



**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/02/2761

Dated: 09-02-2023

Dated of Test: 21-02-2023

To

**Resident Engineer**  
**NESPAK**

**Upgradation / Rehabilitation of Infrastructure in Industrial Zone (Phase - 01, Part - A)**

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76 - 08a]**

Reference to your letter No. SA468/13/MAA/09/06, dated 01.02.2023 on the subject cited above. Two R.C.C. Pipes as received by us have 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)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	18	7.73	7.30	22.83	17.64	2.60	12500	16500	2568	3390
2	24	7.71	7.15	30.31	24.42	2.95	11670	15900	1768	2409

**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/02/2808

Dated: 17-02-2023

Dated of Test: 21-02-2023

To,

M/S Amjad Engineering Services  
Lahore

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/02/2808) (Page -1/2)

Reference to your Letter No. Nil, Dated: 17/02/2023 on the subject cited above. One Pressure Gauge No. AES-3501 as received by us has been calibrated. The results are tabulated as under:

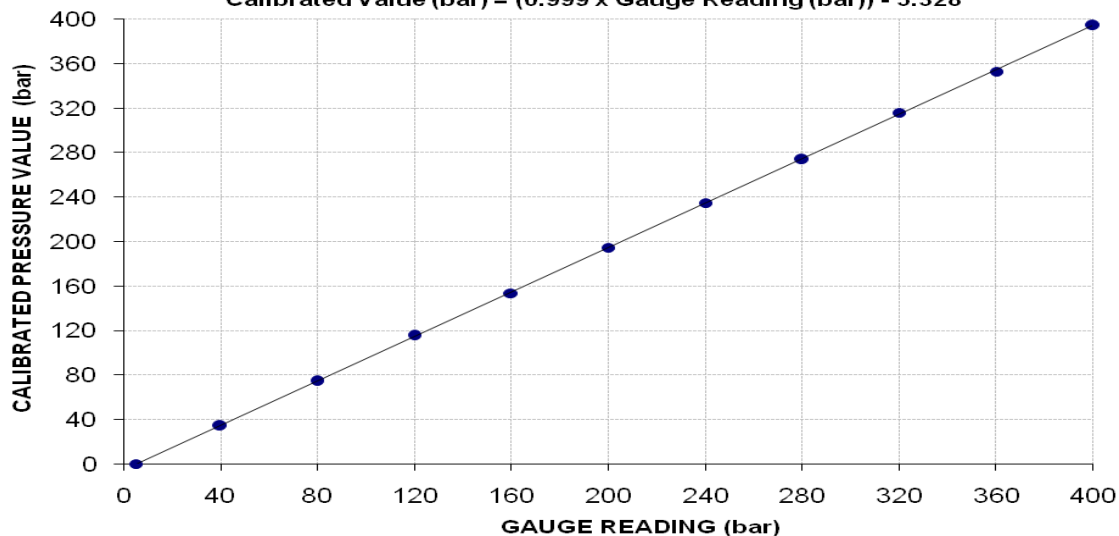
Total Range : Zero - 1000 (bar)  
Calibrated Range : Zero - 400 (bar)

Pressure Gauge Reading (bar)	5	40	80	120	160	200	240	280	320	360	400
Calibrated Load (kg)	0	6900	15000	23300	31000	39300	47400	55300	63800	71300	79600
Calibrated Pressure (bar)	0	34	74	115	154	195	235	274	316	353	394

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

**Calibration Curve for Pressure Gauge No. AES-3501**

Calibrated Value (bar) = (0.999 x Gauge Reading (bar)) - 5.328



**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/02/2808

Dated: 17-02-2023

Dated of Test: 21-02-2023

To,

M/S Amjad Engineering Services  
Lahore

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/02/2808) (Page -2/2)

Reference to your Letter No. Nil, Dated: 17/02/2023 on the subject cited above. One Pressure Gauge No. AES-3502 as received by us has been calibrated. The results are tabulated as under:

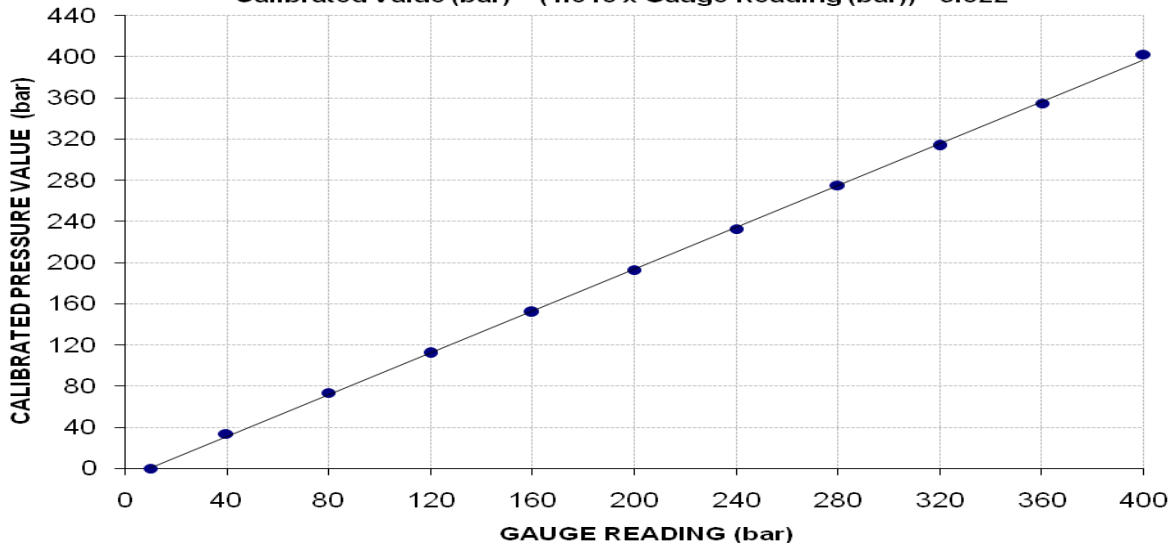
Total Range : Zero - 1000 (bar)  
Calibrated Range : Zero - 400 (bar)

Pressure Gauge Reading (bar)	10	40	80	120	160	200	240	280	320	360	400
Calibrated Load (kg)	0	6800	14800	22600	30600	38900	46900	55500	63300	71600	81200
Calibrated Pressure (bar)	0	34	73	112	152	193	232	275	314	355	402

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

**Calibration Curve for Pressure Gauge No. AES-3502**

Calibrated Value (bar) = (1.016 x Gauge Reading (bar)) - 9.622



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,

Project Manager  
 Premier Developers & Builders  
 Lyallpur Galleria-II Near Four Season Colony Samundri Road, Faisalabad

Reference # CED/TFL **2810** (Dr. M Rizwan Riaz)  
 Reference of the request letter # LG-II/038

Dated: 20-02-2023  
 Dated: 16-02-2023

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

Date of Test 21-02-2023  
 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	0.367	3	0.371	0.11	0.108	3300	4700	66200	67460	94200	96100	1.40	17.5	FF Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one 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



**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 M. Saleem Construction Company  
 Sheikhpura  
 (Extension (Goods Store) Dyeing Unit.)

Reference # CED/TFL **2811** (Dr. M Rizwan Riaz)  
 Reference of the request letter # Steel Test

Dated: 20-02-2023  
 Dated: 20-02-2023

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

Date of Test 21-02-2023  
 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	0.397	3	0.385	0.11	0.117	3500	4800	70200	66170	96200	90800	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**

To,

M/S Beacon Impex  
 Construction of Canteen Building at Beacon Impex  
 34 – km Sheikhpura Road, Faisalabad  
 (M/s Paradise Builders)

Reference # CED/TFL **2812** (Dr. M Rizwan Riaz)  
 Reference of the request letter # B.1/CIVIL/23-3

Dated: 20-02-2023  
 Dated: 17-02-2023

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

Date of Test 21-02-2023  
 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	0.373	3	0.374	0.11	0.110	3300	4700	66200	66270	94200	94400	1.30	16.3	Sheikhoo Steel
2	0.363	3	0.369	0.11	0.107	3100	4500	62200	64010	90200	93000	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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  
[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 Project  
IK Associates  
Construction of Mr. Humair Ejaz Residence F-268, Phase-6, Lahore

Reference # CED/TFL **2813** (Dr. M Rizwan Riaz)  
Reference of the request letter # Nil

Dated: 20-02-2023  
Dated: 17-02-2023

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

Date of Test 21-02-2023  
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	0.383	10	9.61	0.12	0.112	3100	4700	56952	60770	86347	92200	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one 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,

Project Engineer (Electrical)  
 Prosperity Consultants  
 Design, Manufacture, Supply, Erection, Testing and Commission on EPC/ Turkey Basis  
 of 132/11.5 kV (GIS) Grid Station # 1 DHA, Gujranwala.

Reference # CED/TFL **2815** (Dr. M Rizwan Riaz)  
 Reference of the request letter # DHA GUJ/GRID/393

Dated: 20-02-2023  
 Dated: 24-01-2023

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

Date of Test 21-02-2023  
 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	0.365	3	0.369	0.11	0.107	3200	4800	64200	65810	96200	98800	1.20	15.0	SJ Steel
2	0.383	3	0.378	0.11	0.112	3300	4900	66200	64690	98200	96100	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:

- 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,  
Asst Dir Infra  
Defence Housing Authority  
Gujranwala  
"Sector C"

Reference # CED/TFL **2818** (Dr. M Rizwan Riaz)  
Reference of the request letter # 111/15/AD/RS/Pkg-2A/1068

Dated: 21-02-2023  
Dated: 16-02-2023

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

Date of Test 21-02-2023  
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	0.370	3	0.372	0.11	0.109	3300	4900	66200	66830	98200	99300	1.10	13.8	Nonee Steel
2	0.370	3	0.372	0.11	0.109	3300	4900	66200	66830	98200	99300	1.20	15.0	
3	4.285	10	1.266	1.27	1.260	38400	51600	66700	67200	89600	90300	1.50	18.8	
4	4.292	10	1.267	1.27	1.262	39400	55400	68400	68840	96200	96800	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only four samples for tensile and two samples for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														

Witness by Hafiz Danish Waqas (L.T DHA)

**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