Test Performed by: S. Asad Ali Gillani

Engineer`s Representative
Metroplan-Asian JV
Site Office JIC-JHL, Lahore.
(Estb of Jinnah Institute of Cardiology, Extension of Jinah Hospital, AIMC Residential Colony, Lahore)

Client Reference No.: Metroplan-Asian JV JIC-JHL-RE-212-2024 Dated: 11-06-2024
SOM Lab Ref: CED/SOM/4316(Page 1/2) Dated: 12-06-2024
Test Type: Tensile Test **Specification:** ASTM A-36
Sample Type: MS Pipe Diameter 6" & 4" (Hebei Baolai Brand) **Gauge Length:** 2 inches

Tensile & Bend Test Results

Sr. No.	Sample Type	Size of strip (mm)	X Section Area (mm^2)	Yield Load (kN)	Ultimate Load (kN)	Yield Stress (MPa)	Ultimate Tensile Stress (MPa)	Elongation (inch)	% Elongation
1	MS Pipe (Dia 6")	30.0 x 7.1	213.00	62.50	97.50	293.43	457.75	0.45	22.50
2	MS Pipe (Dia 6")	31.0 x 7.0	217.00	63.00	97.50	290.32	449.31	0.50	25.00
3	MS Pipe (Dia 4")	30.2 x 6.1	184.22	56.00	81.20	303.98	440.78	0.60	30.00
4	MS Pipe (Dia 4")	29.7 x 6.1	181.17	58.00	83.50	320.14	460.89	0.60	30.00

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

Test Performed by: S. Asad Ali Gillani

Engineer`s Representative
Metroplan-Asian JV
Site Office JIC-JHL, Lahore.
(Estb of Jinnah Institute of Cardiology, Extension of Jinah Hospital, AIMC Residential Colony, Lahore)

Client Reference No.: Metroplan-Asian JV JIC-JHL-RE-212-2024 Dated: 11-06-2024
SOM Lab Ref: CED/SOM/4316(Page 2/2) Dated: 12-06-2024
Test Type: Unit Weight Test/ Dimension & Wall Thickness
Sample Type: MS Pipe Diameter 6” & 4” (Hebei Baolai Brand)

Weight and Size Test

Sr. No.	Sample Type	Weight (g)	Length (cm)	Weight per Unit Area (Kg/m)	External Diameter (mm)	Internal Diameter (mm)	Wall thickness (mm)
1	MS Pipe (Dia 6”)	28500	100.40	28.38	168.5	154.10	7.20
2	MS Pipe (Dia 4”)	16000	100.8	15.87	114.2	101.8	6.20

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

Engr. Muhammad Tariq Assai **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

GM Jafris and Steel (pvt) Ltd.(Const Of Al-Munawar Residential)

Client Reference: JS80/519 **Dated:** 12-06-2024

SOM Lab Ref: CED/SOM/4320 (Page-1/1) **Dated:** 12-06-2024

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

Sample Type: Deformed Bar **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	3.827	25	24.93	452	488	230.70	315.20	510	473	697	646	37.5	200	18.8	
2	3.833	25	24.93	452	488	249.50	323.70	552	512	716	664	37.5	200	18.8	
3	1.575	16	15.99	201	201	100.20	131.70	498	500	655	657	37.5	200	18.8	
4	1.579	16	16.00	201	201	100.20	132.20	498	499	658	658	37.5	200	18.8	
5	0.990	12	12.67	113	126	54.70	73.50	484	434	650	583	35.0	200	17.5	
6	0.993	12	12.69	113	127	55.00	74.00	486	435	654	585	37.5	200	18.8	
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BEND TEST:

25mm	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:-

Only Nine Samples Received and Tested

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

Engr. Naveed Sadiq **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

RE Orbit Developers.Lahore.(The Springs Atrium,Gulberg III Lahore)

Client Reference: Nil **SOM Lab Ref:** 4317 (Page-1/1)

Dated: 12-06-2024 **Dated:** 12-06-2024

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	2.622	8	0.991	0.79	0.771	25.54	36.00	71290	73050	100510	102990	1.30	8.0	16.3	
2	2.624	8	0.991	0.79	0.771	26.91	39.01	75130	76980	108910	111590	1.40	8.0	17.5	
3	1.503	6	0.750	0.44	0.442	15.75	20.23	78940	78590	101420	100970	1.30	8.0	16.3	
4	1.523	6	0.755	0.44	0.448	15.95	21.56	79970	78540	108070	106140	1.10	8.0	13.8	
5	0.658	4	0.496	0.20	0.193	6.27	8.41	69130	71640	92740	96100	0.80	8.0	10.0	
6	0.666	4	0.500	0.20	0.196	6.44	8.69	71040	72490	95770	97730	0.80	8.0	10.0	
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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

Meezan Developers **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani
Lahore.(Const Of Jamia Tur Rasheed Lahore Campus)

Client Reference: Nil **SOM Lab Ref:** 4318 (Page-1/1)
Dated: 12-06-2024 **Dated:** 12-06-2024

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	2.607	8	0.988	0.79	0.766	24.54	32.16	68500	70650	89790	92600	1.20	8.0	15.0	
2	2.597	8	0.986	0.79	0.763	24.46	32.26	68300	70720	90070	93260	1.30	8.0	16.3	
3	0.666	4	0.500	0.20	0.196	7.46	8.87	82290	83960	97800	99790	1.20	8.0	15.0	
4	0.662	4	0.498	0.20	0.195	6.98	8.43	77000	78980	92960	95350	1.00	8.0	12.5	
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BEND TEST:

# 8	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. Haseeb Afzal
PM HMB Developers Pvt Ltd. Lahore

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

Client Reference: HMBDPL/S.O/06/24/110(LHR)
Dated: 12-06-2024

SOM Lab Ref: 4319 (Page-1/1)
Dated: 12-06-2024

Test: Tension Test & Bend Test
Gauge Length: 8 inch

Test Specification: ASTM-A-615
Sample Type: Deformed Bar (DC # 2001982)

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	2.590	8	0.984	0.79	0.761	27.24	34.76	76040	78940	97040	100740	1.20	8.0	15.0	
2	2.619	8	0.990	0.79	0.770	25.28	33.15	70580	72410	92550	94950	1.30	8.0	16.3	
3	1.463	6	0.740	0.44	0.430	14.70	18.55	73680	75390	92990	95160	1.20	8.0	15.0	
4	1.449	6	0.736	0.44	0.426	14.80	18.65	74190	76630	93510	96580	1.30	8.0	16.3	
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Witnessed By: Muhammad Azhar Saeed

BEND TEST:

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

Kashif Mahmood, AE **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

SDO ITU Lahore.(Const Of Multi-Purpose Building at Main Campus Barki Rd Green City Lahore)

Client Reference: ITU/OEW/24/219 **SOM Lab Ref:** 4321 (Page-1/1)

Dated: 04-06-2024 **Dated:** 12-06-2024

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	2.534	8	0.974	0.79	0.745	27.19	34.93	75900	80480	97530	103420	1.20	8.0	15.0	
2	2.548	8	0.977	0.79	0.749	27.42	35.07	76550	80740	97900	103260	1.20	8.0	15.0	
3	1.508	6	0.751	0.44	0.443	14.42	19.59	72300	71810	98210	97540	1.40	8.0	17.5	
4	1.503	6	0.750	0.44	0.442	14.48	19.42	72560	72230	97340	96900	1.30	8.0	16.3	
5	1.013	5	0.616	0.31	0.298	9.55	12.51	67960	70690	88990	92570	1.40	8.0	17.5	
6	1.025	5	0.619	0.31	0.301	9.65	12.54	68680	70730	89200	91870	1.40	8.0	17.5	
7	0.666	4	0.500	0.20	0.196	6.54	8.82	72170	73640	97230	99220	1.30	8.0	16.3	
8	0.666	4	0.500	0.20	0.196	6.60	8.89	72730	74210	98020	100020	1.30	8.0	16.3	
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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 Twelve Samples Received and Tested

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