Test Performed by: Dr.S. Asad Ali Gillani

Atif Mughal
Manager Material (Engr)
Central Lab DHA Islamabad- Rawalpindi
(Project: Elec Duct Phase/Sec V/K2)

Client Reference No.: DHA/Central Lab/Ph-I/58 Dated: 25-06-2024

SOM Lab Ref: CED/SOM/4349 (P-1/1) Dated: 26-06-2024

Test Type: Flexural Strength & Crushing Strength Test **Standard: ASTM-C-875 - 98**

Sample Type: Asbestos Pipes (6 Inches) Brand: WE Infra Tech

Flexural Load Results

Sample No.	Diameter (mm)		Thickness (mm)	Length of the Tested Sample (unsupported span) (mm)	Flexural Load (kN)
	Outer	Inner			
1	166.0	149.8	8.10	1372	3.40
2	166.0	149.8	8.10	1372	3.67

Crushing Load Results

Sample No.	Diameter (mm)		Thickness (mm)	Length of the Tested Sample (mm)	Crushing Load (kN)
	Outer	Inner			
1	166.0	150.2	7.9	300	1.82
2	166.0	149.8	8.10	300	1.75

Yasir Ahmad
GM-Works FF Steel Lahore.

Test Performed By: **Dr. /Engr.** Nauman Khurram

Client Reference: Nil
Dated: 13-06-2024

SOM Lab Ref: 4348 (Page-1/1)
Dated: 26-06-2024

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

Test Specification: ASTM-A-615
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	1.481	6	0.744	0.44	0.435	13.73	18.96	68830	69620	95040	96130	1.30	8.0	16.3	1
2	1.475	6	0.743	0.44	0.433	13.81	19.01	69240	70360	95290	96830	1.30	8.0	16.3	2
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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

Awais Nazir,XEN **Test Performed By:** **Dr. /Engr.** Nauman Khurram

GE(Army)-II LRC.(Const Of 2 x Block of 8 x E Type Flats (G+3) at Tariq Rd Lhr Cantt)

Client Reference: 6003/95/E6 **SOM Lab Ref:** 4350 (Page-1a/1)

Dated: 24-06-2024 **Dated:** 26-06-2024

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	2.602	8	0.987	0.79	0.765	22.99	35.98	64180	66270	100460	103740	1.30	8.0	16.3	
2	2.635	8	0.993	0.79	0.774	23.01	36.21	64230	65560	101080	103170	1.40	8.0	17.5	
3	1.466	6	0.741	0.44	0.431	13.35	21.20	66940	68330	106280	108500	1.40	8.0	17.5	
4	1.461	6	0.739	0.44	0.429	13.32	21.25	66780	68500	106530	109270	1.30	8.0	16.3	
5	1.060	5	0.630	0.31	0.312	9.99	16.13	71070	70620	114730	113990	1.10	8.0	13.8	
6	1.038	5	0.623	0.31	0.305	9.86	15.87	70130	71280	112920	114770	1.30	8.0	16.3	
7	0.644	4	0.491	0.20	0.189	6.19	9.68	68230	72210	106790	113000	1.00	8.0	12.5	
8	0.650	4	0.493	0.20	0.191	6.24	9.70	68800	72040	107010	112060	1.00	8.0	12.5	
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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

Awais Nazir,XEN **Test Performed By:** **Dr. /Engr.** Nauman Khurram

GE(Army)-II LRC.(Const Of 2 x Block of 8 x E Type Flats (G+3) at Tariq Rd Lhr Cantt)

Client Reference: 6003/95/E6 **SOM Lab Ref:** 4350 (Page-1b/1)

Dated: 24-06-2024 **Dated:** 26-06-2024

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	1.461	6	0.739	0.44	0.429	13.27	21.27	66530	68230	106640	109370	1.20	8.0	15.0	
2	1.456	6	0.738	0.44	0.428	13.25	21.12	66430	68290	105870	108840	1.30	8.0	16.3	
3	1.049	5	0.626	0.31	0.308	10.24	15.92	72890	73360	113280	114020	1.30	8.0	16.3	
4	1.040	5	0.624	0.31	0.306	10.14	16.08	72160	73100	114370	115860	1.10	8.0	13.8	
5	0.643	4	0.491	0.20	0.189	6.17	9.63	68010	71970	106230	112410	1.10	8.0	13.8	
6	0.658	4	0.496	0.20	0.193	6.27	9.68	69130	71640	106790	110660	1.10	8.0	13.8	
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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
# 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

Engr. Muhammad Ashraf Bhatti **Test Performed By:** **Dr. /Engr.** Nauman Khurram

CM Barqaab Consult.Services (Pvt) Ltd.(500/220/132kV Nokhar S/Station,ADB Loan No.3677-Pak)

Client Reference: 500KV/SS/N-LHR/BQB/264 **SOM Lab Ref:** 4351 (Page-1/1)

Dated: 14-06-2024 **Dated:** 26-06-2024

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	1.494	6	0.748	0.44	0.439	13.97	20.05	70000	70160	100500	100730	1.30	8.0	16.3	
2	1.495	6	0.748	0.44	0.439	13.61	19.57	68210	68370	98100	98330	1.40	8.0	17.5	
3	0.654	4	0.494	0.20	0.192	6.39	8.58	70480	73420	94650	98590	1.00	8.0	12.5	
4	0.643	4	0.491	0.20	0.189	6.37	8.53	70260	74350	94090	99560	1.14	8.0	14.3	
5	0.656	4	0.496	0.20	0.193	6.32	8.58	69700	72220	94650	98080	1.10	8.0	13.8	
6	0.654	4	0.494	0.20	0.192	6.24	8.46	68800	71660	93300	97190	1.00	8.0	12.5	
7	0.654	4	0.494	0.20	0.192	6.24	8.46	68800	71660	93300	97190	1.10	8.0	13.8	
8	0.648	4	0.492	0.20	0.190	6.42	8.58	70820	74550	94650	99630	1.20	8.0	15.0	
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Witnessed By: Furqan Shabbir (Dy Manager,Tech),Muhammad Mubeen Khalid

BEND TEST:

# 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 Twelve Samples Received and Tested

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