



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

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 **4985** (Dr. Nauman Khurram)

Dated: 26-04-2024

Reference of the request letter # 500kV/SS/N-LHR/BQB/247

Dated: 20-04-2024

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

Date of Test 09-05-2024

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	0.376	3	0.375	0.11	0.111	4080	5320	81800	81330	106600	106100	1.00	12.5	Kamran Steel
2	0.376	3	0.375	0.11	0.111	4050	5300	81200	80730	106200	105700	0.90	11.3	
3	0.376	3	0.375	0.11	0.110	3870	5150	77600	77270	103200	102900	0.90	11.3	
4	0.377	3	0.376	0.11	0.111	4590	5670	92000	91210	113700	112700	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only four samples for tensile and two samples for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

Witness by Jamshad Ali (NTDC) & M Farhan (Sr. Engr. (Civil), Barqaab)

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

Note:

- 1- You can See your reports On Internet in the following web site  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports)
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To,

Material Engineer  
NESPAK

Infrastructure Development of Quaid-E-Azam Business Park on Motorway M-2, District Sheikhupura – Construction of Priority Works.

Reference # CED/TFL **5021** (Dr. M Rizwan Riaz)  
Reference of the request letter # 4163/11/ZA/01/29

Dated: 03-05-2024  
Dated: 25-04-2024

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

Date of Test 09-05-2024

Gauge length 8 inches

Description Plain Dowel Bar Tensile and Bend Test

Sr. No.	Weight (kg/m)	Diameter/ size		Area (mm <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (MPa) Actual	Ultimate Stress (MPa) Actual	Elongation (inch)	% Elongation	Remarks
		Nominal (mm)	Actual (mm)	Nominal	Actual							
1	8.858	38	37.90	-----	1128.4	58000	86300	504	750	2.30	28.8	
2	8.876	38	37.94	-----	1130.7	58400	86300	507	749	2.20	27.5	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>												
Bend Test												
38mm Dia Bar Bend Test Through 180° is Satisfactory												

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

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Ref: CED/TFL/05/5022

Dated: 06-05-2024

Date of Test: 09-05-2024

To,

**Chief Resident Engineer**  
**Osmani & Company (Pvt) Ltd.**  
**AIIC, Faisalabad**

(Construction of Sewer & Water Supply Networks at Main Arterial, Chiniot Sahianwala and Sem Nala Roads Including Balance Work at Mian Arterial Road and Re-Routing of Water Course due to Industrial Units in Allama Iqbal Industrial City, Near Sahianwala Interchange M-4 Motorway, Faisalabad)

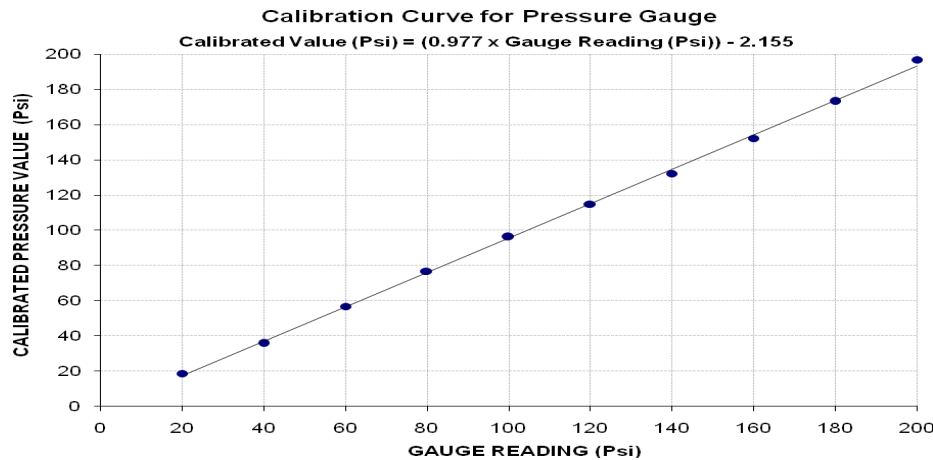
Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/05/5022) (Page # 1/1)

Reference to your Letter No. CRE/AIIC-06/Lab/789, Dated: 30/04/2024 on the subject cited above. One Pressure Gauge (TEL TRUE) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 250 (Psi)**  
**Calibrated Range : Zero - 200 (Psi)**

Pressure Gauge Reading (Psi)	20	40	60	80	100	120	140	160	180	200
Calibrated Load (kg)	260	500	790	1070	1340	1600	1840	2120	2410	2740
Calibrated Pressure (Psi)	19	36	57	77	96	115	132	152	173	197

The Ram Area for Calibration = 198 cm<sup>2</sup>



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

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To,

Resident Engineer  
NESPAK

Construction of Flyover at Shahdara Morr & Construction of Bridge over Ravi River,  
Lahore. (Aziz Steel)

Reference # CED/TFL **5024** (Dr. M Rizwan Riaz)

Dated: 06-05-2024

Reference of the request letter # 4537/03/MSA/09/224

Dated: 29-04-2024

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

Date of Test 09-05-2024

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	Heat. No.
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	4.216	10	1.256	1.27	1.239	34600	57000	60100	61540	99000	101400	1.40	17.5	656
2	4.257	10	1.262	1.27	1.251	34600	59000	60100	60950	102400	104000	1.40	17.5	658
3	4.213	10	1.256	1.27	1.238	38600	56000	67000	68700	97200	99700	1.50	18.8	659
4	4.278	10	1.265	1.27	1.257	38800	55400	67400	68010	96200	97200	1.30	16.3	660
5	4.243	10	1.260	1.27	1.247	34700	57200	60300	61330	99300	101100	1.30	16.3	661
6	5.290	11	1.407	1.56	1.555	48800	69800	69000	69170	98700	99000	1.50	18.8	662

**Note: only six sample for tensile and six samples for bend test**

Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#11 Bar Bend Test Through 180° is Satisfactory														

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

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**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
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To,

Resident Engineer  
 NESPAK  
 Construction of Flyover at Shahdara Morr & Construction of Bridge over Ravi River,  
 Lahore. (Aziz Steel)

Reference # CED/TFL **5024** (Dr. M Rizwan Riaz)  
 Reference of the request letter # 4537/03/MSA/09/226

Dated: 06-05-2024  
 Dated: 02-05-2024

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

Date of Test 09-05-2024  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in <sup>2</sup> )		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Heat. No.
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	4.310	10	1.270	1.27	1.267	39800	56800	69100	69250	98600	98900	1.30	16.3	146
2	4.244	10	1.260	1.27	1.247	39000	57000	67700	68910	99000	100800	1.30	16.3	147
3	4.219	10	1.257	1.27	1.240	38000	56400	66000	67550	97900	100300	1.40	17.5	657
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Note: only three samples for tensile and three samples for bend test</b>														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														

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

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To,  
 Project Manager,  
 HIGH-Q Constructions.  
 Construction of HIGH-Q Mall at 3-A, GulbergII, Lahore.

Reference # CED/TFL **5033** (Dr. M Rizwan Riaz)  
 Reference of the request letter # QC/HQ/CIVIL/207

Dated: 07-05-2024  
 Dated: 07-05-2024

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

Date of Test 09-05-2024  
 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	0.416	10	10.02	0.12	0.122	4330	5680	79549	78070	104351	102500	1.30	16.3	
2	0.418	10	10.04	0.12	0.123	4300	5710	78998	77200	104902	102600	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm Bar Bend Test Through 180° is Satisfactory														

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

Note:

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To,

Chief Resident Engineer  
 Osmani & Comany (Pvt) Ltd.  
 Balance / Repair Work of Boundary Wall at Different locations along Periphery M-3  
 Industrial City, Near Sahinwala Interchange M-4 Motorway, Faisalabad; Procurement  
 No. FIC-057.

Reference # CED/TFL **5036** (Dr. M Rizwan Riaz)

Dated: 07-05-2024

Reference of the request letter # CRE/M3IC/FIC-057/FIEDMC/2204/15

Dated: 22-04-2024

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

Date of Test 09-05-2024

Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in <sup>2</sup> )		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.378	3	0.376	0.11	0.111	3720	4660	74600	73850	93400	92600	1.10	13.8	Mughal Steel
2	0.371	3	0.372	0.11	0.109	3740	4660	75000	75690	93400	94400	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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**  
**UET Lahore, Pakistan.**

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**Pakistan. Ph: 92-42-99029202**

To,

Resident Engineer  
 ESS-I-AAR

Construction of Flyover at Nadirabad Phatak to Industrial Estate, Multan. (Group-I =  
 Construction of of Flyover Bridge 1 & 2. Tehsil and District Multan. Group-II =  
 Construction of Flyover Bridge 3 & Approaches.)

Reference # CED/TFL **5037** (Dr. M Rizwan Riaz)  
 Reference of the request letter # 2724

Dated: 07-05-2024  
 Dated: 02-05-2024

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

Date of Test 09-05-2023

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	3540	4710	71000	70190	94400	93400	1.10	13.8	
2	0.376	3	0.375	0.11	0.111	3620	4660	72600	72120	93400	92900	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														

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

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To,

Major  
Garrison Engineer (Army)  
Multan  
(CA No. ENC-A-15/2024 - Const of 8 x D Type Flats (G+3) HQ SC at Multan.)

Reference # CED/TFL **5038** (Dr. M Rizwan Riaz)  
Reference of the request letter # 6325/12/E-6

Dated: 07-05-2024  
Dated: 30-04-2024

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

Date of Test 09-05-2023  
Gauge length 8 inches  
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		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	0.377	3/8	0.376	0.11	0.111	2980	4080	59800	59290	81800	81200	1.70	21.3	
2	0.373	3/8	0.374	0.11	0.110	2930	4050	58800	58870	81200	81400	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

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

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To,

XEN

GE (Army)-II, Okara

CA No. CEA-CZ-28/2024 - Const of 8 x Sldr Flat (G+3) 11 NLI Regt, Oka Cantt.

CA No. CEA-CZ-06/2024 - Const of 1 x B Veh Shed 106 Med Arty, Oka Cantt.

CA No. CEA-CZ-07/2024 - Const of 1 x A Veh Shed 15 (SP) Arty, Oka Cantt.

CA No. CEA-CZ-28/2024 - Const of 1 x A Veh Shed 19 FF, Oka Cantt.

Reference # CED/TFL **5039** (Dr. M Rizwan Riaz)

Dated: 07-05-2024

Reference of the request letter # 6000/Gen/23/E-6

Dated: 15-02-2024

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

Date of Test 09-05-2023

Gauge length 8 inches

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

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Grade
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.378	3	0.376	0.11	0.111	3080	4250	61800	61170	85200	84400	1.60	20.0	40
2	0.379	3	0.376	0.11	0.111	3080	4300	61800	61000	86200	85200	1.40	17.5	
3	0.377	3	0.376	0.11	0.111	3360	4660	67400	66830	93400	92700	1.30	16.3	60
4	0.375	3	0.375	0.11	0.110	3280	4610	65800	65600	92400	92200	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only four samples for tensile and two samples for bend test</b>														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

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

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**Pakistan. Ph: 92-42-99029202**

To,  
 Sub Divisional Officer  
 Building Sub Division No. 16  
 Lahore  
 (Construction of Smart Police Station Shafiqabad Lahore.)

Reference # CED/TFL **5045** (Dr. M Rizwan Riaz)  
 Reference of the request letter # 336

Dated: 07-05-2024  
 Dated: 14-02-2024

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

Date of Test 09-05-2023  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		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	0.366	3/8	0.370	0.11	0.107	3890	4840	78000	79770	97000	99300	1.10	13.8	
2	0.366	3/8	0.370	0.11	0.107	4030	4960	80800	82670	99400	101800	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

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

Note:

- 1- You can See your reports On Internet in the following web site  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports)
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,  
Civil Engineer  
National Management Foundation  
"Yousaf Shirazi Complex" at Lums Campus

Reference # CED/TFL **5047** (Dr. M Rizwan Riaz)  
Reference of the request letter # NMF/GM/C-39/858

Dated: 08-05-2024  
Dated: 07-05-2024

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

Date of Test 09-05-2023  
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	0.367	10	9.42	0.12	0.108	3690	4660	67791	75290	85612	95100	1.10	13.8	
2	0.366	10	9.40	0.12	0.108	3490	4590	64117	71480	84326	94100	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm Bar Bend Test Through 180° is Satisfactory														

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

Note:

- 1- You can See your reports On Internet in the following web site  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports)
- 2- The above results pertain to sample /samples supplied to this laboratory.
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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Assistant Project Engineer  
 Defence Housing Authority, Gujranwala  
 “Const of 5 Marla Villas (Block B)”

Reference # CED/TFL **5048** (Dr. M Rizwan Riaz)  
 Reference of the request letter # 111/3/AD Bldg/Lab/1309

Dated: 08-05-2024  
 Dated: 03-05-2024

**Tension Test Report** (Page -1/2)

Date of Test 09-05-2024  
 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	0.373	3	0.373	0.11	0.110	3570	5250	71600	71850	105200	105700	1.20	15.0	SJ Steel
2	0.371	3	0.373	0.11	0.109	3570	5270	71600	72190	105600	106600	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														

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

Note:

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- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,

Assistant Project Engineer  
Defence Housing Authority, Gujranwala  
“Const of 5 Marla Villas (Block B)”

Reference # CED/TFL **5048** (Dr. M Rizwan Riaz)  
Reference of the request letter # 111/3/AD Bldg/Lab/1310

Dated: 08-05-2024  
Dated: 03-05-2024

**Tension Test Report** (Page -2/2)

Date of Test 09-05-2024  
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	0.371	3	0.373	0.11	0.109	3330	4760	66800	67330	95400	96300	1.30	16.3	SJ Steel
2	0.371	3	0.372	0.11	0.109	3470	5170	69600	70190	103600	104600	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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**  
**UET Lahore, Pakistan.**

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