

MIDCITY Housing Pvt. Ltd

Test Performed By: Dr. /Engr. Irfan UI Hassan

Chief Engineer MIDCITY Lahore.(Over Head Water Tank (150000 G) In Midcity Housing Lhr)

Client Reference: MCH/UET/12/2023/10

SOM Lab

Ref: 3361 (Page-1/1)

Dated: 15-Dec- 2023

Dated: 15-12-2023

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	1.519	6	0.754	0.44	0.446	16.21	20.03	81240	80150	100400	99050	1.10	8.0	13.8	
2	1.520	6	0.754	0.44	0.447	16.31	20.54	81750	80470	102960	101350	1.10	8.0	13.8	
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BEND TEST:

# 6	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 Adnan
PM Beach Resort Lahore.(Coral Building)

Test Performed By: Dr. /Engr. Irfan UI Hassan

Client Reference: Nil

Dated: 15-Dec- 2023

Test: Tension Test & Bend Test

Gauge Length: 8 inch

SOM Lab

Ref: 3361 (Page-1/1)

Dated: 15-12-2023

Test Specification: ASTM-A-615

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	1.506	6	0.751	0.44	0.443	15.09	19.69	75620	75110	98720	98050	1.30	8.0	16.3	
2	1.486	6	0.746	0.44	0.437	14.48	19.24	72560	73060	96420	97080	1.20	8.0	15.0	
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BEND TEST:

# 6	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

M.Waqas Anwar,RE

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

Nespak Lahore.(Dev Of a Controlled Access Corridor Facility From Niazi Interchange to Babu Sabu)

Client Reference: 3772/103/NBI(P-II)/MWA/04/141

SOM Lab

Ref: 3364 (Page-1/2)

Dated: 06-12-2023

Dated: 15-12-2023

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	6.49	8.61	71610	72330	94990	95950	1.10	8.0	13.8	
2	0.672	4	0.501	0.20	0.197	5.93	8.56	65420	66420	94420	95860	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

M.Waqas Anwar,RE

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

Nespak Lahore.(Dev Of a Controlled Access Corridor Facility From Niazi Interchange to Babu Sabu)

Client Reference: 3772/103/NBI(P-II)/MWA/04/142

SOM Lab

Ref: 3364 (Page-2/2)

Dated: 06-12-2023

Dated: 15-12-2023

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	1.508	6	0.751	0.44	0.443	15.62	19.88	78280	77750	99640	98960	1.30	8.0	16.3	
2	1.497	6	0.748	0.44	0.440	12.76	19.80	63970	63970	99230	99230	1.20	8.0	15.0	
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BEND TEST:

# 6	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

Hasnain Sheikh

Test Performed By: Dr. /Engr. Irfan UI Hassan

ES Consultant (Pvt) Ltd.(Const/Renv Of Toilet Block at Diff/ Heritage &Tourist Site In Central Zone Lhr)

Client Reference: RE/TOL/PTEGP/ESC 04

SOM Lab

Ref: 3365 (Page-1/2)

Dated: 20-09-2023

Dated: 15-12-2023

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	1.491	6	0.747	0.44	0.438	15.70	19.88	78690	79050	99640	100090	1.00	8.0	12.5	
2	0.671	4	0.501	0.20	0.197	5.83	8.79	64300	65280	96900	98370	1.20	8.0	15.0	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Four 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

Hasnain Sheikh

Test Performed By: Dr. /Engr. Irfan UI Hassan

ES Consultant (Pvt) Ltd.(Toilet Block at Diff/ Heritage & Tourist Site In Central Zone Sahiwal & Kasur)

Client Reference: RE/TOL/PTEGP/ESC 04

SOM Lab

Ref: 3365 (Page-2/2)

Dated: 20-09-2023

Dated: 15-12-2023

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	1.500	6	0.749	0.44	0.441	15.67	20.46	78530	78360	102550	102320	1.20	8.0	15.0	
2	0.676	4	0.503	0.20	0.199	5.81	8.74	64080	64400	96340	96820	1.30	8.0	16.3	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack	Note:- Only Four 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

Tawasul Developers (Pvt) Ltd
Lahore (Creek Tower 6-D Upper Mall Lahore)

Test Performed By: Dr. /Engr. Irfan UI Hassan

Client Reference: Nil

Dated: 15-12-2023

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref: 3366 (Page-1/1)

Dated: 15-12-2023

ASTM-A-615

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	2.611	8	0.988	0.79	0.767	31.91	37.97	89070	91750	106010	109190	1.20	8.0	15.0	
2	2.620	8	0.990	0.79	0.770	31.50	37.92	87940	90220	105860	108610	1.10	8.0	13.8	
3	1.482	6	0.745	0.44	0.436	15.95	19.57	79970	80700	98100	99000	1.00	8.0	12.5	
4	1.478	6	0.743	0.44	0.434	15.41	19.08	77260	78330	95650	96970	1.10	8.0	13.8	
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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	

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

Bilal Imtiaz, RE

Test Performed By:

Dr. /Engr. Asad Ali Gillani

ECSP Distt Jail Nankana Sahib.(Const Of District Jail Nankana Sahib)

Client Reference: 363/ECSP/DNJ/45

SOM Lab

Ref: 3367 (Page-1/1)

Dated: 26-08-2023

Dated: 15-12-2023

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	1.516	6	0.754	0.44	0.446	18.32	22.09	91820	90580	110720	109230	1.00	8.0	12.5	
2	1.500	6	0.749	0.44	0.441	16.23	20.31	81340	81160	101780	101550	1.20	8.0	15.0	
3	0.673	4	0.502	0.20	0.198	5.81	8.61	64080	64720	94990	95950	1.30	8.0	16.3	
4	0.676	4	0.503	0.20	0.199	6.14	9.63	67670	68010	106230	106760	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

Test Performed by: S. Asad Ali Gillani

Malik Riaz
Manager Technical
Bin Tariq Pvt. Ltd Lahore.

Client Reference No.: BTPL/LHR/UET-Test/23-235

Dated: 14-12-2023

SOM Lab Ref: CED/SOM/3363 (Page 1/4)

Dated: 15-12-2023

Test Type: Tension Test

Sample Type: FRP Horizontal Tube, FRP Vertical Tube, FRP Strips, FRP Pipe & FRP Grating

Tension Test Results

Sample No.	Samlpe Type	Sample Size	Area (mm ²)	Ultimate Breaking Load (kN)	Ultimate Breaking Strength (MPa)
1	FRP Horizontal Tube	26.4 x 4.0	102.40	27.20	265.62
2	FRP Vertical Tube	25.7 x 3.4	87.39	25.70	294.19
3	FRP Strip	26.0 x 4.9	127.40	26.20	205.65
4	FRP Pipe	18.0 x 3.0	54.0	8.70	161.11
5	FRP Grating	26.0 x 4.8	124.80	25.40	203.52

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.

Client Reference No.: BTPL/LHR/UET-Test/23-235

Dated: 14-12-2023

SOM Lab Ref: CED/SOM/3363 (Page 2/4)

Dated: 15-12-2023

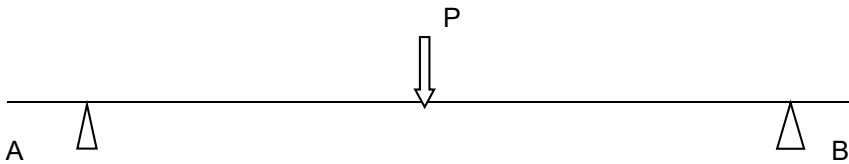
Test Type: Flexural Load Test

Sample Type: FRP Horizontal Tube,FRP Vertical Tube,FRP Strips,FRP Pipe & FRP Grating

Flexural Load Test Results

Sample No.	Sample Type	Ultimate Breaking Load (kN)	Remarks
1	FRP Horizontal Tube	5.7	Pin Punches in the top fiber & failure occurs at this load
2	FRP Vertical Tube	5.2	Pin Punches in the top fiber & failure occurs at this load
3	FRP Strip	1.0	Pin Punches in the top fiber & failure occurs at this load
4	FRP Pipe	3.0	Pin Punches in the top fiber & failure occurs at this load
5	FRP Grating	34.7	Pin Punches in the top fiber & failure occurs at this load

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.

Client Reference No.: BTPL/LHR/UET-Test/23-235

Dated: 14-12-2023

SOM Lab Ref: CED/SOM/3363 (Page 3/4)

Dated: 15-12-2023

Test Type: Compression Test

Sample Type FRP Horizontal Tube,FRP Vertical Tube,FRP Strips,FRP Pipe & FRP Grating

Compression Test Results

Sample No.	Sample Type	Ultimate Breaking Load (kN)	Remarks
1	FRP Horizontal Tube	63.7	Buckling & Delamination
2	FRP Vertical Tube	94.5	Buckling & Delamination
3	FRP Strip	1.50	Buckling & Delamination
4	FRP Pipe	50.6	Buckling & Delamination
5	FRP Grating (Strip)	2.2	Buckling & Delamination

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.

Client Reference No.: BTPL/LHR/UET-Test/23-236

Dated: 14-12-2023

SOM Lab Ref: CED/SOM/3363 (Page 4/4)

Dated: 15-12-2023

Test Type: Load Test / Stiffness Test

Sample Type: FRP Grating with Pultruded L Channel

Load Test Results

Sample No.	Type Of Pipe	Dimensions	Ultimate Load (kN)	Remarks
1	FRP Grating with Pultruded L Channel	15" X 26"	30.30	Pin Punches in the top fiber & failure occurs at this load

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