

**Test Performed By:** Dr. Syed Asad Ali Gillani

Misha Asad  
Manager Proposal & Contracts  
Fibre Craft Industries (Pvt) Ltd.

**Client Reference:** FCI/25/CR/24568

Dated: 13-08-2025

**SOM Laboratory Reference:** CED/SOM/1660(Page-1a/1)

Dated: 19-08-2025

**Test:** Hoop Tensile Test

**Sample Type:** Fiberglass Filament Wounded Pipe (Size 12")

**Hoop Tensile Test (ASTM-D-2290-04)**

Sample Size (mm)				Hoop Tensile Load (kN)	Hoop Stress (MPa)
b <sub>1</sub>	t <sub>1</sub>	b <sub>2</sub>	t <sub>2</sub>		
12.1	14.0	12.2	14.1	180.7	522.82

**Note:** Please always confirm the results of above report on web: [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

**Test Performed By:** Dr. Syed Asad Ali Gillani

Misha Asad  
Manager Proposal & Contracts  
Fibre Craft Industries (Pvt) Ltd.

**Client Reference:** FCI/25/CR/24568

Dated: 13-08-2025

**SOM Laboratory Reference:** CED/SOM/1660(Page-1/1)

Dated: 19-08-2025

**Test:** Stiffness Test & Tensile Test

**Sample Type:** Fiberglass Filament Wounded Pipe (Size 12")

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

Total Length = 300 mm, External Diameter = 315 mm, Wall Thickness = 10.5 mm

Percentage Reduction in Diameter of Sample	Compression Load, P (kN)	Stiffness (Corrected)			Remarks
		Pipe Stiffness (kN/m <sup>2</sup> )	Stiffness Factor (N-m)	Specific Tangential Initial Stiffness (N/m <sup>2</sup> )	
5%	10.7	2451	1289	50727	No Crack Observed
10%	29.7	3676	1933	75056	No Crack Observed
12%	37.2	3955	2080	81832	No Crack Observed
15%	52.2	5549	2918	114828	Delamination occur at this load

**Tensile Test (ASTM-D-638)**

Sample Type	Size of Sample (mm)	Ultimate Load (kN)	Ultimate Stress (MPa)
Fiberglass Pipe	15.2 x 11.0	18.20	108.85

**Note:** Please always confirm the results of above report on web: [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

AJ Contractors

Test Performed By:

Dr. /Engr.

Nauman Khurram

Lahore.[Project TAWAL Site ID: TWPSKP0016,TWPGRW0024]

Client Reference: AJ Contractor/Steel/TAWAL/27

Dated: 18-08-2025

SOM Lab Ref: CED/SOM/1664 (Page-1/2)

Dated: 19-08-2025

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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	1.531	16	15.76	201	195	94.70	127.70	471	486	635	655	30.0	200	15.0	
2	0.978	12	12.60	113	125	64.70	89.20	572	520	789	716	22.5	200	11.3	
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**BEND TEST:**

--	No Bend test performed	<b>Note:-</b>  Only Two Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

AJ Contractors  
Lahore.[Project TAWAL Site ID: TWPSKP0016]

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

**Client Reference:** AJ Contractor/Steel/TAWAL/28

**Dated:** 18-08-2025

**SOM Lab Ref:** CED/SOM/1664 (Page-2/2)

**Dated:** 19-08-2025

**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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	2.168	20	18.75	314	276	131.50	177.50	419	477	565	644	30.0	200	15.0	
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**BEND TEST:**

--	No Bend test performed	<b>Note:-</b>  Only One Sample Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Mudassar Maqsood  
Quality Manager Aziz Industries Muridke.

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

**Client Reference:** Nil  
**SOM Lab Ref:** CED/SOM/1659(Page-1/1)  
**Test:** Tension Test & Bend Test  
**Sample Type:** Deformed Bar (Aziz Steel)

**Dated:** 19-08-2025  
**Dated:** 19-08-2024  
**Test Specification:** ASTM-A 615  
**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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	3.874	25	25.08	491	494	280.00	376.50	570	567	767	763	30.0	200	15.0	
2	3.885	25	25.10	491	495	289.00	381.70	589	585	778	772	27.5	200	13.8	
3	2.190	19	18.85	284	279	174.20	216.00	614	625	762	775	30.0	200	15.0	
4	2.144	19	18.65	284	273	171.50	217.70	605	628	768	798	30.0	200	15.0	
5	1.582	16	16.02	201	202	129.50	152.00	644	643	756	755	22.5	200	11.3	
6	1.577	16	15.99	201	201	129.00	150.70	642	643	750	751	20.0	200	10.0	
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**BEND TEST:**

25mm	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Nine Samples Received and Tested
19mm	Sample bend through 180 degrees Satisfactorily without any crack	
16mm	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](http://www.uet-civil.edu.pk)

Haris & Company

Test Performed By:

Dr. /Engr.

Nauman Khurram

Lahore.(JAZZ ID: AHN8062,RUR1774,JGB8959,HWY2001,HWY7309,MLH8613,ISG8048)

Client Reference: HC/No.28

Dated: 01-06-2025

SOM Lab Ref: CED/SOM/1662 (Page-1/2)

Dated: 19-08-2025

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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	1.547	16	15.84	201	197	115.20	142.20	573	585	707	722	20.0	200	10.0	
2	0.996	12	12.71	113	127	63.00	88.50	557	497	783	698	22.5	200	11.3	
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**BEND TEST:**

--	No Bend test performed	<b>Note:-</b>  Only Two Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Haris & Company  
Lahore.(UFONE ID: 2393,2642,4025)

Test Performed By: Dr. /Engr. Nauman Khurram

Client Reference: HC/No.28  
SOM Lab Ref: CED/SOM/1662 (Page-2/2)  
Test: Tension Test & Bend Test  
Sample Type: Deformed Bar

Dated: 01-06-2025  
Dated: 19-08-2025  
Test Specification: ASTM-A 615  
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 <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	1.550	16	15.84	201	197	110.20	145.00	548	560	721	737	22.5	200	11.3	
2	1.044	12	13.01	113	133	59.20	86.50	523	446	765	651	25.0	200	12.5	
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**BEND TEST:**

--	No Bend test performed	<b>Note:-</b>  Only Two Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Wajid Naeem

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

Proj Admin Muslim Hands Education Complex.(Const Of Girls Hostel Rooms at MHEC Sohdera,Wazirabad)

**Client Reference:** MHEC/ST/08/01

**SOM Lab**

**Ref:** 1661 (Page-1/1)

**Dated:** 19-08-2025

**Dated:** 19-08-2025

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A-615

**Gauge Length:** 8 inch

**Sample Type:** Def. 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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.657	4	0.496	0.20	0.193	4.81	7.24	53060	54980	79810	82710	1.20	8.0	15.0	
2	0.654	4	0.494	0.20	0.192	4.71	7.14	51940	54100	78690	81970	1.30	8.0	16.3	
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**BEND TEST:**

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

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Usman Yousaf

Test Performed By:

Dr. /Engr.

Nauman Khurram

Dy Management Procurement Libermann International Sialkot.(Sialkot Tannery Zone)

Client Reference: Nil

SOM Lab

Ref:

1663 (Page-1/1)

Dated: 19-08-2025

Dated:

19-08-2025

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Gauge Length: 8 inch

Sample Type:

Def. 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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.721	8	1.009	0.79	0.800	24.26	34.25	67730	66890	95620	94420	1.20	8.0	15.0	
2	2.611	8	0.988	0.79	0.767	25.71	36.03	71770	73930	100600	103620	1.20	8.0	15.0	
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**BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Engr.Ahmed Hussain Shah

Test Performed By: Dr. /Engr. Nauman Khurram

RE New Vision Consultant, Lahore.(Const Of Auditorium Building at Uni of Child Health Science,Lhr)

Client Reference: NEWVISION/UCHS/AUD/013

SOM Lab

Ref: 1665 (Page-1/1)

Dated: 18-08-2025

Dated: 19-08-2025

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Def. 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 <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.627	8	0.991	0.79	0.772	27.62	37.36	77120	78920	104300	106730	1.00	8.0	12.5	Ak Steel
2	2.528	8	0.973	0.79	0.743	27.85	35.47	77750	82670	99030	105300	1.00	8.0	12.5	Ak Steel
3	1.488	6	0.746	0.44	0.437	13.48	19.57	67550	68010	98100	98780	1.10	8.0	13.8	Ak Supreme
4	1.476	6	0.743	0.44	0.434	13.46	20.05	67450	68380	100500	101890	1.20	8.0	15.0	Ak Supreme
5	0.653	4	0.494	0.20	0.192	7.10	9.55	78350	81620	105330	109720	1.10	8.0	13.8	Ak Steel
6	0.651	4	0.493	0.20	0.191	6.14	8.61	67670	70860	94990	99460	0.90	8.0	11.3	Ak Steel
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**BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  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](http://www.uet-civil.edu.pk)