2)	Stiffness Factor (N-m)	Specific Tangential Initial Stiffness (N/m^2)	
5%	14.1	2317	2968	47286	No Crack Observed

Note: Please always confirm the results on web www.uet-civil.edu.pk

Prime Steel Re-Rolling Mills
Sheikhupura.

Test Performed By: **Dr. /Engr.** Irfan Ul Hassan

Client Reference: Nil
Dated: 15-03-2024

SOM Lab Ref: 3809 (Page-1/1)
Dated: 15-03-2024

Test: Tension Test & Bend Test
Gauge Length: 8 inch
Test Specification: ASTM-A-615
Sample Type: Deformed Bar (Prime Steel Skp)

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.609	8	0.988	0.79	0.767	21.61	34.22	60330	62140	95530	98400	1.50	8.0	18.8	
2	1.442	6	0.735	0.44	0.424	11.82	19.13	59270	61510	95910	99530	1.30	8.0	16.3	
3	0.687	4	0.507	0.20	0.202	5.63	8.77	62050	61440	96670	95720	1.10	8.0	13.8	
4	0.665	4	0.498	0.20	0.195	5.56	8.92	61270	62840	98360	100880	1.20	8.0	15.0	
5	0.684	4	0.506	0.20	0.201	5.63	8.79	62050	61740	96900	96420	1.10	8.0	13.8	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack
# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Ten Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Innovative ® **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

Construction Company Lahore.(Project: Shoring Works at Kingdom area,RUDA Lahore)

Client Reference: ICL/KA/PW/0324/02 **SOM Lab Ref:** 3810 (Page-1/1)

Dated: 15-03-2024 **Dated:** 15-03-2024

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615

Gauge Length: 8 inch **Sample Type:** Deformed Bar

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.479	6	0.744	0.44	0.435	13.88	19.44	69590	70390	97440	98560	1.00	8.0	12.5	
2	1.485	6	0.745	0.44	0.436	14.12	19.52	70770	71420	97850	98750	1.20	8.0	15.0	
3	1.060	5	0.630	0.31	0.312	10.47	13.61	74480	74000	96820	96200	1.30	8.0	16.3	
4	1.052	5	0.627	0.31	0.309	10.52	13.68	74840	75090	97330	97640	1.30	8.0	16.3	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 5	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Six Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Sehreen Tabish **Test Performed By:** **Dr. /Engr.** Ali Ahmad

Building Standards Lahore.(Commercial Project For Mr.Imran Sarwar)

Client Reference: GT/LTR/240315-093 **SOM Lab Ref:** 3812 (Page-1/1)

Dated: 15-03-2024 **Dated:** 15-03-2024

Test: Tension Test & Bend Test **Test Specification:** ASTM-A 615

Gauge Length: 4 Inch **Sample Type:** Deformed Bar

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.473	6	0.743	0.44	0.433	14.78	19.37	74090	75290	97080	98650	1.00	4.0	25.0	
2	0.648	4	0.492	0.20	0.190	6.32	8.31	69700	73360	91610	96440	1.10	8.0	13.8	
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BEND TEST:

--	No Bend test performed

Note:-

Only Two Samples Received and Tested

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk