Test Performed by: S. Asad Ali Gillani

Ghulam Mustafa
Project Manager
Liberty Builders Lahore.
(Const of Zee Avenue- Ramada Hotel & Suites 17-a Cooper Road, Lahore)

Client Reference No.: TRT/UET/20250206 Dated: 06-02-2025

SOM Lab Ref: CED/SOM/715 (Page 1/1) Dated: 06-02-2025

Test Type: Tensile Test

Sample Type: Threaded Rod (M16x10”) **Gauge Length**: 2 Inches

Tensile Test Results

S No.	Sample Type	Sample Diameter (mm)	Tested Diameter of Rod/Bolt (mm)	Yield Load (kN)	Ultimate Load (kN)	Yield Stress (MPa)	Ultimate Tensile Stress (MPa)	% Elongation
1	Threaded Rod M16	16.0	10.0	27.0	40.5	343.9	515.9	25.0
2	Threaded Rod M16	16.0	10.0	28.0	41.5	356.7	528.7	25.0
3	Threaded Rod M16	16.0	10.0	27.7	40.2	352.9	512.1	25.0

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

Test Performed by: Dr. Syed Asad Ali Gilani

S.J Steel
RE-Rolling Mills
Sharkpura Road Sheikhpura.
(Installation of Solar Panel)

Client Reference No.: Nil Dated: 31-01-2025

SOM Lab Ref: CED/SOM/719 (Page-1/3) Dated: 06-02-2025

Test Type: Load Test

Sample Type: Solar Panel Support **(**Aluminum Column, Y-Profile, L-Cleet & Nut-Bolt)

Load Test:

S No	Sample Type	Ultimate Load (kN)	Remarks
1 (Large)	Solar Panel Support (Aluminum Column, Y-Profile, L-Cleet & Nut-Bolt)	22.9	Y-Profile fails at this load
2 (Small)	Solar Panel Support (Aluminum Column, Y-Profile, L-Cleet & Nut-Bolt)	24.30	Y-Profile fails at this load
Note: Please always confirm the results of above report on web www.uet-civil.edu.pk			

Test Performed by: Dr. Syed Asad Ali Gilani

S.J Steel
RE-Rolling Mills
Sharkpura Road Sheikhpura.
(Installation of Solar Panel)

Client Reference No.: Nil Dated: 31-01-2025

SOM Lab Ref: CED/SOM/719 (Page-2/3) Dated: 06-02-2025

Test Type: Tensile Test

Sample Type: Aluminum Column **Gauge Length:** 2 inches

Tensile Test Results

Sr. No.	Size of strip (mm)	X Section Area (mm^2)	Yield Load (kN)	Ultimate Load (kN)	Yield Stress (kN)	Ultimate Tensile Stress (MPa)	Elongation (inch)	% Elongation
1 (Large)	23.3 x 2.5	58.25	6.8	9.70	116.74	166.52	0.20	10.00
2 (Small)	22.7 x 2.5	56.75	6.6	8.65	116.30	152.42	0.20	10.00

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

Test Performed by: Dr. Syed Asad Ali Gilani

S.J Steel
RE-Rolling Mills
Sharkpura Road Sheikhpura.
(Installation of Solar Panel)

Client Reference No.: Nil Dated: 31-01-2025

SOM Lab Ref: CED/SOM/719 (Page-3/3) Dated: 06-02-2025

Sample Type: Solar Panel Support **(**Aluminum Column, Y-Profile, L-Cleet & Nut-Bolt)

Hardness Test Details:

Machine used: Avery Rockwell Hardness Testing Machine
(Minor Load: 10 Kgf Major Load: 50 kgf Scale: A)

Hardness Test Results

Sample No.	Sample Type	Hardness AVG
1	Aluminum Column (L)	HR – 18.16– A
2	Aluminum Column (S)	HR – 19.0– A
3	Y-Profile	HR – 13.83– A
4	L-Cleet	HR – 29.83– A
5	Nut	HR – 30.66– A
6	Bolt	HR – 31.66– A

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

Safdar Rashid, RE **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

NESPAK.(KBCMA College of Veterinary and Animal Sciences Narowal Campus)

Client Reference: 4650/311/SR/94 **SOM Lab Ref:** 714 (Page-1/1)

Dated: 04-02-2025 **Dated:** 06-02-2025

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	0.667	4	0.500	0.20	0.196	6.52	8.66	71940	73410	95550	97500	1.30	8.0	16.3	
2	0.670	4	0.501	0.20	0.197	6.73	8.84	74190	75320	97460	98940	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

Muhammad Shuaib, Asst Engr **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

SDO B & R AGE (A) Khanewal.(Const Of 1 x 128 Men SM BK, 176 HBBE Engr 2 Corps at Abk)

Client Reference: 600/111/B&R **SOM Lab Ref:** 716 (Page-1/1)

Dated: 07-01-2025 **Dated:** 06-02-2025

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	2.585	8	0.984	0.79	0.760	25.13	33.56	70150	72920	93680	97380	1.50	8.0	18.8	
2	2.572	8	0.981	0.79	0.756	25.20	33.61	70350	73510	93830	98050	1.60	8.0	20.0	
3	1.502	6	0.749	0.44	0.441	13.81	19.08	69240	69080	95650	95430	1.50	8.0	18.8	
4	1.462	6	0.740	0.44	0.430	12.35	17.94	61930	63370	89930	92020	1.40	8.0	17.5	
5	1.001	5	0.612	0.31	0.294	9.55	12.51	67960	71650	88990	93830	1.50	8.0	18.8	
6	0.996	5	0.611	0.31	0.293	9.55	12.49	67960	71900	88840	94000	1.40	8.0	17.5	
7	0.670	4	0.501	0.20	0.197	6.63	8.41	73070	74180	92740	94150	1.40	8.0	17.5	
8	0.668	4	0.500	0.20	0.196	6.49	8.41	71610	73070	92740	94630	1.30	8.0	16.3	
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BEND TEST:

--	No Bend test performed

Note:-

Only Eight Samples Received and Tested

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

Maj Muhammad Fariq Habib **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani
GE(Army) Mgl.(Const Of 1 x 128 Men SM BK, Musa Coy, HQ SSG at Mgl)

Client Reference: 6759/16/E-6 **SOM Lab Ref:** 717 (Page-1/1)
Dated: 12-12-2024 **Dated:** 06-02-2025
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	2.656	8	0.997	0.79	0.781	25.76	34.71	71920	72740	96900	98020	1.40	8.0	17.5	
2	2.653	8	0.997	0.79	0.780	25.69	34.58	71720	72640	96530	97770	1.50	8.0	18.8	
3	1.496	6	0.748	0.44	0.440	14.98	20.18	75110	75110	101170	101170	1.20	8.0	15.0	
4	1.493	6	0.748	0.44	0.439	15.09	20.18	75620	75790	101170	101400	1.40	8.0	17.5	
5	1.041	5	0.624	0.31	0.306	10.67	13.83	75930	76920	98410	99700	1.30	8.0	16.3	
6	1.037	5	0.623	0.31	0.305	10.62	13.83	75570	76810	98410	100030	1.20	8.0	15.0	
7	0.659	4	0.497	0.20	0.194	6.52	8.79	71940	74170	96900	99890	1.20	8.0	15.0	
8	0.665	4	0.498	0.20	0.195	6.60	8.72	72730	74600	96110	98580	1.20	8.0	15.0	
9	0.672	4	0.501	0.20	0.197	4.91	6.73	54180	55010	74190	75320	1.30	8.0	16.3	
10	0.673	4	0.502	0.20	0.198	4.94	6.63	54520	55070	73070	73810	1.40	8.0	17.5	

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
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Fifteen Samples Received and Tested

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

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

SPM, Old P&D IDAP Lahore.(Re-Const Of Old P&D Building Lahore)

Client Reference: SPM(Old P&D)/IDAP/S/2025/21409 **SOM Lab Ref:** 720 (Page-1/2)

Dated: 28-01-2025 **Dated:** 06-02-2025

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	2.672	8	1.000	0.79	0.785	23.50	38.76	65600	66020	108200	108890	1.30	8.0	16.3	
2	1.502	6	0.749	0.44	0.441	12.90	20.41	64640	64490	102290	102060	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

Note:-

Only Four Samples Received and Tested

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

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

SPM, Old P&D IDAP Lahore.(Re-Const Of Old P&D Building Lahore)

Client Reference: SPM(Old P&D)/IDAP/S/2025/21485 **SOM Lab Ref:** 720 (Page-2/2)

Dated: 06-02-2025 **Dated:** 06-02-2025

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	1.470	6	0.742	0.44	0.432	13.27	21.00	66530	67760	105260	107210	1.30	8.0	16.3	
2	0.660	4	0.497	0.20	0.194	6.17	9.35	68010	70110	103080	106270	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 Four Samples Received and Tested

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

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

ME Banu Mukhtar Contracting(Pvt.) Ltd.(Burj-1 By AJWA Builders)

Client Reference: DOC-BMC/AJWA/156 **SOM Lab Ref:** 721 (Page-1/1)

Dated: 06-02-2025 **Dated:** 06-02-2025

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	0.653	4	0.494	0.20	0.192	6.68	8.94	73630	76700	98580	102690	1.40	8.0	17.5	
2	0.665	4	0.498	0.20	0.195	7.00	8.61	77230	79210	94990	97420	1.30	8.0	16.3	
3	0.667	4	0.500	0.20	0.196	6.98	8.56	77000	78570	94420	96350	1.20	8.0	15.0	
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BEND TEST:

# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Four Samples Received and Tested

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

Nasir Mahmood, CM **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani
Elite Engineering (Pvt) Ltd.(Project: Sitara 3 JAYS Tower)

Client Reference: EEPL/08/EL-15 **SOM Lab Ref:** 722 (Page-1/1)
Dated: 06-02-2025 **Dated:** 06-02-2025

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615
Gauge Length: 8 inch **Sample Type:** Deformed Bar (Markhor 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	2.650	8	0.996	0.79	0.779	24.97	35.95	69720	70710	100370	101790	1.40	8.0	17.5	
2	2.625	8	0.991	0.79	0.771	25.08	36.14	70010	71730	100880	103370	1.50	8.0	18.8	
3	1.522	6	0.754	0.44	0.447	14.07	19.72	70510	69410	98870	97320	1.60	8.0	20.0	
4	1.519	6	0.754	0.44	0.446	14.53	20.23	72810	71830	101420	100060	1.20	8.0	15.0	
5	0.670	4	0.501	0.20	0.197	6.14	8.53	67670	68700	94090	95520	1.00	8.0	12.5	
6	0.661	4	0.497	0.20	0.194	5.88	8.36	64860	66870	92180	95030	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
# 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