KAY & EMMS (Pvt) Ltd.
Faisalabad.

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

Client Reference: Nil
Dated: 05-01-2024

SOM Lab
Ref: 3461(Page-1/1)
Dated: 05-01-2024

Test: Tension Test & Bend Test
Gauge Length: 8 inch
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	2.643	8	0.995	0.79	0.777	27.17	35.17	75840	77110	98180	99820	1.40	8.0	17.5	
2	2.651	8	0.996	0.79	0.779	27.22	35.09	75980	77060	97950	99340	1.30	8.0	16.3	
3	1.496	6	0.748	0.44	0.440	14.58	19.42	73070	73070	97340	97340	1.40	8.0	17.5	
4	1.499	6	0.749	0.44	0.441	13.76	19.37	68980	68820	97080	96860	1.30	8.0	16.3	
5	0.655	4	0.494	0.20	0.192	6.70	8.84	73850	76930	97460	101520	1.40	8.0	17.5	
6	0.649	4	0.493	0.20	0.191	6.47	8.79	71380	74750	96900	101460	1.60	8.0	20.0	
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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

Note:-

Only Nine Samples Received and Tested

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

Sub Divisional officer, **Test Performed By:** **Dr. /Engr.** Irfan Ul Hassan

BSD No.2,Multan.(Const Of New Admin Block Lahore High Court Multan Bench Multan)(Group.1)

SOM Lab

Client Reference: 1316/SDO 2nd **Ref:** 3462 (Page-1/1)

Dated: 23-11-2023 **Dated:** 05-01-2024

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

Gauge Length: 8 inch **Sample Type:** Deformed Bar (Kamran 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	1.496	6	0.748	0.44	0.440	13.91	21.10	69750	69750	105770	105770	1.20	8.0	15.0	
2	1.498	6	0.748	0.44	0.440	13.83	20.97	69340	69340	105100	105100	1.20	8.0	15.0	
3	0.660	4	0.497	0.20	0.194	6.42	8.84	70820	73010	97460	100470	1.30	8.0	16.3	
4	0.660	4	0.497	0.20	0.194	6.40	8.92	70600	72780	98360	101400	1.20	8.0	15.0	
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BEND TEST:

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

Engr.Atif Bashir,MCQ **Test Performed By:** **Dr. /Engr.** Irfan Ul Hassan

EastGate Industries (Pvt) Ltd.Lahore.(Const. Of New Office Building at EGA-2 Gajumatta,Lahore)

SOM Lab

Client Reference: Nil **Ref:** 3463(Page-1/1)

Dated: 05-01-2024 **Dated:** 05-01-2024

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	2.629	8	0.992	0.79	0.773	24.76	36.41	69130	70650	101650	103890	1.00	8.0	12.5	
2	1.529	6	0.756	0.44	0.449	15.44	20.64	77410	75860	103470	101390	1.30	8.0	16.3	
3	1.017	5	0.617	0.31	0.299	10.70	13.56	76150	78950	96460	100000	1.30	8.0	16.3	
4	0.653	4	0.494	0.20	0.192	7.19	9.04	79250	82550	99710	103860	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
# 5	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Eight Samples Received and Tested

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

Sohail Anjum,PM **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

MS IT Tower,G4 Lahore.(Const. Of MS IT Tower at Plot 450,451 Johar Town Lahore)

SOM Lab

Client Reference: MSITT/UET/2023/S-004 **Ref:** 3465 (Page-1/1)

Dated: 05-01-2024 **Dated:** 05-01-2024

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

Gauge Length: 8 inch **Sample Type:** Deformed Bar (AFCO 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	1.495	6	0.748	0.44	0.439	17.38	21.20	87120	87320	106280	106520	1.30	8.0	16.3	
2	1.487	6	0.746	0.44	0.437	16.18	20.39	81090	81650	102190	102890	1.10	8.0	13.8	
3	0.663	4	0.498	0.20	0.195	7.41	8.82	81720	83820	97230	99730	1.10	8.0	13.8	
4	0.664	4	0.498	0.20	0.195	7.21	8.53	79470	81510	94090	96500	1.40	8.0	17.5	
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BEND TEST:

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

Test Performed By: Dr. Syed Asad Ali Gillani

Resident Engineer
Jers Consultancy (Pvt) Ltd.
Shuja Abad.(PRSWSSP Pilot Phase Cluster South II Shuja Abad)

Client Reference: 490-jo3-CO-08 Dated: 26-12-2023
SOM Laboratory Reference: CED/SOM/3464(Page-1/3) Dated: 05-01-2024
Test: Stiffness Test & Tensile Test & Compressive Test
Sample Type: GRP Blind Pipe 12" Diameter (Source B&A)

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

Total Length = 335 mm, External Diameter = 320 mm, Wall Thickness = 6.45 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%	4.7	947	544	18777	No Crack Observed
10%	9.2	999	574	19813	No Crack Observed
15%	14.7	1146	658	22712	No Crack Observed
20%	18.7	1457	837	28892	No Crack Observed
65%	29.5	2299	1320	45578	Delamination occur at this load

Tensile Test

Sample Type	Size of Sample (mm)	Ultimate Load (kN)	Ultimate Stress (MPa)
GRP Blind Pipe	12.0 x 6.0	17.0	236.11
GRP Blind Pipe	12.3 x 5.9	17.7	243.90

Compression Strength Test (ASTM-D-695)

Sample Type	Size of Sample (mm)	Compression Load (kN)	Compressive Stress (MPa)
GRP Blind Pipe	29.0 x 26.8	205.0	263.77

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