

Client Reference No.: MMP/PCP/MCO/178/2024

Dated: 27-03-2024

SOM Lab Ref: CED/SOM/3913

Dated: 06-03-2024

Test Type: Load Test of RPC Manhole Cover (M/S Muhammad Sajjad Pvt.Ltd)

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

ARE MMP/Pack-V

Punjab Cities Program (MMP)

(RPC Man Hole Covers Laying of Tuff Pavers/Tiles in Various Important Areas of Okara City)

This is with reference to your above-mentioned letter and SOM receipt No. 3913 dated: 01-04-2024. The sample of RPC Manhole Cover submitted in the Laboratory has been tested and the result is provided below.

Load Test Result

Weight of Manhole Cover With Ring	Diameter of Manhole Cover	Average Thickness of Manhole Cover	Maximum Load	Observations/Remarks
48.0 Kg	644 mm	63.13mm	9500 kg	The sample was cracked at this load

Witnessed by: M.Ismail (ARE/MMP), Zia-Mohiuddin (Senior Draftsman)

M.Faraz

Test Performed By:

Dr. /Engr.

Asad Ali Gillani

Lab In Charge CMEC Haveli Bahadur Shah.(Const Of 1263MW Punjab Thermal Poer Plant,Jhang)

Client Reference: CMEC/UET/24031301

Dated: 01-04-2024

SOM Lab Ref: CED/SOM/3904(Page-1/1)

Dated: 01-04-2024

Test: Tension Test & Bend Test

Test Specification: ASTM-A 615

Sample Type: Deformed Bar (Ittehad Steel)

Gauge Length: 200 mm

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)				
	kg/m	mm	mm	mm ²	mm ²	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	4.985	28	28.43	616	635	280.00	396.70	455	441	644	625	30.0	200	15.0	
2	4.978	28	28.42	616	634	274.00	392.20	445	433	637	619	32.5	200	16.3	
3	3.915	25	25.20	491	499	302.00	358.50	615	606	730	719	25.0	200	12.5	
4	3.965	25	25.36	491	505	308.00	366.70	627	610	747	727	32.5	200	16.3	
5	2.207	20	18.92	314	281	146.20	183.20	465	520	583	652	27.5	200	13.8	
6	2.213	20	18.95	314	282	147.00	182.70	468	522	582	648	32.5	200	16.3	
7	1.568	16	15.95	201	200	103.70	131.20	516	520	653	657	32.5	200	16.3	
8	1.547	16	15.84	201	197	101.20	129.50	503	514	644	658	30.0	200	15.0	
9	0.882	12	11.96	113	112	52.50	74.50	464	468	659	663	32.5	200	16.3	
10	0.885	12	11.98	113	113	52.70	75.00	466	468	663	666	35.0	200	17.5	

Witnessed By:

M.Iqbal (CMEC)

BEND TEST:

28mm	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Fifteen Samples Received and Tested
25mm	Sample bend through 180 degrees Satisfactorily without any crack	
20mm	Sample bend through 180 degrees Satisfactorily without any crack	
16mm	Sample bend through 180 degrees Satisfactorily without any crack	
12mm	Sample bend through 180 degrees Satisfactorily without any crack	

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

Sheikhoo Steel

Test Performed By:

Dr. /Engr.

Asad Ali Gillani

Director Projects Sheikhoo Sugar Mills, Anwar Abad Kot Addu, Muzaffargarh.

Client Reference: Nil

Dated: 25-03-2024

SOM Lab Ref: CED/SOM/3906(Page-1/1)

Dated: 01-04-2024

Test: Tension Test & Bend Test

Test Specification: ASTM-A 615

Sample Type: Deformed Bar (Sheikhoo Steel)

Gauge Length: 200 mm

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)				
	kg/m	mm	mm	mm ²	mm ²	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	4.845	28	28.03	616	617	300.00	406.20	487	487	660	659	32.5	200	16.3	
2	3.809	25	24.86	491	485	228.70	325.70	466	472	664	672	40.0	200	20.0	
3	2.965	22	21.93	380	378	180.00	251.20	474	477	661	666	35.0	200	17.5	
4	2.441	20	19.90	314	311	158.50	208.50	505	510	664	671	32.5	200	16.3	
5	1.551	16	15.86	201	198	92.70	133.00	461	470	661	674	32.5	200	16.3	
6	0.882	12	11.96	113	112	55.20	74.70	488	492	660	665	37.5	200	18.8	
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BEND TEST:

--	No Bend test performed	Note:- Only Six Samples Received and Tested

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

Waqas Ali
Variant Gulberg 2, Lahore.

Test Performed By: Dr. /Engr. Asad Ali Gillani

Client Reference: VA/29/136

SOM Lab

Ref: 3905 (Page-1/1)

Dated: 29-03-2024

Dated: 01-04-2024

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	1.483	6	0.745	0.44	0.436	13.32	20.20	66780	67400	101270	102200	1.30	8.0	16.3	
2	1.483	6	0.745	0.44	0.436	13.35	20.29	66940	67550	101680	102610	1.40	8.0	17.5	
3	0.660	4	0.497	0.20	0.194	5.83	9.14	64300	66290	100830	103950	1.00	8.0	12.5	
4	0.663	4	0.498	0.20	0.195	5.93	9.17	65420	67100	101170	103760	1.10	8.0	13.8	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Six Samples Received and Tested
# 4	Sample bend through 180 degrees Satisfactorily without any crack	

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

Engineer Muhammad Irfan
Dy Dir Infra. DHA Gujranwala.(Sector C)

Test Performed By: Dr. /Engr. Asad Ali Gillani

Client Reference: 111/15/DD/RS/Lab/Pkg-2A/3011

SOM Lab

Ref: 3907 (Page-1/1)

Dated: 28-03-2024

Dated: 01-04-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (FF Steel)

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	0.707	4	0.515	0.20	0.208	7.14	9.58	78690	75660	105670	101600	1.20	8.0	15.0	
2	0.699	4	0.511	0.20	0.205	6.88	9.40	75880	74030	103640	101110	1.10	8.0	13.8	
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BEND TEST:

# 4	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Three Samples Received and Tested

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

Muhammad Zubair, Site Admin

Test Performed By: Dr. /Engr. Asad Ali Gillani

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

Client Reference: ICL/KA/PW/042/01

SOM Lab

Ref: 3908 (Page-1/1)

Dated: 01-04-2024

Dated: 01-04-2024

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	2.674	8	1.000	0.79	0.786	26.22	34.98	73200	73570	97670	98170	1.50	8.0	18.8	
2	2.662	8	0.998	0.79	0.782	26.10	35.22	72850	73600	98320	99330	1.40	8.0	17.5	
3	1.015	5	0.616	0.31	0.298	9.45	12.90	67230	69940	91740	95440	1.20	8.0	15.0	
4	1.038	5	0.623	0.31	0.305	10.42	13.78	74120	75330	98050	99660	1.30	8.0	16.3	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Six Samples Received and Tested
# 5	Sample bend through 180 degrees Satisfactorily without any crack	

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

Client Reference: Nil

SOM Lab

Dated: 01-04-2024

Ref: 3909(Page-1/1)

Dated: 01-04-2024

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	2.647	8	0.995	0.79	0.778	25.99	33.51	72570	73690	93540	94990	1.60	8.0	20.0	
2	1.515	6	0.753	0.44	0.445	14.70	18.93	73680	72850	94880	93820	1.30	8.0	16.3	
3	0.659	4	0.497	0.20	0.194	6.98	8.69	77000	79380	95770	98740	1.20	8.0	15.0	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Six Samples Received and Tested
# 6	Sample bend through 180 degrees Satisfactorily without any crack	
# 4	Sample bend through 180 degrees Satisfactorily without any crack	

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

Muhammad Shabbir Sandhu,ME

Test Performed By: Dr. /Engr. Asad Ali Gillani

NESPAK,EPCM Consult Swl.(Trunk Main Sewer Effluent P/Station & A/Works, Lot-04& Road Project)

Client Reference: 3976/11/MIA/SWL/Lot-04/01/940

SOM Lab

Ref: 3910 (Page-1/1)

Dated: 08-03-2024

Dated: 01-04-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (Aziz Steel)

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	0.673	4	0.502	0.20	0.198	6.19	9.48	68230	68920	104540	105600	1.10	8.0	13.8	
2	0.672	4	0.501	0.20	0.197	6.32	9.53	69700	70760	105100	106700	1.20	8.0	15.0	
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BEND TEST:

# 4	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Three Samples Received and Tested

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

Muhammad Shabbir Sandhu,ME

Test Performed By: Dr. /Engr. Asad Ali Gillani

NESPAK,EPCM Consult Swl.(Trunk Main Sewer Effluent P/Station & A/Works, Lot-04& Road Project)

Client Reference: 3976/11/MS/SWL/Lot-04/01/1069

SOM Lab

Ref: 3911 (Page-1/1)

Dated: 01-04-2024

Dated: 01-04-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (AF Steel)

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	0.652	4	0.494	0.20	0.192	6.93	8.31	76440	79620	91610	95430	1.20	8.0	15.0	
2	0.649	4	0.493	0.20	0.191	7.56	8.89	83410	87340	98020	102640	1.10	8.0	13.8	
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BEND TEST:

# 4	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Three Samples Received and Tested

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

Luqman Maqsood,RE

Test Performed By:

Dr. /Engr.

Asad Ali Gillani

Shahzad Ayub Associates New Metro City Sri Alamgir.(Ghousia Engineering)

Client Reference: SAA-St-Rep-018

SOM Lab

Ref:

3912(Page-1/1)

Dated: 30-03-2024

Dated:

01-04-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Deformed Bar (SJ Steel)

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	2.628	8	0.991	0.79	0.772	25.43	34.40	71000	72660	96050	98290	1.50	8.0	18.8	
2	2.640	8	0.994	0.79	0.776	25.40	34.48	70920	72200	96250	97980	1.60	8.0	20.0	
3	1.448	6	0.736	0.44	0.426	13.48	21.33	67550	69770	106890	110400	1.30	8.0	16.3	
4	1.446	6	0.736	0.44	0.425	13.73	21.63	68830	71260	108420	112250	1.40	8.0	17.5	
5	0.672	4	0.501	0.20	0.197	6.63	8.48	73070	74180	93530	94950	1.20	8.0	15.0	
6	0.673	4	0.502	0.20	0.198	6.57	8.46	72510	73240	93300	94240	1.10	8.0	13.8	
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Witnessed By:

M-Nadeem (Senior Material Engineer,BSM)

BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Nine Samples Received and Tested
# 6	Sample bend through 180 degrees Satisfactorily without any crack	
# 4	Sample bend through 180 degrees Satisfactorily without any crack	

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