



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

To,  
 Chief Engineer Design  
 EnMasse (Pvt) Ltd, Lahore  
 Additional of one No. 132/11.5kV, 31.5/40MVA Power Transformer (TR3) and Allied  
 Equipment including Associated Civil works at 132kV (AIS) Grid Station N. 1, M-3 Industrial  
 City, Faisalabad

Reference # CED/TFL **34549** (Dr. Waseem Abbas)  
 Reference of the request letter # FIEDMC/EnM/2301-1

Dated: 27-01-2020  
 Dated: 23-01-2020

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

Date of Test 29-01-2020  
 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	0.408	10	9.93	0.12	0.120	2700	3900	49604	49610	71650	71700	1.60	20.0	AF Steel
2	0.412	10	9.97	0.12	0.121	2800	4000	51441	50960	73487	72800	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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  
[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,  
Material Engineer  
Associated Consulting Engineers – ACE (Pvt) Ltd., Lahore  
Pavron Consulting Engineers, Islamabad  
Reconstruction of RCC Bridge on Haipur – Beer Section, S-12 Length = (150m)

Reference # CED/TFL **34556** (Dr. Waseem Abbass)  
Reference of the request letter # RE/ACE/HBRP/LAB/66

Dated: 27-01-2020  
Dated: 04-12-2019

**Tension Test Report** (Page – 1/3)

Date of Test 29-01-2020  
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	784.0	17700	173.64	19800	194.24	198	>3.50	xx
2	12.70 (1/2")	775.0	783.0	17800	174.62	19900	195.22	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  
[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



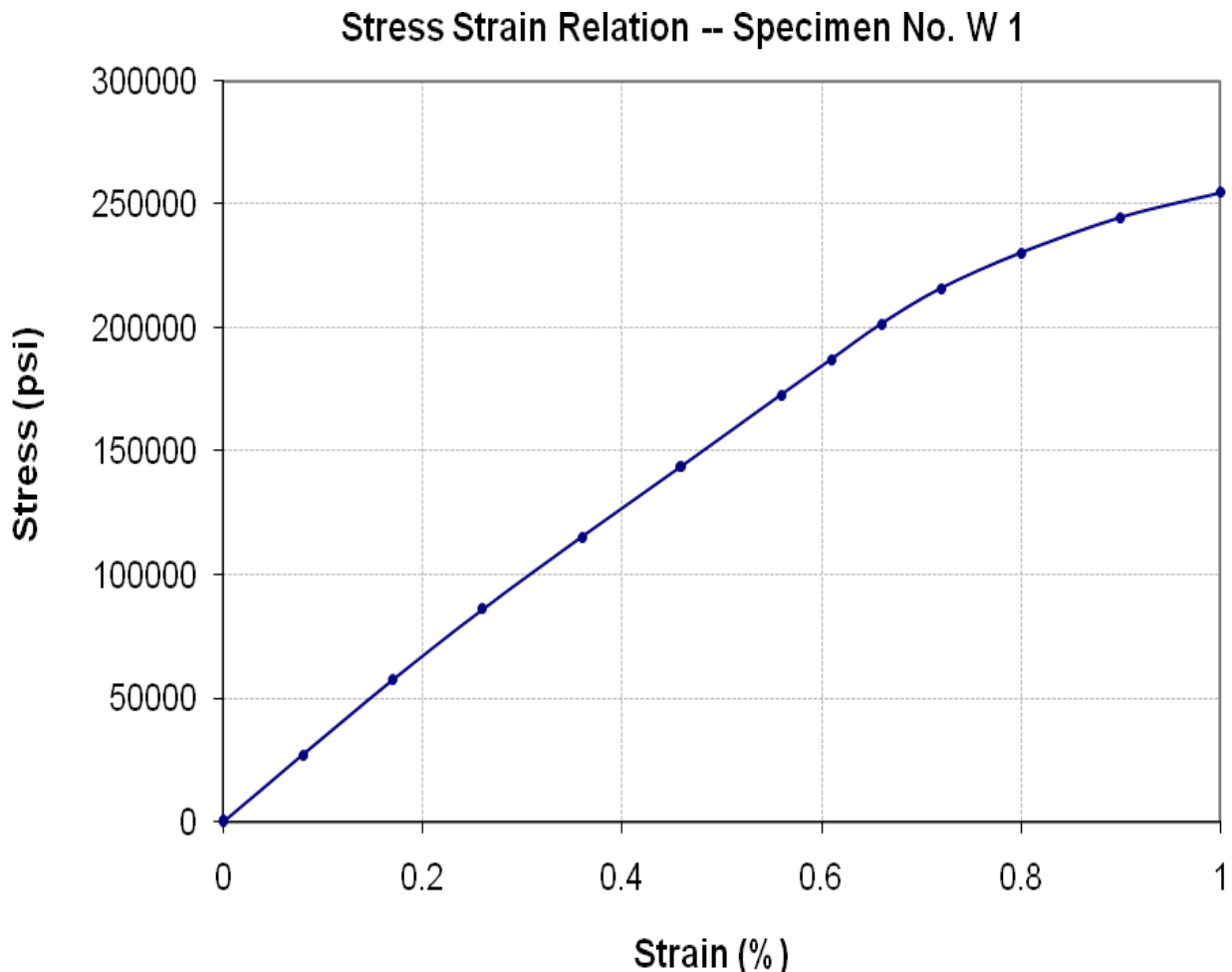
**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
Material Engineer  
Associated Consulting Engineers – ACE (Pvt) Ltd., Lahore  
Pavron Consulting Engineers, Islamabad  
Reconstruction of RCC Bridge on Haipur – Beer Section, S-12 Length = (150m)

Reference # CED/TFL **34556** (Dr. Waseem Abbass)  
Reference of the request letter # RE/ACE/HBRP/LAB/66

Dated: 27-01-2020  
Dated: 04-12-2019

**Graph** (Page – 2/3)



**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.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



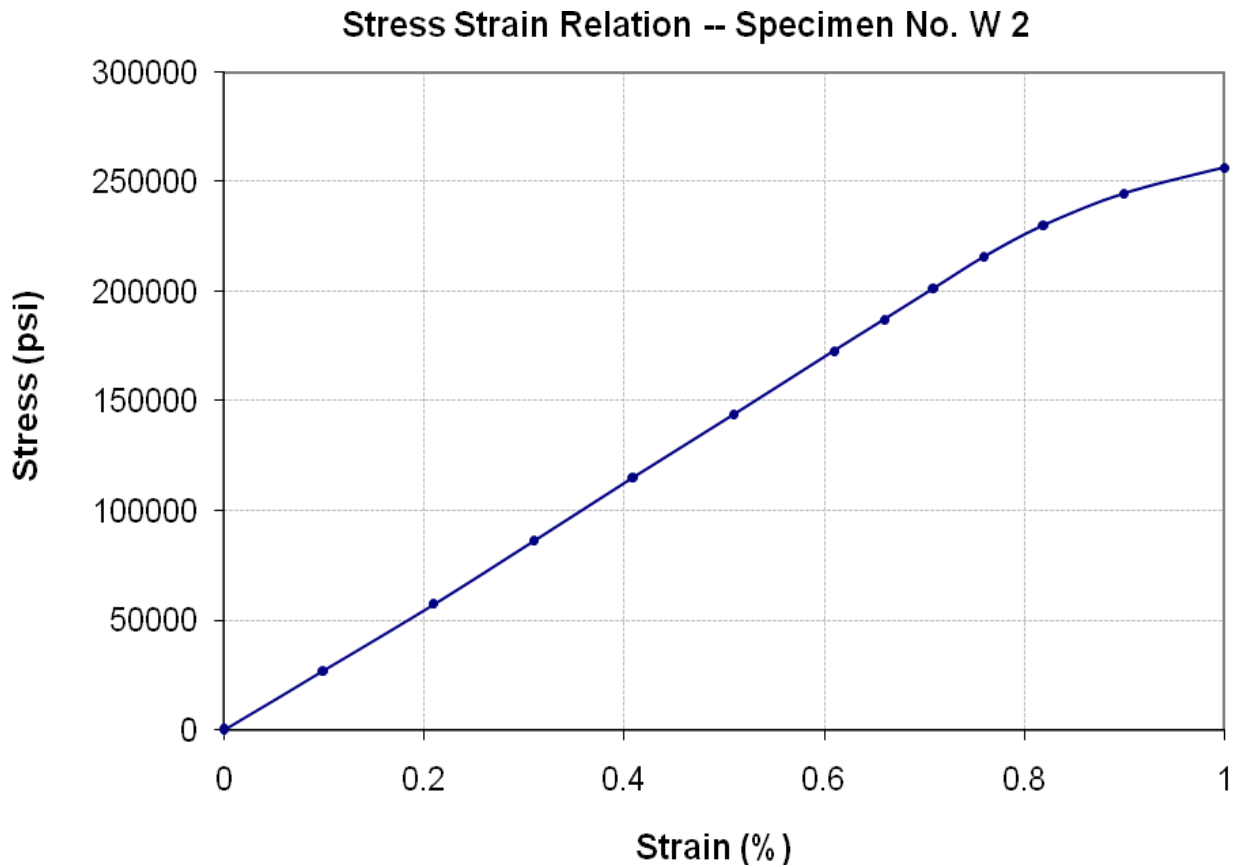
**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
Material Engineer  
Associated Consulting Engineers – ACE (Pvt) Ltd., Lahore  
Pavron Consulting Engineers, Islamabad  
Reconstruction of RCC Bridge on Haipur – Beer Section, S-12 Length = (150m)

Reference # CED/TFL **34556** (Dr. Waseem Abbass)  
Reference of the request letter # RE/ACE/HBRP/LAB/66

Dated: 27-01-2020  
Dated: 04-12-2019

**Graph** (Page – 3/3)



**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.
- 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**

Ref: CED/TFL/01/34559

Dated: 28-01-2020

Date of Test: 29-01-2020

To  
Sub Divisional Officer  
Kirana Development Sub Division  
Sargodha  
(Rehabilitation of Chenab Escape RD 0+000 to RD 63+000 along with Construction /  
Repairing of Structures of Khadir Feeder "Package-D" (Construction of V.R Bridge))

Subject: - TEST RESULT REPORT FOR BEARING DEVICE (PAD) (Page # 1/1)

Reference to your letter no. 547/6-W(Khadir), Dated: 18/12/0919 on the above mentioned subject. One Elastomeric Bearing Rubber Pad (EBRP) (14"x9"x1-3/4") has been received by us. The same was tested and results are given below.

Laboratory : TEST FLOOR LAB  
Machine : SHIMADZU  
Sample No. : 1/1  
Dimensions of EBRP : 358 x 232 x 43.64 mm

**TEST RESULTS - SHORT DURATION**

Load Duration : 5+5 minutes  
Test Load : 95 TONS  
Bulging Pattern : Uniform Buldging.  
Laminated Parallelism : Parallel  
Cracks : No crack is observed

**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,  
 Resident Engineer  
 NESPAK  
 Public Spaces Upgradation of Existing Parks in Sahiwal & Sialkot, Lot-2: Works for  
 Upgradation of 4 Existing Parks in Sialkot

Reference # CED/TFL **34560** (Dr. Waseem Abbas)  
 Reference of the request letter # Nespak/SAH/UET/07

Dated: 28-01-2020  
 Dated: 27-01-2020

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

Date of Test 29-01-2020  
 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	0.403	3/8	0.388	0.11	0.118	4000	5200	80200	74420	104200	96800	1.00	12.5	
2	0.406	3/8	0.390	0.11	0.119	3700	4900	74200	68310	98200	90500	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
38" 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,  
M/S Beacon Impex  
32-km Sheikhpura Road, Faisalabad  
(Construction of New dye House (Phase-I R.c.c. Footing) for PE Building)  
(M/s M. Saleem Construction Company)(Batala Steel)

Reference # CED/TFL **34562** (Dr. Waseem Abbas)  
Reference of the request letter # B.I/CIVIL/20-111

Dated: 28-01-2020  
Dated: 27-01-2020

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

Date of Test 29-01-2020  
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	0.366	3	0.370	0.11	0.108	3200	4900	64200	65560	98200	100400	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one sample 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  
[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**

Ref: CED/TFL/01/34564  
Dated of Test: 29-01-2020

Dated: 28-01-2020

To,  
Sub Divisional Officer  
Highway Sub Division  
Mian Channu  
(Construction of Pile Foundation Bridge over Sidhnai Canal near Abdul Hakeem District Khanewal)

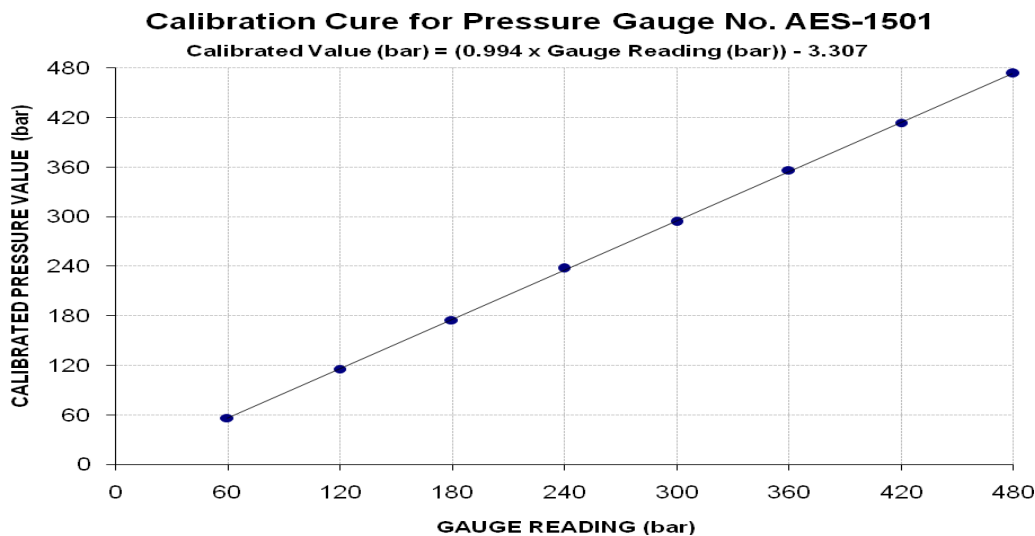
Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/01/34564) (Page -1/2)

Reference to your Letter No. 326/SDO MC, Dated: 27/01/2020 on the subject cited above. One Pressure Gauge No. AES-1501 as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 480 (bar)**

Pressure Gauge Reading (bar)	60	120	180	240	300	360	420	480
Calibrated Load (kg)	11400	23300	35300	47900	59300	71900	83500	95600
Calibrated Pressure (bar)	56.46	115.41	174.84	237.25	293.71	356.12	413.58	473.51

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



**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**

Ref: CED/TFL/01/34564  
Dated of Test: 29-01-2020

Dated: 28-01-2020

To,  
Sub Divisional Officer  
Highway Sub Division  
Mian Channu  
(Construction of Pile Foundation Bridge over Sidhnai Canal near Abdul Hakeem District Khanewal)

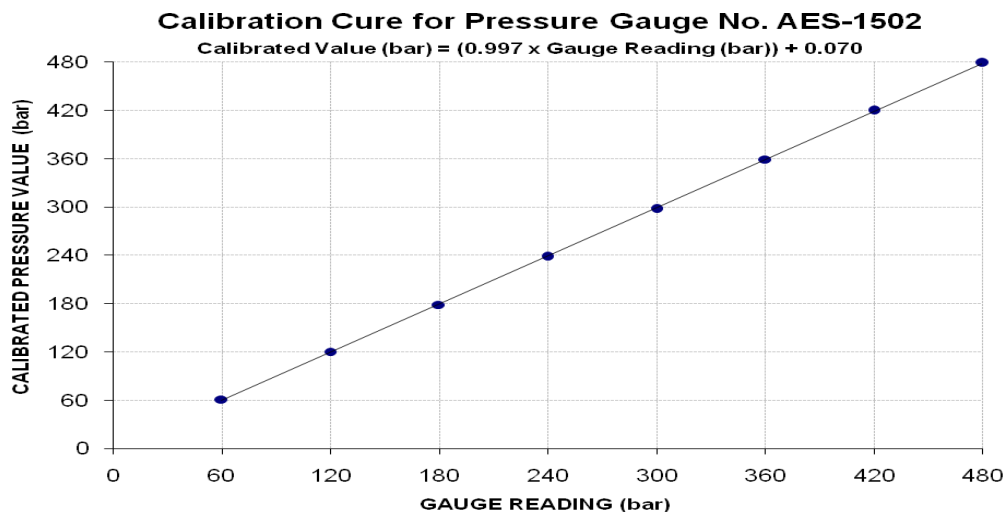
Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/01/34564) (Page -2/2)

Reference to your Letter No. 326/SDO MC, Dated: 27/01/2020 on the subject cited above. One Pressure Gauge No. AES-1502 as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 480 (bar)**

Pressure Gauge Reading (bar)	60	120	180	240	300	360	420	480
Calibrated Load (kg)	12300	24300	36100	48100	60100	72500	84800	96700
Calibrated Pressure (bar)	60.92	120.36	178.80	238.24	297.68	359.09	420.02	478.96

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



**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.
- 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,  
 Manager, QA/QC Department  
 Bahria Town Private Limited, Lahore  
 School at Bahria Orchard-4

Reference # CED/TFL **34565** (Dr. M Rizwan Riaz)  
 Reference of the request letter # QA/QC-Steel-1824

Dated: 29-01-2020  
 Dated: 27-01-2020

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

Date of Test 29-01-2020  
 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	0.394	3	0.384	0.11	0.116	4300	5300	86200	81760	106200	100800	1.00	12.5	BSM
2	0.384	3	0.379	0.11	0.113	3820	4810	76600	74530	96400	93900	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.**

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