



**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/09/37075

Dated: 21-09-2021

Dated of Test: 27-09-2021

To  
**Resident Engineer**  
**NESPAK**  
**Construction of Sheranwala Flyover, Lahore**

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

Reference to your letter No. 3772/SF/103/MWA/04/84, dated 30.08.2021

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	36	7.96	7.62	3.65	2.98	3.99	27270	34060	2643	3301

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

Note:

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To,  
 Resident Engineer  
 AZ Engineering Associates  
 Construction of Multi Purpose Complex (MPC), Building (Phase-I) at Quaid-e-Azam Business Park (QABP) on M-2 Motorway, Sheikhpura

Reference # CED/TFL **37101** (Dr. Qasim Khan)  
 Reference of the request letter # RE/AZEA/MPC-80

Dated: 24-09-2021  
 Dated: 30-08-2021

**Tension Test Report** (Page -1/2)

Date of Test 27-09-2021  
 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	0.370	3/8	0.372	0.11	0.109	3700	5100	74200	74910	102200	103300	1.00	12.5	F.F Steel
2	0.371	3/8	0.373	0.11	0.109	3900	5200	78200	78780	104200	105100	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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To,  
 Resident Engineer  
 AZ Engineering Associates  
 Construction of Multi Purpose Complex (MPC), Building (Phase-I) at Quaid-e-Azam Business Park (QABP) on M-2 Motorway, Sheikhpura

Reference # CED/TFL **37101** (Dr. Qasim Khan)  
 Reference of the request letter # RE/AZEA/MPC-91

Dated: 24-09-2021  
 Dated: 14-09-2021

**Tension Test Report** (Page -2/2)

Date of Test 27-09-2021  
 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	0.367	3/8	0.370	0.11	0.108	3200	4900	64200	65440	98200	100200	1.20	15.0	F.S.L
2	0.368	3/8	0.371	0.11	0.108	3200	4900	64200	65150	98200	99800	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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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**University of Engineering and Technology Lahore, 54890**  
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To,  
 GM  
 Professional Construction Services (Pvt) Ltd  
 TCF School at JDW Rahim Yar Khan

Reference # CED/TFL **37102** (Dr. Qasim Khan)  
 Reference of the request letter # PCS/21/Eng-108

Dated: 24-09-2021  
 Dated: 02-09-2021

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

Date of Test 27-09-2021  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile 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	0.379	3	0.376	0.11	0.111	3900	4800	78200	77230	96200	95100	0.80	10.0	
2	0.387	3	0.381	0.11	0.114	4700	5300	94200	90990	106200	102600	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile test</b>														
Bend Test														

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

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Ref: CED/TFL/09/37104  
Dated of Test: 27-09-2021

Dated: 27-09-2021

To,  
Chairman  
Department of Civil Engineer  
University of Engineering & Technology, Taxila

Subject: - CALIBRATION OF LOAD CELL (MARK: TFL/10/37104) (Page – 1/2)

Reference to your Letter No. CED/ST/2021/81, Dated: 27/09/2021 on the subject cited above. One Load Cell Make: ELE International Ltd., Serial No. 1052-9-6080, Capacity: 3000 kN as received by us has been calibrated. The results are tabulated as under:

Load Cell Reading	Calibrated Laod (kg)
50	11748
100	23640
150	35532
200	46830
250	58325
300	69821
350	81515
400	92614
450	104704
500	116993
550	129677
600	143750
650	154254
700	165155
750	174867

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**UET Lahore, Pakistan.**

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Ref: CED/TFL/09/37104  
Dated of Test: 27-09-2021

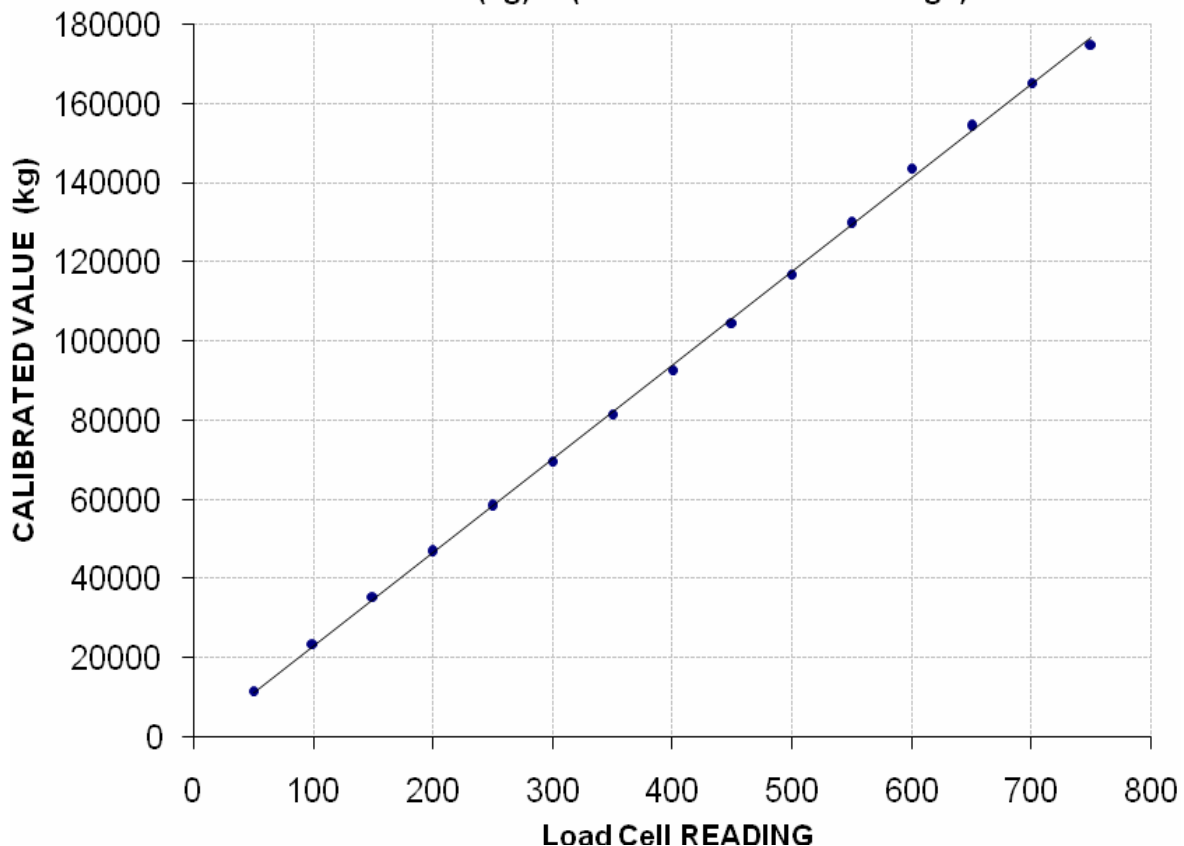
Dated: 27-09-2021

To,  
Chairman  
Department of Civil Engineer  
University of Engineering & Technology, Taxila

Subject: - CALIBRATION OF LOAD CELL (MARK: TFL/10/37104) (Page – 2/2)

### Calibration Curve For Load Cell

$$\text{Calibrated Value (kg)} = (235.9 \times \text{Load Cell Readings}) - 432.4$$



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To,  
 Construction Manager  
 Zameen Aurum  
 Construction of Zameen Aurum at Plot No. 15 Block L, Gulberg-III, Main Feroze Pur Road,  
 Lahore  
 Reference # CED/TFL **37105** (Dr. Qasim Khan) Dated: 27-09-2021  
 Reference of the request letter # ZD/ZA/STR014 Dated: 27-09-2021

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

Date of Test 27-09-2021  
 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	0.400	3	0.387	0.11	0.118	3700	5100	74200	69290	102200	95600	1.10	13.8	Pak Steel
2	0.399	3	0.386	0.11	0.117	4000	5300	80200	75200	106200	99700	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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