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/06/34937 Dated: 04-06-2020

Dated of Test: 09-06-2020

To
Assistant Director (Technical)
Anti-Corruption Establishment
Sahiwal Region, Sahiwal

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

Reference to your letter No. 100-IP/HQ, dated 02.06.2020 on the subject cited above. Four R.C.C. Pipes 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	7.79	7.27	1.64	1.27	2.22	16600	19300	3964	4608
2	18	7.77	7.35	1.91	1.49	2.53	15300	16500	3085	3327
3	21	7.79	7.27	2.21	1.74	2.84	16590	21440	2894	3740
4	24	7.79	7.10	2.49	1.99	3.02	15620	19500	2438	3044

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/06/34948 **Dated: 08-06-2020**
Dated of Test: 09-06-2020

To,
Amjad Engineering Services
Lahore

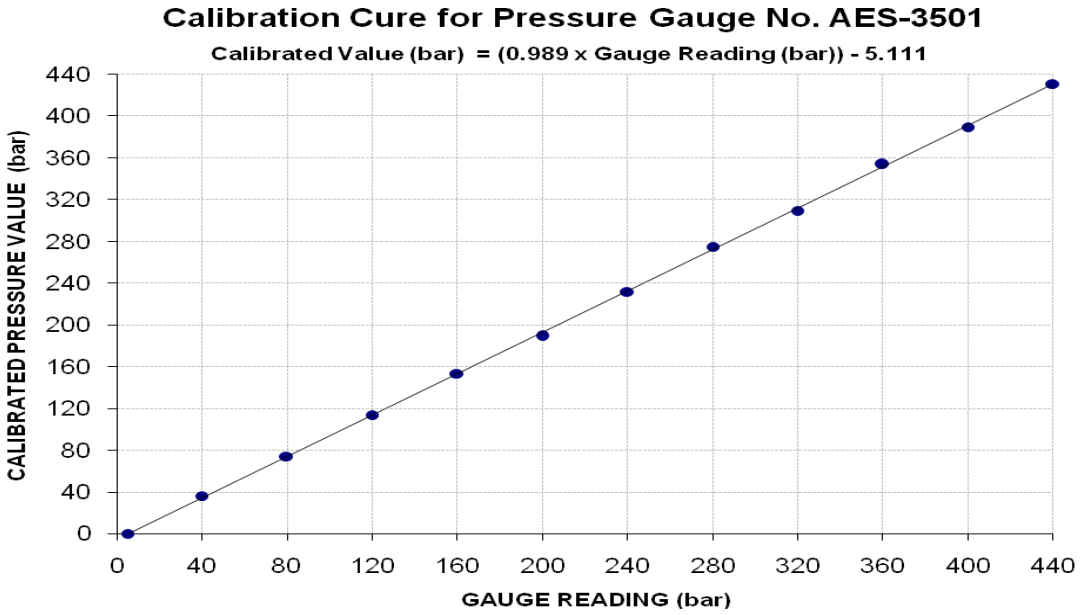
Subject: **- CALIBRATION OF PRESSURE GAUGE (MARK: TFL/06/34948)** (Page -1/2)

Reference to your Letter No. Nil, Dated: 08/06/2020 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 - 440 (bar)

Pressure Gauge Reading (bar)	**5**	**40**	**80**	**120**	**160**	**200**	**240**	**280**	**320**	**360**	**400**	**440**
Calibrated Load (kg)	**0**	**7300**	**14900**	**22900**	**31000**	**38200**	**46800**	**55500**	**62500**	**71400**	**78700**	**87000**
Calibrated Pressure (bar)	**0**	**36.16**	**73.80**	**113.42**	**153.54**	**189.21**	**231.80**	**274.89**	**309.56**	**353.65**	**389.80**	**430.91**

The Ram Are use for Calibration = 198 cm^2



I/C Testing Laboratoires
UET Lahore, Pakistan.

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Ref: CED/TFL/06/34948 **Dated: 08-06-2020**
Dated of Test: 09-06-2020

To,
Amjad Engineering Services
Lahore

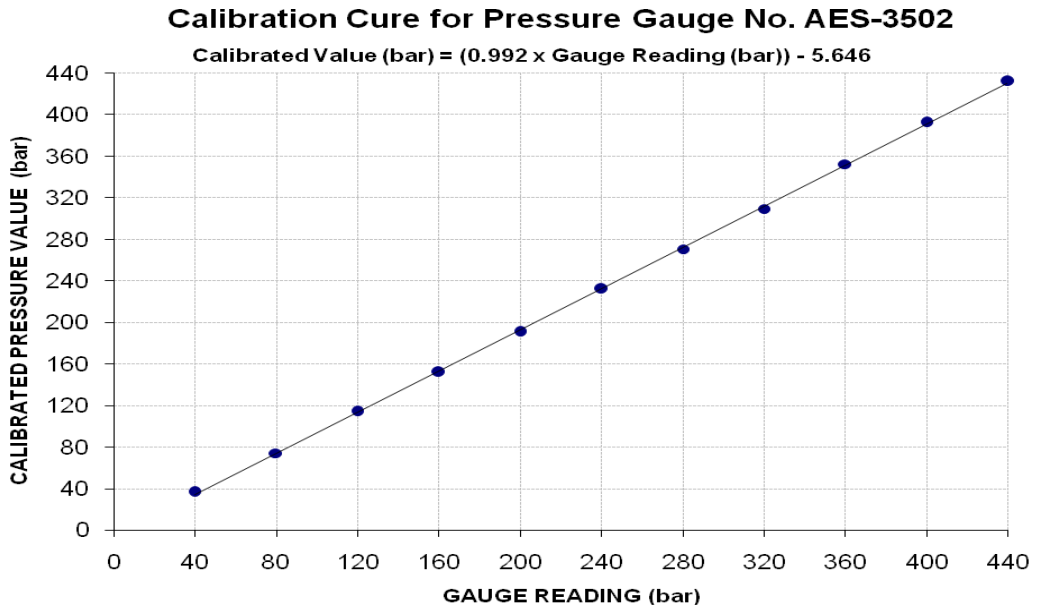
Subject: **- CALIBRATION OF PRESSURE GAUGE (MARK: TFL/06/34948)** (Page -2/2)

Reference to your Letter No. Nil, Dated: 08/06/2020 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 - 440 (bar)

Pressure Gauge Reading (bar)	40	80	120	160	200	240	280	320	360	400	440
Calibrated Load (kg)	7400	14900	23000	30700	38500	46900	54600	62500	71200	79300	87300
Calibrated Pressure (bar)	36.65	73.80	113.92	152.06	190.69	232.30	270.44	309.56	352.66	392.78	432.40

The Ram Are use for Calibration = 198 cm^2



To,

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Sub Divisional Officer
Highway Sub Division No. II
Lahore
(Construction / Widening of Road Start from Bhani Interchange Ring Road to Ravi Syphon Road via Ganja Chowk, Length 7.30km from Bhanni Interchange Ring Road Jhandiala via Ganja Chowk District Lahore)
Reference # CED/TFL **34951** (Dr. Qasim Khan) Dated: 08-06-2020
Reference of the request letter # 51/DS-II Dated: 30-05-2020

Tension Test Report (Page -1/1)

Date of Test 09-06-2020
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in^2)		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	0.367	3/8	0.371	0.11	0.108	3690	4840	74000	75430	97000	99000	1.00	12.5	
-	0.371	3/8	0.373	0.11	0.109	3840	4910	77000	77640	98400	99300	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180º is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
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STRUCTURAL ENGINEERING DIVISION

Test Floor Laboratory
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Pakistan. Ph: 92-42-99029202

To,
Divisional Engineer, ES Civil Division
Maintenance & Development
CAA, AIIAP, Lahore
(Improvement / Strengthening of Perimeter Fence at 36 End Towerds Nadir at AIIAP, Lahore

Reference # CED/TFL **34952** (Dr. Qasim Khan) Dated: 08-06-2020
Reference of the request letter # AIIAP/1656-01/45/LACV/II/324 Dated: 04-06-2020

Tension Test Report (Page -1/1)

Date of Test 09-06-2020
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in^2)		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	0.378	3/8	0.376	0.11	0.111	3470	5120	69600	68880	102600	101700	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180º is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
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STRUCTURAL ENGINEERING DIVISION

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Pakistan. Ph: 92-42-99029202

To,
M.E
AS Enterprises
Style Textile Manga/ Style Textile Rewind
(AA Associates)

Reference # CED/TFL **34953** (Dr. Asad Ali) Dated: 08-06-2020
Reference of the request letter # USD/ASE/21 Dated: 08-06-2020

Tension Test Report (Page -1/1)

Date of Test 09-06-2020
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (mm)		Area (in^2)		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	0.406	10	9.90	0.12	0.119	4590	5560	84326	84720	102146	102700	0.90	11.3	Agha Steel
2	0.408	10	9.93	0.12	0.120	4430	5470	81386	81370	100493	100500	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only two samples for tensile and one sample for bend test

Bend Test

10mm Dia Bar Bend Test Through 180º is Satisfactory

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Resident Engineer
Dar Engineering
Punjab Agriculture Food and Durg Authority's Science Enclave, Lahore Pakistan
(Heat No. J-08 - Kamran Steel)

Reference # CED/TFL **34955** (Dr. Qasim Khan) Dated: 08-06-2019
Reference of the request letter # DB-78/DAR/RE/ME/2019/0220 Dated: 05-06-2019

Tension Test Report (Page -1/1)

Date of Test 09-06-2020
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	0.375	3	0.374	0.11	0.110	3770	5050	75600	75460	101200	101100	0.90	11.3	
2	0.374	3	0.374	0.11	0.110	3520	4940	70600	70640	99000	99200	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only two samples for tensile and one sample for bend test

Bend Test

#3 Bar Bend Test Through 180º is Satisfactory

I/C Testing Laboratoires
UET Lahore, Pakistan.

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