



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/12/35702
2020

Dated: 03-12-

Dated: 05-12-2020

To
M/S Faisalabad Oil Refinery
Madina Steel Mill Chiniot

Subject:- CALIBRATION OF UNIVERSAL TESTING MACHINE OF 2000kN
(MARK: CED/TFL/12/35702)

Reference to your letter No. Nil, dated: 24/11/2020 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:

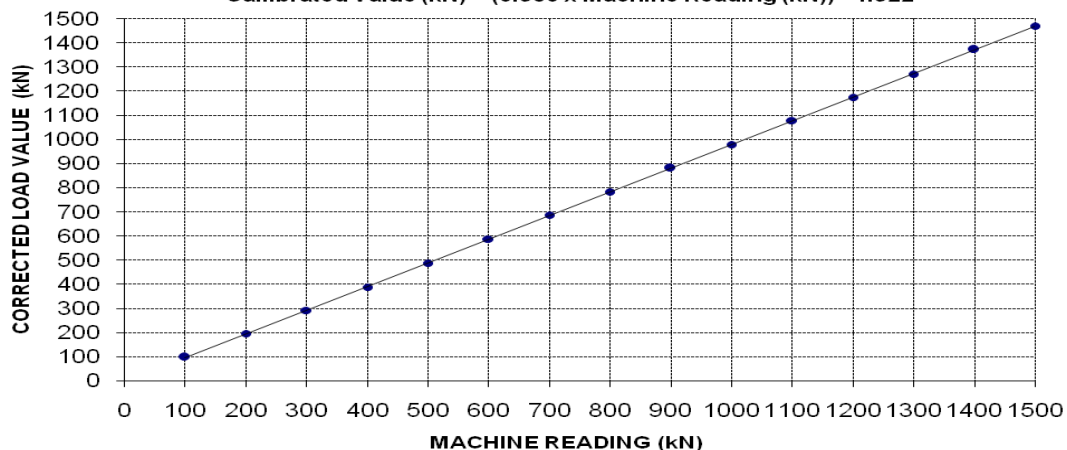
Total Range : Zero - 2000 (kN)

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)	97	195	292	388	488	586	686	782	881	978	1077	1173	1270	1371	1469

CALIBRATION CURVE FOR UNIVERSAL TESTING MACHINE

Callibrated Value (kN) = (0.980 × Machine Reading (kN)) - 1.922



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To,
M/S Ali Zaman (Pvt) Ltd
Gulberg 5, Lahore

Reference # CED/TFL **35705** (Dr. Qasim Khan)
Reference of the request letter # azl-460-2020

Dated: 04-12-2020

Dated: 03-12-2020

Tension Test Report (Page – 1/1)

Date of Test 07-12-2020
Gauge length 2 inches
Description M.S Sheet Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	2	38.50x2.00	77.00	2000	2600	254.81	331.25	0.60	30.00	
2		40.10x2.00	80.20	2100	2700	256.87	330.26	0.50	25.00	
3	3	38.50x2.90	111.65	4600	5400	404.17	474.46	0.50	25.00	
4		39.20x2.90	113.68	4600	5500	396.96	474.62	0.60	30.00	
5	3.25	40.00x3.25	130.00	2600	3800	196.20	286.75	1.00	50.00	
6		39.70x3.25	129.03	2500	3700	190.08	281.32	1.10	55.00	
Only Six Samples for Tensile Test										
Bend Test										

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To,
 Project Manager
 Nazir & Sons Trust
 Nazir & Sons Trust Building Construction Project

Reference # CED/TFL **35706** (Dr. Qasim Khan)
 Reference of the request letter # NST/MT/SR/UE/003

Dated: 04-12-2020
 Dated: 04-12-2020

Tension Test Report (Page -1/1)

Date of Test 07-12-2020
 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 ²)		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	0.402	3	0.388	0.11	0.118	2900	4300	58200	54130	86200	80300	1.10	13.8	Koh-e-Noor Steel	
2	0.386	3	0.380	0.11	0.113	2800	4200	56200	54380	84200	81600	1.20	15.0		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Note: only two samples for tensile and one sample for bend test															
Bend Test															
#3 Bar Bend Test Through 180° is Satisfactory															

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To,
M/S CGGC – DESCON Joint Venture
Construction of Mohmand Dam Hydropower Project - Contract no. ICB MDHP-01,
Construction of Civil Works Including Design, Supply and Installation of Electric and
Mechanical Works and Hydraulic Steel Structures

Reference # CED/TFL **35707** (Dr. Qasim Khan)
Reference of the request letter # CDJV-MDHP-Lot-01-024

Dated: 04-12-2020
Dated: 04-12-2020

Tension Test Report (Page -1/1)

Date of Test 07-12-2020
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 ²)		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	0.368	10	9.43	0.12	0.108	3000	4400	55115	61120	80835	89700	1.40	17.5	C/R-219-000-2011202-1
2	0.369	10	9.44	0.12	0.108	2900	4400	53278	58940	80835	89500	1.50	18.8	C/R-219-000-2011202-2
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory (C/R-219-000-2011202-3)														

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To,
 Assistant Resident Engineer
 Asian Consulting Engineers Pvt. Ltd
 Rehabilitation/(M&R) Projects under Punjab Cities Program (PCP) Package – 2 Kamalia

Reference # CED/TFL **35708** (Dr. Qasim Khan) Dated: 04-12-2020
 Reference of the request letter # AsCE-PMDFC-KAM-ARE-010 Dated: 04-12-2020

Tension Test Report (Page -1/1)

Date of Test 07-12-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in ²)		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	0.088	1.5	0.181	-----	0.026	800	960	-----	68500	-----	82200	1.10	13.8	Model Steel
2	0.085	1.5	0.179	-----	0.025	800	960	-----	70330	-----	84400	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#1.5 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Resident Engineer
 Metroplan - Asian Jv
 Resident Construction Supervision for Establishment of 200 Bedded Mother & Child Hospital
 and Nursing College, District Mianwali

Reference # CED/TFL **35709** (Dr. Qasim Khan) Dated: 04-12-2020
 Reference of the request letter # Metroplan Asian Jv-Nexus-MMCH-RE-561 Dated: 11-11-2020

Tension Test Report (Page -1/1)

Date of Test 07-12-2020
 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 ²)		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	3300	4900	66200	67350	98200	100000	1.20	15.0	SJ Steel
2	0.374	3	0.374	0.11	0.110	3400	5000	68200	68190	100200	100300	1.10	13.8	
3	0.370	3	0.372	0.11	0.109	3400	4900	68200	68880	98200	99300	1.30	16.3	
4	0.376	3	0.375	0.11	0.110	3300	5000	66200	65870	100200	99900	1.40	17.5	
5	0.368	3	0.371	0.11	0.108	3300	4900	66200	67300	98200	100000	1.20	15.0	
6	0.367	3	0.371	0.11	0.108	3300	4900	66200	67430	98200	100200	1.30	16.3	
Note: only six samples for tensile and three samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Resident Engineer
 Metroplan - Asian Jv
 Resident Construction Supervision for Establishment of 200 Bedded Mother & Child Hospital
 and Nursing College, District Mianwali

Reference # CED/TFL **35710** (Dr. Qasim Khan) Dated: 04-12-2020
 Reference of the request letter # Metroplan Asian Jv-Nexus-MMCH-RE-550 Dated: 06-11-2020

Tension Test Report (Page -1/1)

Date of Test 07-12-2020
 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 ²)		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	0.372	3	0.373	0.11	0.109	3300	4900	66200	66510	98200	98800	1.20	15.0	SJ Steel
2	0.367	3	0.371	0.11	0.108	3300	4900	66200	67360	98200	100100	1.20	15.0	
3	0.373	3	0.374	0.11	0.110	3400	5000	68200	68400	100200	100600	1.10	13.8	
4	0.371	3	0.373	0.11	0.109	3400	5000	68200	68630	100200	101000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,
 S.E WASO
 Pakistan Atomic Energy Commission

Reference # CED/TFL **35711** (Dr. Qasim Khan)
 Reference of the request letter # Nil

Dated: 04-12-2020
 Dated: 03-12-2020

Tension Test Report (Page -1/1)

Date of Test 07-12-2020
 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 ²)		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	0.415	3	0.394	0.11	0.122	4400	5600	88200	79560	112300	101300	1.00	12.5	
2	0.372	3	0.373	0.11	0.109	4300	5300	86200	86760	106200	107000	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,
 Project Manager
 Dupak Properaties (Pvt) Ltd
 Defence view Apartments at Shanghai Road, Lahore

Reference # CED/TFL **35715** (Dr. Qasim Khan)
 Reference of the request letter # Dupak/DVA/055

Dated: 07-12-2020
 Dated: 07-12-2020

Tension Test Report (Page -1/1)

Date of Test 07-12-2020
 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 ²)		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	0.374	0.11	0.110	3400	4500	68200	68270	90200	90400	0.90	11.3	
2	0.370	3	0.372	0.11	0.109	3500	4600	70200	71030	92200	93400	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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