

To,
 Mr. Manohar Lal (Resident Engineer)
 Nespak (Pvt.) Ltd.
 Dualization of Road From Gujranwala to M-2 Interchange at Kot Sarwar via hafizabad Km 6.20 to
 Km 80.35 Length 74.1 Km in District Gujranwala & Hafizabad (section Km40.20 ~55.40, L=15.20 Km)

Reference # CED/TFL 7563 (Dr. Rizwan Riaz)
 Reference of the request letter # SA-466F/103/GH/ML/Lab/109

Dated: 29-09-2025
 Dated: 02-09-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
 Gauge Length 2 inches
 Description Joint Aluminium Alloy Strip (Saw-Tooth Type) Tensile Test Report

Sr. No.	Designation	Size of Strip	X Section Area	Yield Load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(Inch)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(inch)		
1	Joint Aluminium Al	24.20 x 4.40	106.48	1120	1460	103.2	134.5	0.4	20.0	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

Note: Only 1 Samples for Tensile and 0 Samples for Bend test

Bend Test										

Test Performed and Verified by:

To,
 Project Manager
 Guarantee Engineers (Pvt.) Ltd.

Reference # CED/TFL 7606 (Dr. Rizwan Riaz)
 Reference of the request letter # GEPL/Projects/3907/25/2

Dated: 07-10-2025
 Dated: 25-09-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
 Gauge Length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.420	3	0.396	0.110	0.1233	39.70	45.20	81103	72362	92339	82387	0.9	11.3	3/8"
2	0.415	3	0.394	0.110	0.1219	40.00	44.70	81716	73763	91318	82430	1.0	12.5	3/8"
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,
 Construction Manager
 Unison Pvt. Ltd.
 Map-Building
 (Hunza Steel)

Reference # CED/TFL 7607 (Dr. Rizwan Riaz)
 Reference of the request letter # 2508/UNI/UMT/MAP/03

Dated: 07-10-2025
 Dated: 03-10-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
 Gauge Length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.372	3	0.373	0.110	0.1094	33.70	43.50	68846	69217	88866	89345	1.2	15.0	-
2	0.372	3	0.373	0.110	0.1093	33.70	43.50	68846	69285	88866	89433	1.5	18.8	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Mr. Muhammad Rashid (Project Manager)
Swiss Mall
Swiss Mall MM Alam Road Gulberg-III, Lahore

Reference # CED/TFL 7608 (Dr. Rizwan Riaz)
Reference of the request letter # Nil

Dated: 07-10-2025
Dated: 06-10-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (mm)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.372	10	0.373	0.120	0.1094	32.70	49.00	61236	67141	91760	100609	1.2	15.0	-
2	0.372	10	0.373	0.120	0.1093	33.00	49.00	61798	67846	91760	100741	1.3	16.3	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
10mm Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Sub Divisional Officer
Building Sub Division No.22, Lahore
Construction of Office of Chief Engineer Special Initiative Department Lahore

Reference # CED/TFL 7610 (Dr. Rizwan Riaz)
Reference of the request letter # 213/SDO-22

Dated: 08-10-2025
Dated: 02-10-2025

Tension Test Report (Page-1/3)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.373	3	0.373	0.110	0.1095	31.70	47.70	64760	65028	97446	97850	1.3	16.3	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 1 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Sub Divisional Officer
Building Sub Division No.22, Lahore
Construction of Building of Government Primary School for Special Education Needs and
Disabilities at Raiwind Lahore

Reference # CED/TFL 7610 (Dr. Rizwan Riaz)
Reference of the request letter # 205/SDO-22

Dated: 08-10-2025

Dated: 02-10-2025

Tension Test Report (Page-2/3)

Date of Test 10-10-2025

Gauge Length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.363	3	0.368	0.110	0.1066	31.50	47.00	64351	66402	96016	99076	1.2	15.0	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 1 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Sub Divisional Officer
Building Sub Division, Narowal
Construction for Revaming of BHUs of North and Central Punjab (Phase-II) at District Narowal
(APD # 579 for the Year 2024-2025) (Khan Khasa)

Reference # CED/TFL 7610 (Dr. Rizwan Riaz)
Reference of the request letter # 239/NL

Dated: 08-10-2025
Dated: 24-07-2025

Tension Test Report (Page-3/3)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.385	3	0.380	0.110	0.1132	29.00	46.70	59244	57590	95403	92739	1.4	17.5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 1 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Mr. Adnan Jamil (Civil Engineer)
National Management Foundation
Yousaf Shirazi Complex at LUMS Campus

Reference # CED/TFL 7612 (Dr. Rizwan Riaz)
Reference of the request letter # NMF/GM/C-39/896

Dated: 08-10-2025
Dated: 08-10-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (mm)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.369	10	0.372	0.120	0.1084	32.00	45.00	59925	66337	84270	93286	1.3	16.3	-
2	0.383	10	0.378	0.120	0.1124	32.70	47.00	61236	65363	88015	93947	1.7	21.3	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
10mm Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Mr. Muhammad Shabbir Sandhu (Material Engineer)
EPCM Consultants
Trunk Main Sewer Lines and Allied Work, NCB-Works/PICIIP-03 (Lot-03)
(AF Steel)

Reference # CED/TFL 7613 (Dr. Rizwan Riaz)
Reference of the request letter # 3976/11/MSS/SWL/Lot-03/01/191

Dated: 08-10-2025
Dated: 08-08-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.351	3	0.363	0.110	0.1032	35.00	41.50	71502	76206	84780	90359	0.8	10.0	-
2	0.350	3	0.362	0.110	0.1028	42.50	49.00	86823	92930	100102	107143	0.8	10.0	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Mr. Muhammad Shabbir Sandhu (Material Engineer)
EPCM Consultants
Trunk Main Sewer Lines and Allied Work, NCB-Works/PICIIP-03 (Lot-02)
(AF Steel)

Reference # CED/TFL 7614 (Dr. Rizwan Riaz)
Reference of the request letter # 3976/11/MSS/SWL/Lot-02/01/416

Dated: 08-10-2025
Dated: 04-10-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.356	3	0.365	0.110	0.1047	37.70	46.20	77017	80924	94382	99169	0.9	11.3	-
2	0.363	3	0.369	0.110	0.1067	36.50	45.20	74566	76862	92339	95183	1.0	12.5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Sub Divisional Officer

Highway Sub Division Mailsi

Construction of Additional Carriageway (Dehli-Multan Road) From Pull 114/10R to Pir Murad Morr

Length:49.60 KM District Vehari

Reference # CED/TFL 7616 (Dr. Rizwan Riaz)

Dated: 08-10-2025

Reference of the request letter # 145/SDM

Dated: 09-09-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025

Gauge Length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.374	3	0.374	0.110	0.1099	35.50	46.50	72523	72590	94995	95083	1.3	16.3	-
2	0.373	3	0.374	0.110	0.1096	34.00	45.50	69459	69717	92952	93298	1.5	18.8	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test

3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Sub Divisional Officer
Buildings Sub Division No.12, Lahore
Punjab Tianjin University of Technology (PTUT) Lahore Group No.1
(FF Steel)

Reference # CED/TFL 7617 (Dr. Rizwan Riaz)
Reference of the request letter # 515

Dated: 08-10-2025
Dated: 07-10-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.366	3	0.370	0.110	0.1076	34.70	47.50	70889	72465	97038	99196	1.0	12.5	3/8"
2	0.367	3	0.371	0.110	0.1079	34.50	47.20	70480	71831	96425	98273	1.1	13.8	3/8"
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 0 Samples for Bend test

Bend Test														

Test Performed and Verified by:

To,

Mr. Muhammad Hassan (Project Monitoring Sec I/C)
HNR Company (Pvt.) Ltd.
Haier Factory 19.5 Km Raiwind Road, Lahore
(FF Steel)

Reference # CED/TFL 7618 (Dr. Rizwan Riaz)
Reference of the request letter # Projects/BMC/IM/25-10/04

Dated: 08-10-2025
Dated: 08-10-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (mm)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.394	10	0.384	0.120	0.1159	37.50	48.20	70225	72731	90262	93484	1.3	16.3	-
2	0.390	10	0.382	0.120	0.1147	37.00	47.70	69288	72480	89326	93441	1.3	16.3	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
10mm Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Engr. M. Asif Javaid (Project Manager)
Engineering Services & Architectural Consultants
Grand Central Mall Faisalabad
(FF Steel)

Reference # CED/TFL 7619 (Dr. Rizwan Riaz)
Reference of the request letter # ESAC/TGC/GCMF/286

Dated: 08-10-2025
Dated: 08-10-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.372	3	0.373	0.110	0.1092	35.50	46.00	72523	73036	93973	94638	1.4	17.5	-
2	0.370	3	0.372	0.110	0.1086	33.00	47.70	67416	68298	97446	98722	1.1	13.8	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Mr. Yahya Jan (Area Engineer)
Attock Petroleum Ltd.
APL Retail Outlet Lake City Lahore
(Boundary Wall Columns and Foundation)

Reference # CED/TFL 7622 (Dr. Rizwan Riaz)
Reference of the request letter # APL/Engg/UETLab/10/08-01

Dated: 08-10-2025
Dated: 08-10-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.369	3	0.372	0.110	0.1084	34.50	43.50	70480	71499	88866	90150	1.3	16.3	-
2	0.368	3	0.371	0.110	0.1081	35.70	44.50	72932	74229	90909	92526	1.3	16.3	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,

Engr. Ahsan Murad (Assistant Engineer)
University of Engineering and Technology, Lahore (Narowal Campus)
Solar Panel System at UET Lahore Narowal Campus

Reference # CED/TFL 7623 (Dr. Rizwan Riaz)
Reference of the request letter # Univ/NRL/ICIP/PD/1505

Dated: 09-10-2025

Dated: 02-10-2025

Tension Test Report (Page-1/2)

Date of Test 10-10-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in ²)		Yield Load (kN)	Breaking Load (kN)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
				Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.368	3	0.371	0.110	0.1082	34.50	50.70	70480	71637	103575	105275	1.2	15.0	-
2	0.367	3	0.370	0.110	0.1077	34.20	50.50	69867	71343	103166	105346	1.0	12.5	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test	
# 3 Bar Bend Test Through 180 Degree is Satisfactory	

Test Performed and Verified by:

To,
 Engr. Ahsan Murad (Assistant Engineer)
 University of Engineering and Technology, Lahore (Narowal Campus)
 Solar Panel System at UET Lahore Narowal Campus

Reference # CED/TFL 7623 (Dr. Rizwan Riaz)
 Reference of the request letter # Univ/NRL/ICIP/PD/1504

Dated: 09-10-2025
 Dated: 02-10-2025

Tension Test Report (Page-2/2)

Date of Test 10-10-2025
 Gauge Length 2 inches
 Description Strip Tensile Test Report

Sr. No.	Designation	Size of Strip	X Section Area	Yield Load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(Inch)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(inch)		
1	Plate	29.30 x 4.00	117.20	4840	6370	405.1	533.2	0.7	35.0	-
2	Plate	29.00 x 4.90	142.10	6270	8100	432.9	559.2	0.6	30.0	-
3	Plate	29.40 x 5.80	170.52	10090	13810	580.5	794.5	0.6	30.0	-
4	Plate	29.40 x 7.80	229.32	8150	9730	348.6	416.2	0.7	35.0	-
5	Purlin	29.10 x 2.00	58.20	1990	2600	335.4	438.2	0.6	30.0	-
6	Plate	29.30 x 20.60	603.58	27830	35040	452.3	569.5	0.8	40.0	-

Note: Only 6 Samples for Tensile and 0 Samples for Bend test

Bend Test										

Test Performed and Verified by:

To,
 Mr. Wei Zhihao (Project Manager)
 CRBC-HBSZ (JV)
 CRBC-HBSZ (JV)- Restoration and Up-gradation of Sukkur arrage-SBIP/S1
 (Heat No. 4AD4533) (S355JR+N)

Reference # CED/TFL 7624 (Dr. Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 09-10-2025
 Dated: 09-10-2025

Tension Test Report (Page-1/1)

Date of Test 10-10-2025
 Gauge Length 2 inches
 Description Strip Tensile Test Report

Sr. No.	Designation	Size of Strip	X Section Area	Yield Load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(Inch)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(inch)		
1	SBIP-S1-P-10	40.10 x 10.20	409.02	16940	20230	406.3	485.2	0.9	45.0	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

Note: Only 1 Samples for Tensile and 0 Samples for Bend test

Bend Test										

Test Performed and Verified by: