



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

To,  
M/S New Mujahid ALCON  
Lahore  
(The QUBE Lahore)

Reference # CED/TFL **35721** (Dr. Ali Ahmed)  
Reference of the request letter # Nil

Dated: 08-12-2020  
Dated: 01-12-2020

**Tension Test Report** (Page – 1/1)

Date of Test 23-12-2020  
Gauge length 2 inches  
Description Welded Plate Tensile and Bend Test

Sr. No.	Designation	Size of Strip	X Section Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm <sup>2</sup> )	(kg)	(MPa)	(inch)		
1	8	27.40x8.00	219.20	10500	469.91	0.65	32.50	Failure at the location other than weld
2		27.40x8.00	219.20	10600	474.39	0.70	35.00	Failure at the location other than weld
	10	26.80x10.00	268.00	13600	497.82	0.70	35.00	Failure at the location other than weld
		26.80x10.00	268.00	13400	490.50	0.65	32.50	Failure at the location other than weld
<b>Only four samples for tensile and two samples for bend test</b>								
<b>Bend Test</b>								
Strip taken from Welded Plate (8mm) Bend Test Through 180° is Satisfactory								
Strip taken from Welded Plate (10mm) 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)
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**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
Resident Engineer / Team Leader  
Prime Engineering Consultancy  
Kallurkot Bridge Project  
Construction of 4 Lane Bridge over River Indus Connecting Kallur Kot with D.I Khan

Reference # CED/TFL **35783** (Dr. Ali Ahmed)  
Reference of the request letter # KK-DIK-BR-PJ/2020/214

Dated: 18-12-2020  
Dated: 17-12-2020

**Tension Test Report** (Page – 1/3)

Date of Test 23-12-2020  
Gauge length 640 mm  
Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	783.0	18200	178.54	19900	195.22	199	>3.50	xx
2	12.70 (1/2")	775.0	780.0	17600	172.66	20000	196.20	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only two samples for Test</b>										

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

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

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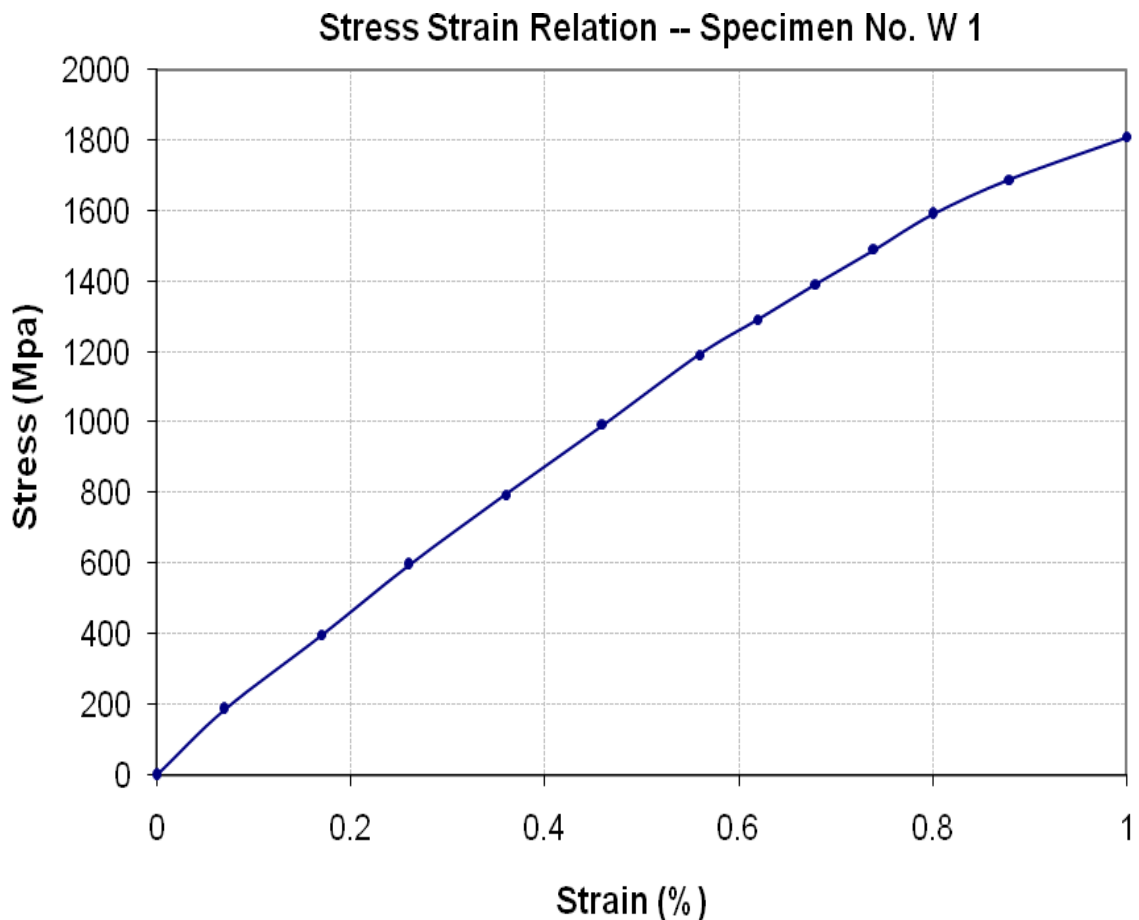
**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
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To,  
Resident Engineer / Team Leader  
Prime Engineering Consultancy  
Kallurkot Bridge Project  
Construction of 4 Lane Bridge over River Indus Connecting Kallur Kot with D.I Khan

Reference # CED/TFL **35783** (Dr. Ali Ahmed)  
Reference of the request letter # KK-DIK-BR-PJ/2020/214

Dated: 18-12-2020  
Dated: 17-12-2020

**Graph** (Page – 2/3)



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

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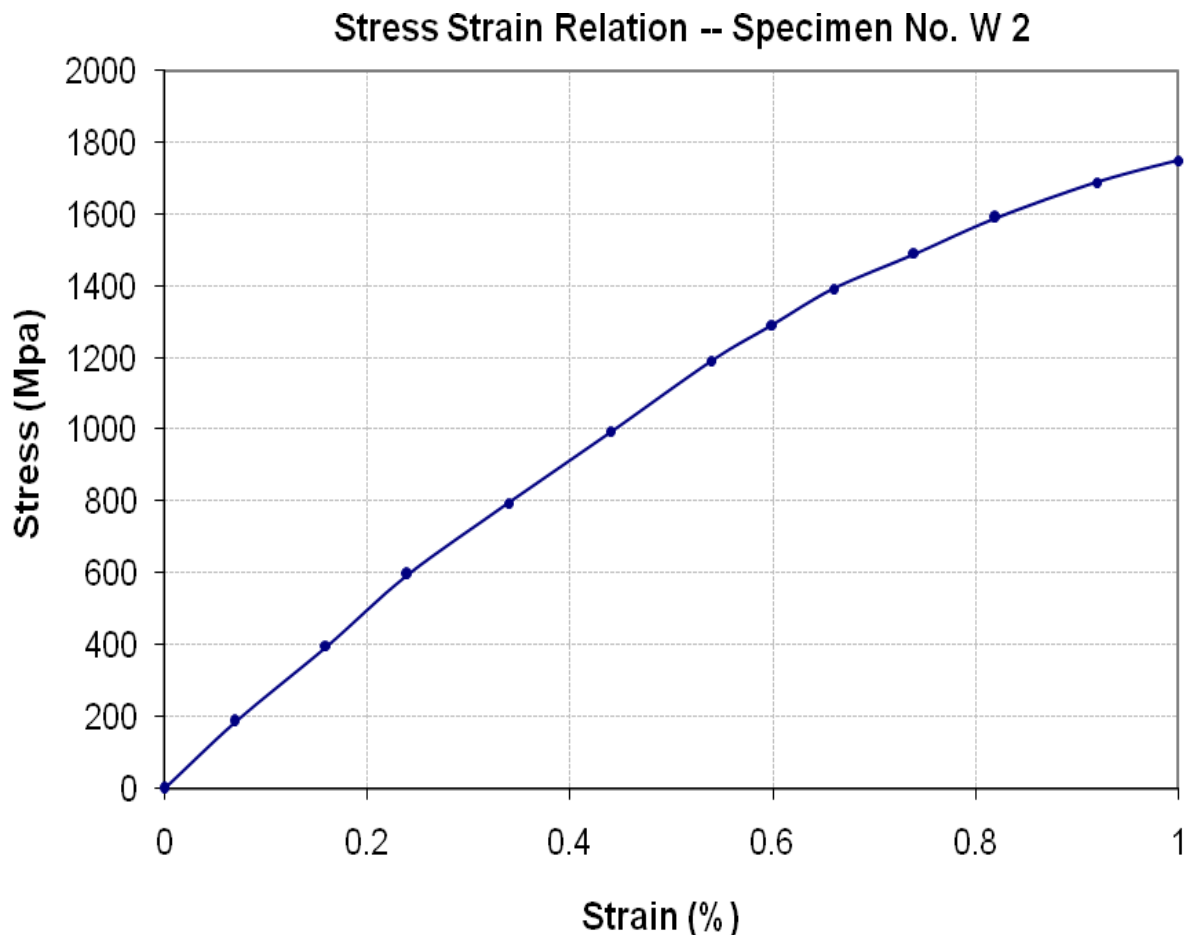
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**Test Floor Laboratory**  
**Department of Civil Engineering**  
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To,  
Resident Engineer / Team Leader  
Prime Engineering Consultancy  
Kallurkot Bridge Project  
Construction of 4 Lane Bridge over River Indus Connecting Kallur Kot with D.I Khan

Reference # CED/TFL **35783** (Dr. Ali Ahmed)  
Reference of the request letter # KK-DIK-BR-PJ/2020/214

Dated: 18-12-2020  
Dated: 17-12-2020

**Graph** (Page – 3/3)



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

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

Ref: CED/TFL/12/35791

Dated: 18-12-2020

Dated of Test: 23-12-2020

**To**  
**Assistant Resident Engineer**  
**Asian Consulting Engineers Pvt. Ltd**  
**Rehabilitation of Municipal Services Infra Structures (M&R) PCP-Package -2**  
**PMDFC Group A**

**Subject: TESTING OF R.C.C. PIPE [ASTM-C76 - 08a] (Page -1/2)**

Reference to your letter No. AsCE-PMDFC-OK-ARE-015, dated 17.12.2020

on the subject cited above. One R.C.C. Pipe as received by us has been tested. The results are tabulated as under.

<b>Sr. No</b>	<b>Nominal Size</b>	<b>Total Length</b>	<b>Loaded Length</b>	<b>External Diameter</b>	<b>Internal Diameter</b>	<b>Wall Thickness</b>	<b>Proof load</b>	<b>Ultimate Load</b>	<b>Proof Stress</b>	<b>Ultimate Stress</b>
	<b>(inch)</b>	<b>(foot)</b>	<b>(foot)</b>	<b>(foot)</b>	<b>(foot)</b>	<b>(inch)</b>	<b>(kg)</b>	<b>(kg)</b>	<b>Pound/Linear foot/foot</b>	<b>Pound/Linear foot/foot</b>
<b>1</b>	<b>12</b>	<b>7.80</b>	<b>7.28</b>	<b>1.35</b>	<b>1.02</b>	<b>2.01</b>	<b>9400</b>	<b>12100</b>	<b>2799</b>	<b>3603</b>

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

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**Test Floor Laboratory**  
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Ref: CED/TFL/12/35791

Dated: 18-12-2020

Dated of Test: 23-12-2020

To  
Assistant Resident Engineer  
Asian Consulting Engineers Pvt. Ltd  
Rehabilitation of Municipal Services Infra Structures (M&R) PCP-Package -2  
PMDFC Group A

Subject: TESTING OF R.C.C. PIPE [ASTM-C76 - 08a] (Page -2/2)

Reference to your letter No. AsCE-PMDFC-OK-ARE-015-A, dated 17.12.2020 on the subject cited above. One R.C.C. Pipe as received by us has been tested.

The results are tabulated as under.

Sr. No	Nominal Size	Total Length	Loaded Length	External Diameter	Internal Diameter	Wall Thickness	Proof load	Ultimate Load	Proof Stress	Ultimate Stress
	(inch)	(foot)	(foot)	(foot)	(foot)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	15	7.76	7.33	1.56	1.22	2.02	4000	8500	985	2093

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

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**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

Ref: CED/TFL/12/35799

Dated: 22-12-2020

Dated of Test: 23-12-2020

To,  
Sub Divisional Officer  
Highway Sub Division No. 1  
Rawalpindi

(Rehabilitation / Improvement of Road from Chak Jalal Din to Girja Road upto Akbar Chowk Length = 4.00 km Tehsil & District Rawalpindi)

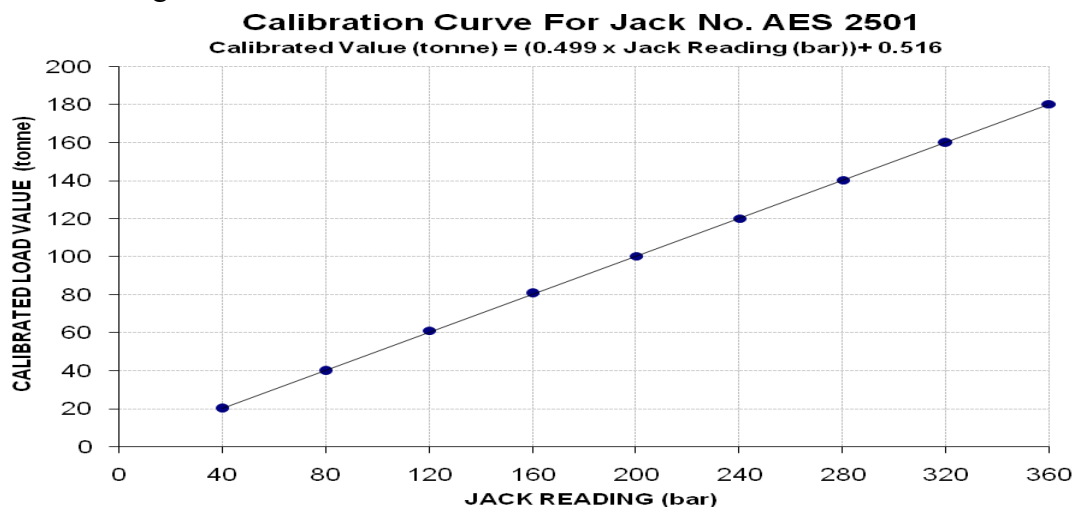
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/12/35799) (Page -1/2)

Reference to your Letter No. 937 H-1, Dated: 16/12/2020 on the subject cited above. One Hydraulic Jack (Jack No 2501, Gauge No. AES-2501) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 360 (bar)**

Hydraulic Jack Reading (bar)	40	80	120	160	200	240	280	320	360	
Calibrated Load	(kg)	20200	40000	61200	80800	100400	120200	140400	160000	180400
	Tonne	20.20	40.00	61.20	80.80	100.40	120.20	140.40	160.00	180.40
Calibrated Pressure (bar)	40.95	81.08	124.06	163.79	203.52	243.65	284.60	324.33	365.68	

1 Tonne = 1000 kg, The Ram Area of Jack = 483.80 cm<sup>2</sup>



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

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**University of Engineering and Technology Lahore, 54890**  
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Ref: CED/TFL/12/35799

Dated: 22-12-2020

Dated of Test: 23-12-2020

To,  
Sub Divisional Officer  
Highway Sub Division No. 1  
Rawalpindi

(Rehabilitation / Improvement of Road from Chak Jalal Din to Girja Road upto Akbar Chowk Length = 4.00 km Tehsil & District Rawalpindi)

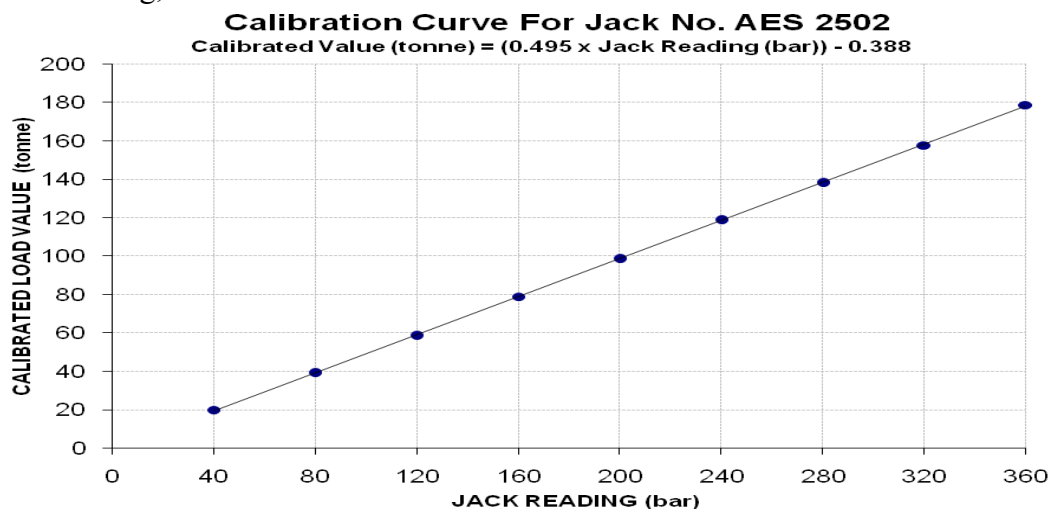
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/12/35799) (Page -2/2)

Reference to your Letter No. 937 H-1, Dated: 16/12/2020 on the subject cited above. One Hydraulic Jack (Jack No 2502, Gauge No. AES-2502) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 360 (bar)**

Hydraulic Jack Reading (bar)	40	80	120	160	200	240	280	320	360	
Calibrated Load	(kg)	20000	39200	58600	79000	98600	118800	138200	157800	178800
	Tonne	20.00	39.20	58.60	79.00	98.60	118.80	138.20	157.80	178.80
Calibrated Pressure (bar)	40.54	79.46	118.79	160.14	199.87	240.82	280.14	319.87	362.44	

1 Tonne = 1000 kg, The Ram Area of Jack = 483.80 cm<sup>2</sup>



**I/C Testing Laboratoires**  
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To,  
 Chief Executive  
 Paidar Builders (Pvt) Ltd  
 Construction of TCF Secondary School at Awan Dhai Wala, Lahore

Reference # CED/TFL **35800** (Dr. Ali Ahmed)  
 Reference of the request letter # PBL/UET/2020-387

Dated: 22-12-2020  
 Dated: 21-12-2020

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

Date of Test 23-12-2020  
 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	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.400	3/8	0.387	0.11	0.118	3800	5400	76200	71210	108200	101200	1.10	13.8	
2	0.391	3/8	0.383	0.11	0.115	3800	5400	76200	72880	108200	103600	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile test</b>														
Bend Test														

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

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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,  
 Lt Commander PN  
 GE (Navy) Lahore  
 (CA No. CEN-25/2021 - Construction of Offices and CPOS/Sailors Barrack (G+1 with G+3  
 Foundations at Navy Complex Bahawapur)

Reference # CED/TFL **35803** (Dr. Ali Ahmed)  
 Reference of the request letter # 6021/154/23/E-6

Dated: 22-12-2020  
 Dated: 07-12-2020

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

Date of Test 23-12-2020  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (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	0.382	3/8	0.378	0.11	0.112	4000	5200	80200	78460	104200	102000	1.00	12.5	
2	0.387	3/8	0.381	0.11	0.114	4100	5200	82200	79450	104200	100800	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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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**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
M.E  
A.S. Enterprises  
Style Textile Mill Manga  
(AA Associates)

Reference # CED/TFL **35804** (Dr. Ali Ahmed)  
Reference of the request letter # USD/ASE/16

Dated: 22-12-2020  
Dated: 22-12-2020

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

Date of Test 23-12-2020  
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 <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	10.03	0.12	0.122	5000	6600	91858	90070	121253	118900	1.10	13.8	Afco Steel
2	0.411	10	9.96	0.12	0.121	4500	6200	82673	82110	113904	113200	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

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

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**Department of Civil Engineering**  
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**Pakistan. Ph: 92-42-99029202**

To,  
 SDO (B&R)  
 Army Welfare Trust Housing Scheme  
 External Electrication Works AWT Housing Scheme Phase-2, Lahore

Reference # CED/TFL **35806** (Dr. Ali Ahmed) Dated: 22-12-2020  
 Reference of the request letter # AWRES/Dev-N/Ph-2 Dated: 08-12-2020

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

Date of Test 23-12-2020  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (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	0.387	3/8	0.380	0.11	0.114	3300	4800	66200	64020	96200	93200	1.30	16.3	Model Steel
2	0.377	3/8	0.376	0.11	0.111	3200	4500	64200	63650	90200	89500	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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**  
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**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 PU, Lahore  
 Construction of Institute of Energy and Environmental Engineering at University of Punjab,  
 Lahore

Reference # CED/TFL **35807** (Dr. Ali Ahmed) Dated: 22-12-2020  
 Reference of the request letter # RE/PCL-562/LHR/IEEE/PU/130 Dated: 12-12-2020

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

Date of Test 23-12-2020  
 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 <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	0.380	3	0.377	0.11	0.112	4100	5300	82200	80940	106200	104700	0.70	8.8	
2	0.371	3	0.373	0.11	0.109	3400	4600	68200	68700	92200	93000	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**  
**UET Lahore, Pakistan.**

Note:

- 1- You can See your reports On Internet in the following web site  
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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,  
A.R.E (MEP)  
Al-Imam Enterprises Pvt Ltd  
Construction of Penta Square, Phase-V, D.H.A, Lahore

Reference # CED/TFL **35808** (Dr. Ali Ahmed) Dated: 22-12-2020  
Reference of the request letter # Al-Imam/746/PS-1/DHA/LHE/1219 Dated: 22-12-2020

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

Date of Test 23-12-2020  
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 <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	0.371	10	9.47	0.12	0.109	3400	5100	62464	68660	93696	103000	1.30	16.3	Kamran Steel
2	0.371	10	9.47	0.12	0.109	3400	5100	62464	68680	93696	103100	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm 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  
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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
Resident Engineer (AZEA)  
Sargodha Mianwali Road  
Mainwali  
Widening / Improvement of Road from Rokhari Morr and Tari Khel, (Construction of Bridge & its Approaches)(WMI)  
Reference # CED/TFL **35809** (Dr. Ali Ahmed) Dated: 22-12-2020  
Reference of the request letter # RE/MWI-133 Dated: 16-12-2020

**Tension Test Report** (Page – 1/3)

Date of Test 23-12-2020  
Gauge length 640 mm  
Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	781.0	18000	176.58	19500	191.30	199	>3.50	xx
2	12.70 (1/2")	775.0	779.0	18200	178.54	19500	191.30	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	

**Only two samples for Test**

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

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

Note:

- 1- You can See your reports On Internet in the following web site  
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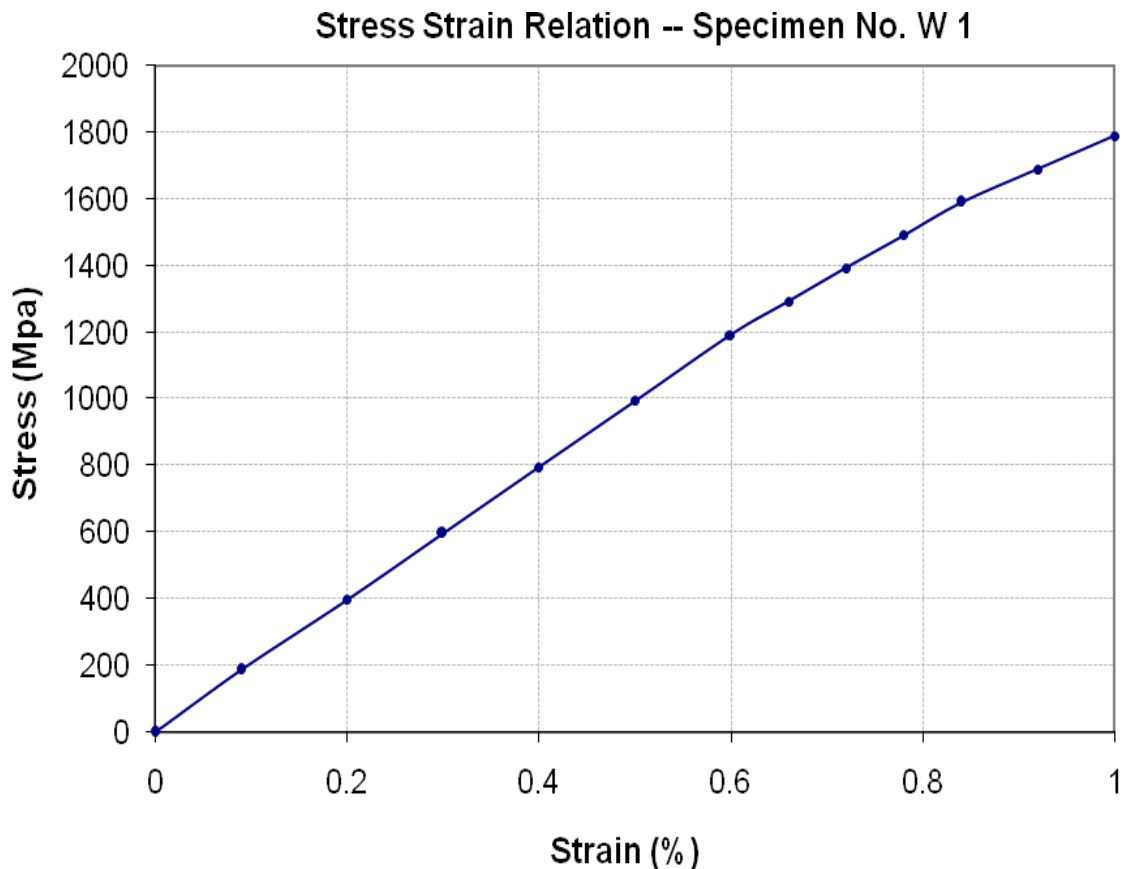


**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
Resident Engineer (AZEA)  
Sargodha Mianwali Road  
Mainwali  
Widening / Improvement of Road from Rokhari Morr and Tari Khel, (Construction of Bridge & its Approaches)(WMI)  
Reference # CED/TFL **35809** (Dr. Ali Ahmed)  
Reference of the request letter # RE/MWI-133

Dated: 22-12-2020  
Dated: 16-12-2020

**Graph** (Page – 2/3)



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

**Note:**

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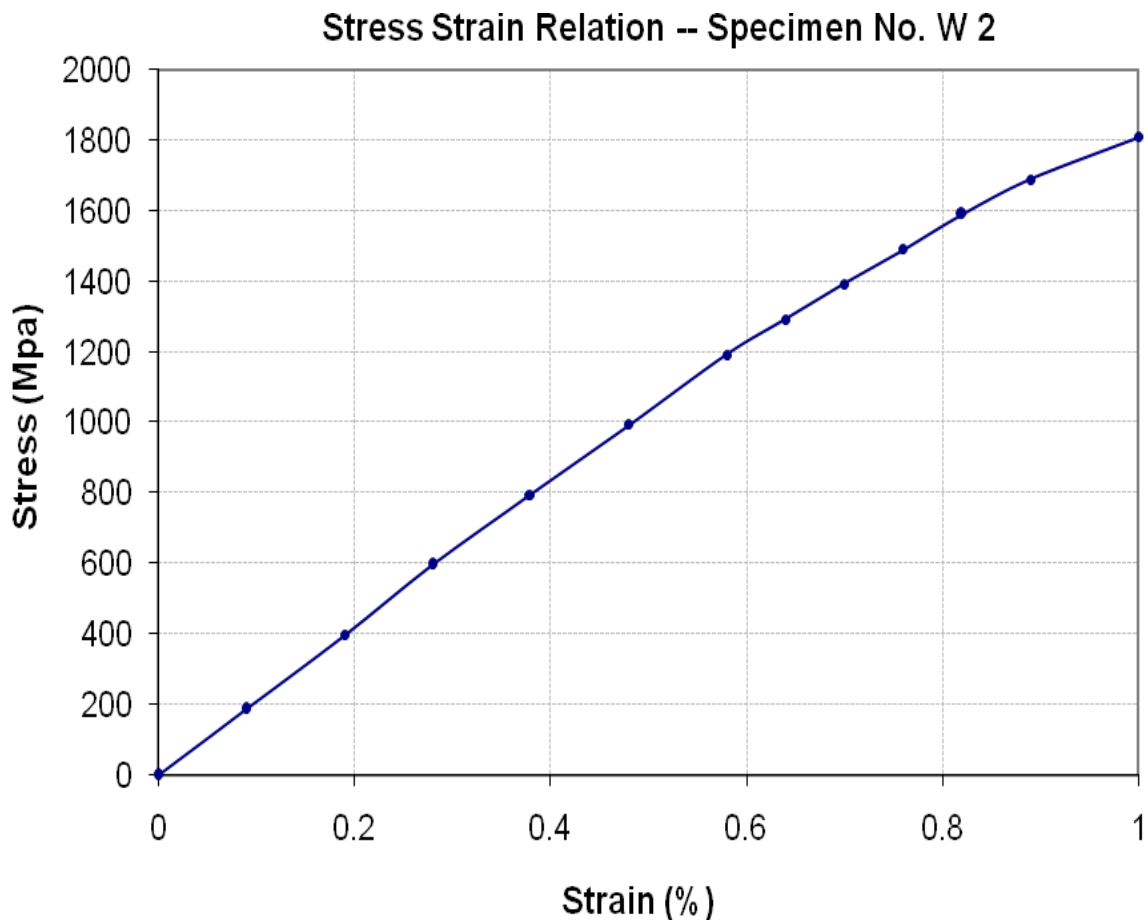


**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
Resident Engineer (AZEA)  
Sargodha Mianwali Road  
Mainwali  
Widening / Improvement of Road from Rokhari Morr and Tari Khel, (Construction of Bridge & its Approaches)(WMI)  
Reference # CED/TFL **35809** (Dr. Ali Ahmed)  
Reference of the request letter # RE/MWI-133

Dated: 22-12-2020  
Dated: 16-12-2020

**Graph** (Page – 3/3)



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

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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,  
 Resident Engineer  
 EA Consulting Pvt Ltd  
 Life Style Residency Apartment - Bedian Road

Reference # CED/TFL **35810** (Dr. Ali Ahmed)  
 Reference of the request letter # EA/FGEHA/LHE/051

Dated: 22-12-2020  
 Dated: 22-12-2020

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

Date of Test 23-12-2020  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (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	0.371	3/8	0.373	0.11	0.109	3200	4900	64200	64710	98200	99100	1.40	17.5	
2	0.372	3/8	0.373	0.11	0.109	3200	4800	64200	64420	96200	96700	1.30	16.3	
3	0.382	3/8	0.378	0.11	0.112	3300	5000	66200	64830	100200	98300	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Note: only three samples for tensile and one sample for bend test**

**Bend Test**

3/8" Dia Bar Bend Test Through 180° is Satisfactory

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

Note:

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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**

Ref: CED/TFL/12/35811  
Dated of Test: 23-12-2020

Dated: 23-12-2020

To,  
**Amjad Engineering Services**  
**Lahore**

Bridhe over Thal Canal RD 91+219, 77+000, 70+228 and Bridge over Thal Canal at RD 100+350 on Road from Rokhari Morr Main Kalabagh Road - Rokhari City, District Mianwali

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/12/35811) (Page -1/2)

Reference to your Letter No. APT2024, Dated: 23/12/2020 on the subject cited above. One Pressure Gauge No. AES-315 as received by us has been calibrated. The results are tabulated as under:

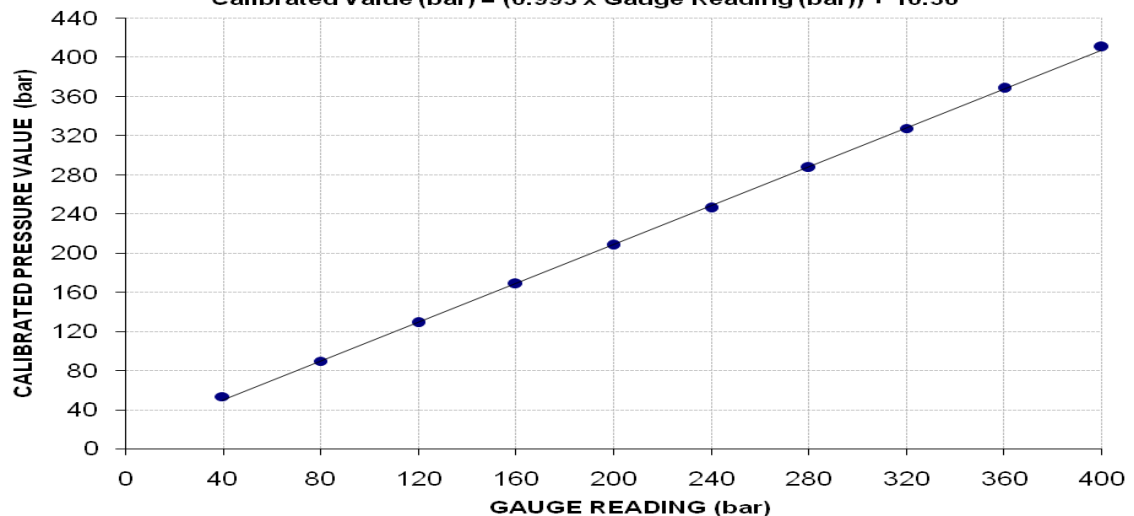
**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 400 (bar)**

Pressure Gauge Reading (bar)	40	80	120	160	200	240	280	320	360	400
Calibrated Load (kg)	10800	18100	26000	34000	42000	49700	58000	66100	74400	82900
Calibrated Pressure (bar)	53.49	89.65	128.78	168.40	208.03	246.17	287.28	327.40	368.51	410.61

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

**Calibration Curve for Pressure Gauge No. AES-315**

**Calibrated Value (bar) = (0.993 × Gauge Reading (bar)) + 10.36**



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

Note:

- 1- You can See your reports On Internet in the following web site  
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**STRUCTURAL ENGINEERING DIVISION**  
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**University of Engineering and Technology Lahore, 54890**  
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Ref: CED/TFL/12/35811  
Dated of Test: 23-12-2020

Dated: 23-12-2020

To,  
Amjad Engineering Services  
Lahore

Bridhe over Thal Canal RD 91+219, 77+000, 70+228 and Bridge over Thal Canal at RD 100+350 on Road from Rokhari Morr Main Kalabagh Road - Rokhari City, District Mianwali

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/12/35811) (Page -2/2)

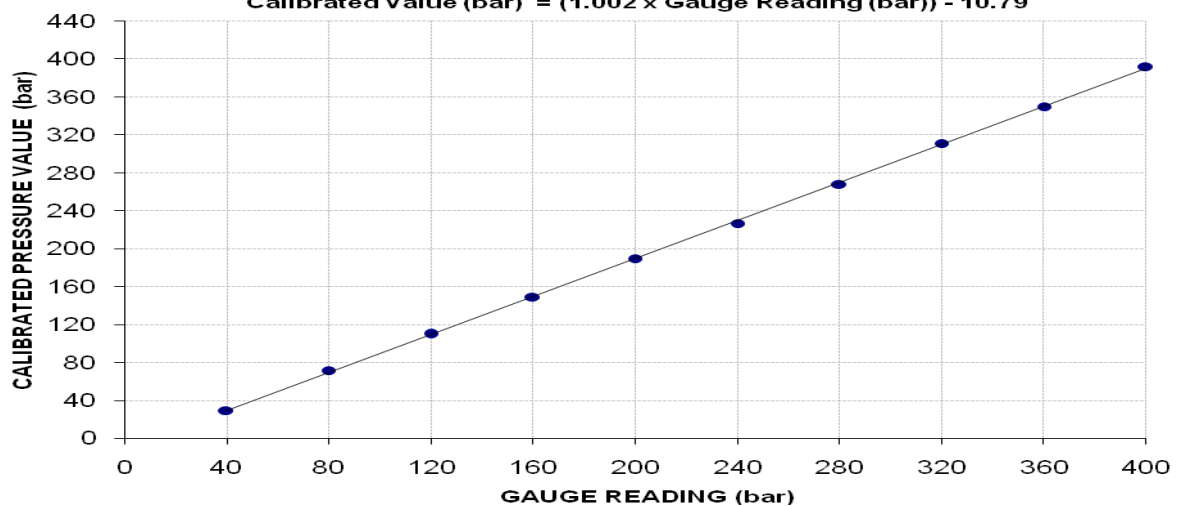
Reference to your Letter No. APT2024, Dated: 23/12/2020 on the subject cited above. One Pressure Gauge No. AES-316 as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 400 (bar)**

Pressure Gauge Reading (bar)	40	80	120	160	200	240	280	320	360	400
Calibrated Load (kg)	5900	14400	22200	30100	38300	45800	54100	62800	70600	79200
Calibrated Pressure (bar)	29.22	71.32	109.96	149.09	189.70	226.85	267.96	311.05	349.68	392.28

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

**Calibration Curve for Pressure Gauge No. AES-316**  
Calibrated Value (bar) = (1.002 × Gauge Reading (bar)) - 10.79



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

Note:

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