



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

Ref: CED/TFL/11/37431  
2021

Dated: 23-11-

Dated: 03-12-2021

To  
M/S Faisalabad Oil Refinery  
Madina Steel Mill Chiniot

Subject:- **CALIBRATION OF UNIVERSAL TESTING MACHINE OF 2000kN**  
**(MARK: CED/TFL/11/37431)**

Reference to your letter No. Nil, dated: 23/11/2021 on the subject cited above. One Universal Testing Machine (Model: WAW-2000E) has been calibrated by using standard calibration device. The results are tabulated as under:

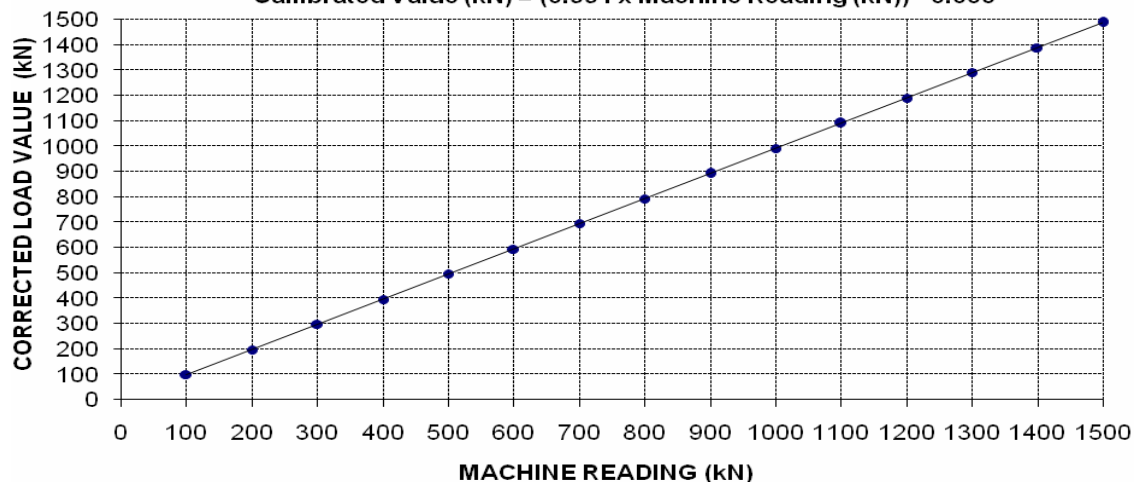
**Total Range : Zero - 2000 (kN)**

**Calibrated Rang : Zero - 1500 (kN)**

Machine Reading (kN)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
Corrected Load Value (kN)	100	197	298	396	496	595	694	794	892	990	1090	1189	1291	1388	1487

**CALIBRATION CURVE FOR UNIVERSAL TESTING MACHINE**

**Callibrated Value (kN) = (0.991 x Machine Reading (kN)) - 0.056**



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

Note:

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To,  
 CRE TPBC Panjbnad Barrage  
 Newly Included Buildings of Panjnad Barrage

Reference # CED/TFL **37451** (Engr. Amina Rajput)  
 Reference of the request letter # TPBC/CRE/2021/TECH/1601

Dated: 02-12-2021

Dated: 01-12-2021

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

Date of Test 03-12-2021  
 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	0.383	3	0.379	0.11	0.113	4000	5100	80200	78290	102200	99900	1.10	13.8	
2	0.390	3	0.382	0.11	0.115	4100	5200	82200	78860	104200	100100	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one samples 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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To,  
M/S Building Standards  
Lahore  
(Construction of Residential Building in Gulberg, Lahore)

Reference # CED/TFL **37452** (Engr. Amina Rajput)  
Reference of the request letter # GT/LTR/211202-132

Dated: 02-12-2021  
Dated: 02-12-2021

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

Date of Test 03-12-2021  
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	0.387	3	0.381	0.11	0.114	3600	4700	72200	69760	94200	91100	1.20	15.0	
2	0.368	3	0.371	0.11	0.108	3700	4800	74200	75430	96200	97900	0.90	11.3	
3	0.397	3	0.386	0.11	0.117	3900	5000	78200	73610	100200	94400	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only three samples for tensile test</b>														
Bend Test														

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

Note:

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To,  
 Assistant Project Coordinator  
 Al – Hussain Trsders – Al Khurram Associates (Jv)  
 Dismantling of Existing 4x37 MVAR Reactor and Civil Works Assembly, Erection, Testing &  
 Commission of 4 x 37 MVAR Sunt Reactor with 500kV Circuit Breakers at 500 kV Grid Station  
 Rawat.  
 Reference # CED/TFL **37453** (Engr. Amina Rajput) Dated: 02-12-2021  
 Reference of the request letter # AHT-AKA/JV/PD-ISD-04/5071-73 Dated: 02-12-2021

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

Date of Test 03-12-2021  
 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	0.387	3	0.380	0.11	0.114	3400	5300	68200	65930	106200	102800	1.00	12.5	Kohsar Steel
2	0.384	3	0.379	0.11	0.113	3200	4900	64200	62540	98200	95800	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one samples 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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To,  
 C.E.O.  
 MH & Brothers Builders & Developers  
 8 x D Type Flats at Lhr Cantt

Reference # CED/TFL **37455** (Engr. Amina Rajput)  
 Reference of the request letter # MH/10/02/Org

Dated: 02-12-2021  
 Dated: 01-12-2021

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

Date of Test 03-12-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile 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	0.367	3/8	0.371	0.11	0.108	3600	5500	72200	73490	110200	112300	1.20	15.0	60
2	0.374	3/8	0.374	0.11	0.110	3000	4500	60200	60120	90200	90200	1.40	17.5	40
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Note: only two samples for tensile test</b>														
Bend Test														

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

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To,  
 Deputy Director  
 PHATA  
 Sub Region Okara  
 (Construction of Housing Units 03/05 Marla (Single Bed and Double Bed) in ADS-II Renala  
 Khurd District Okara under Naya Pakistan Housing Program.)

Reference # CED/TFL **37456** (Engr. Amina Rajput)  
 Reference of the request letter # 768

Dated: 02-12-2021  
 Dated: 30-11-2021

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

Date of Test 03-12-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in <sup>2</sup> )		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.377	3/8	0.376	0.11	0.111	3900	5000	78200	77580	100200	99500	0.90	11.3	
2	0.379	3/8	0.376	0.11	0.111	3900	5300	78200	77230	106200	105000	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile test</b>														
Bend Test														

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To,  
 M/S REDO Engineering & Construction (Private) Limited  
 Johar Town, Lahore

Reference # CED/TFL 37457 (Engr. Amina Rajput)  
 Reference of the request letter # Nil

Dated: 02-12-2021

Dated: 02-12-2021

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

Date of Test 03-12-2021  
 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	0.339	3	0.356	0.11	0.100	2500	3700	50100	55370	74200	82000	1.10	13.8	
2	0.337	3	0.355	0.11	0.099	2500	3700	50100	55630	74200	82400	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one samples for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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