



**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
Resident Engineer (JCP Wahga)  
NESPAK  
Expansion of Joint Check Post Wahga, Lahore.

Reference # CED/TFL **5724** (Dr. Usman Akmal)  
Reference of the request letter # 4749/031/YK/01/62

Dated: 26-09-2024  
Dated: 23-09-2024

**Tension Test Report** (Page -1/1)

Date of Test 08-10-2024  
Gauge length 8 inches  
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.377	3	0.376	0.11	0.111	3200	4800	64200	63570	96200	95400	1.10	13.8	Aziz Steel
2	0.375	3	0.375	0.11	0.110	3100	4700	62200	61940	94200	94000	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

Witness by Sohail Sulehri (LT NESPAK)

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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- 2- The above results pertain to sample /samples supplied to this laboratory.
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To,

Construction Manager  
Barqaab Consulting Services (Private) Limited.  
Procurement of Plant, Design, Supply, Installation, Testing and Commissioning of  
500/220/132kV Lahore North Substation & Extension Works at 500/220/132kV Nokhar  
Substation Under ADB Laon-3677-Pak Second Power Transmission Enhancement  
Investment Program Trench-III.

Reference # CED/TFL **5779** (Dr. Asad Ali)

Dated: 04-10-2024

Reference of the request letter # 500kV/SS/N-LHR/BQB/310

Dated: 24-09-2024

**Tension Test Report** (Page -1/1)

Date of Test 08-10-2024

Gauge length 8 inches

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

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks	
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual				
1	0.378	3	0.376	0.11	0.111	3360	4740	67400	66660	95000	94100	1.20	15.0	Kamran Steel	
2	0.379	3	0.377	0.11	0.111	3410	4810	68400	67500	96400	95200	1.20	15.0		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Note: only two samples for tensile and one sample for bend test</b>															
Bend Test															
#3 Bar Bend Test Through 180° is Satisfactory															

Witness by Sajaad HUSSAIN (Sub Divisional Engineer. EHVI, NTDC) & M Farhan (Sr. Engr.  
(Civil), Barqaab)

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**UET Lahore, Pakistan.**

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To,

Director Projects  
Sheikhoo Sugar Mills (Steel Division)  
Sheikhoo Steel  
Anwar Abad Kot Addu, Muzaffargarh

Reference # CED/TFL **5783** (Dr. Usman Akmal)  
Reference of the request letter # Nil

Dated: 07-10-2024  
Dated: 06-10-2024

**Tension Test Report** (Page -1/1)

Date of Test 08-10-2024  
Gauge length 8 inches  
Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.367	3	0.371	0.11	0.108	3400	4800	68200	69510	96200	98200	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one sample for tensile test</b>														
Bend Test														

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
Resident Engineer  
NESPAK  
Renovation of Gaddafi Stadium Lahore Project.

Reference # CED/TFL **5784** (Dr. Usman Akmal)  
Reference of the request letter # RE/4521/04/MH/22

Dated: 07-10-2024  
Dated: 07-10-2024

**Tension Test Report** (Page -1/1)

Date of Test 08-10-2024  
Gauge length 8 inches  
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.370	10	9.45	0.12	0.109	3900	5000	71650	79110	91858	101500	0.70	8.8	Mughal Steel
2	0.370	10	9.45	0.12	0.109	3900	5000	71650	79130	91858	101500	0.70	8.8	
3	4.149	32	31.65	1.25	1.219	38400	53600	67725	69410	94533	96900	1.50	18.8	
4	4.185	32	31.79	1.25	1.230	38200	53800	67373	68450	94886	96400	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only four samples for tensile and two samples for bend test</b>														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
32mm Dia Bar Bend Test Through 180° is Satisfactory														

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To,  
Project Manager  
Jilani Poly Industries (Pvt) Ltd.  
Construction of Jilani Poly-2 Trap Extension Sheikhpura.

Reference # CED/TFL **5785** (Dr. Usman Akmal)  
Reference of the request letter # JP-2/UET/2024/S-004

Dated: 07-10-2024  
Dated: 07-10-2024

**Tension Test Report** (Page -1/1)

Date of Test 08-10-2024  
Gauge length 8 inches  
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.392	3	0.383	0.11	0.115	3500	5400	70200	66990	108200	103400	1.00	12.5	SJ Steel
2	0.373	3	0.374	0.11	0.110	3400	5000	68200	68320	100200	100500	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,  
 Resident Engineer (JCP Wahga)  
 NESPAK  
 Expansion of Joint Check Post Wahga, Lahore.

Reference # CED/TFL **5786** (Dr. Usman Akmal)  
 Reference of the request letter # 4749/031/YK/01/75

Dated: 07-10-2024  
 Dated: 07-10-2024

**Tension Test Report** (Page -1/1)

Date of Test 08-10-2024  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.375	3	0.374	0.11	0.110	3400	5000	68200	68060	100200	100100	1.50	18.8	Aziz Steel
2	0.375	3	0.375	0.11	0.110	3100	5000	62200	62020	100200	100100	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,

CEO  
M.R. Construction Company  
Civil Works, Erection, Stringing, Testing & Commissioning of 220kV Double Circuit /  
Single Circuit Mangla-Ghakkar-KSK T/Line for its Rerouting / Upraising Between  
Exiting Tower No. 70 to 71.

Reference # CED/TFL **5788** (Dr. Asad Ali)

Dated: 08-10-2024

Reference of the request letter # MRCC/XEN/EHV-I/NTDC/RWP/24013-17 Dated: 07-10-2024

**Tension Test Report** (Page -1/1)

Date of Test 08-10-2024

Gauge length 8 inches

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

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.382	3	0.378	0.11	0.112	4400	5120	88200	86290	102600	100400	1.00	12.5	Amreli Steel
2	0.386	3	0.380	0.11	0.113	4380	5100	87800	85150	102200	99200	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratoires**  
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