



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/06/33415

Dated: 20-06-19

To,
M/S Defence Housing Authority.
Lahore Cantt
(Infra Dev Works at Sector-R, Pkg-1, DHA Ph-IX)(M/s DHA-C Coy)

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/06/33415) (Page -1/1)

Reference to your Letter No. 408/241/E/Lab/615/727, Dated: 19/06/2019 on the subject cited above. One Pressure Gauge as received by us has been calibrated. The results are tabulated as under:

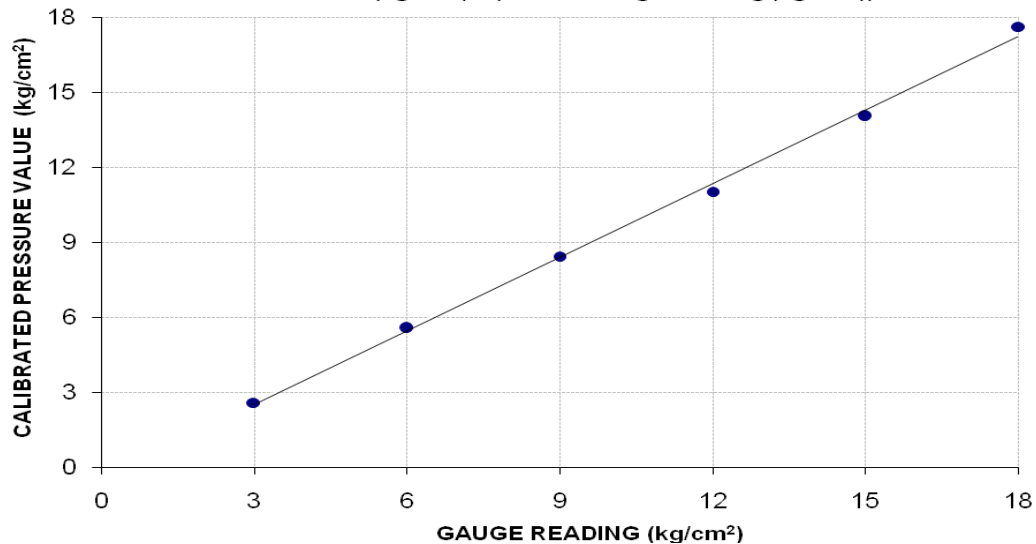
Total Range : Zero - 21 (kg/cm²)
Calibrated Range : Zero - 18 (kg/cm²)

Pressure Gauge Reading (kg/cm ²)	3	6	9	12	15	18
Calibrated Load (kg)	510	1100	1670	2180	2780	3490
Calibrated Pressure (kg/cm ²)	2.58	5.56	8.43	11.01	14.04	17.63

The Ram Are use for Calibration = 198 cm²

Calibration Curve for Pressure Gauge

Calibrated Value (kg/cm²) = (0.983 x Gauge Reading (kg/cm²)) - 0.454



I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
M/S Unze Trading (Pvt) Limited
Lahore
(Leasing out MEPCO PC Pole Plant Lodhran for Manufacturing & Providing of Pre-Stressed
Cement Concrete Spun Hollow LT & HT Poles)

Reference # CED/TFL **33435** (Dr. Usman Akmal)
Reference of the request letter # UNZE/300/2019

Dated: 25-06-2019
Dated: 25-06-2019

Tension Test Report (Page – 1/1)

Date of Test 27-06-2019
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)		% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)		
1	11.11 (7/16")	582.0	593.0	13500	132.44	14900	146.17	>3.50	xx
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
Only one sample for Test									

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To,
 Sub Divisional Officer
 Highway Sub Division
 Shahpur

(Construction of Roads Hindwan to Kotla Rehman via Bhekray wala, Thatha Umar, Bora Loudyial, Haveli Nathoka, Kanjou, Shahpur Kanjou, Kotla Rehman to Janiana Shah Length 25.60 km in District Sargodha)

Reference # CED/TFL **33439** (Dr. Usman Akmal)

Dated: 26-06-2019

Reference of the request letter # 214/SP

Dated: 13-06-2019

Tension Test Report (Page -1/1)

Date of Test 27-06-2019

Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		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	0.364	3	0.369	0.11	0.107	3100	4500	62200	63870	90200	92800	1.20	15.0	
2	4.120	10	1.242	1.27	1.211	40200	53200	69800	73160	92400	96900	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Bend Test

#3 Bar Bend Test Through 180° is Satisfactory

#10 Bar Bend Test Through 180° is Satisfactory

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UET Lahore, Pakistan.

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To,
M/S CM Engineering (Pvt) Ltd
Lahore
(CMPAK Project Site ID = 42561)

Reference # CED/TFL **33441** (Dr. Usman Akmal)
Reference of the request letter # CME/Steel/CMPAK/327

Dated: 26-06-2019
Dated: 18-05-2019

Tension Test Report (Page -1/1)

Date of Test 27-06-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile Test as per ASTM A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		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	0.414	10	10.00	0.12	0.122	3600	5500	66138	65140	101044	99600	0.80	10.0	
2	0.377	10	9.54	0.12	0.111	2900	4300	53278	57730	78998	85600	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
M/S Defence Housing Authority.
Lahore Cantt
(Infra Development Works Sector-E, DHA Ph-IX)(M/s Inland)

Reference # CED/TFL **33443** (Dr. Usman Akmal)
Reference of the request letter # 408/241/E/Lab/621/57

Dated: 26-06-2019
Dated: 26-06-2019

Tension Test Report (Page -1/1)

Date of Test 27-06-2019
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 ²)		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	3200	4900	64200	63110	98200	96700	1.30	16.3	City Steel
2	0.375	3	0.374	0.11	0.110	3100	4800	62200	62070	96200	96100	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,
 Junior Research Officer-I
 Building Research Station
 Lahore
 (Supreme Steel)

Reference # CED/TFL **33444** (Dr. Usman Akmal)
 Reference of the request letter # 154-R/1447

Dated: 26-06-2019
 Dated: 03-06-2019

Tension Test Report (Page -1/1)

Date of Test 27-06-2019
 Gauge length 2 inches
 Description Deformed Steel Bar Tensile Test as per BS 4449

Sr. No.	Weight (lbs/ft)	Diameter/ Size		Area (in ²)		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	0.369	3	0.371	0.11	0.108	3600	4900	72200	73240	98200	99700	0.5	25.0	
2	0.374	3	0.374	0.11	0.110	3600	5000	72200	72170	100200	100300	0.4	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,
M/S Defence Housing Authority.
Lahore Cantt
(Const. of Mosque at Sector-D, DHA Ph-VI)(M/s Warraich Constr)

Reference # CED/TFL **33445** (Dr. Usman Akmal)
Reference of the request letter # 408/241/E/Lab/620/035

Dated: 26-06-2019
Dated: 26-06-2019

Tension Test Report (Page -1/1)

Date of Test 27-06-2019
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 ²)		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	0.412	3	0.393	0.11	0.121	2600	4300	52100	47350	86200	78300	1.30	16.3	Saeed Kasur
2	0.382	3	0.378	0.11	0.112	3500	5500	70200	68710	110200	108000	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,
 Planning and Monitoring Engineer
 Matrix Management (Pvt) Ltd
 Project: Ibrahim Industries, Lahore

Reference # CED/TFL **33453** (Dr. Usman Akmal)
 Reference of the request letter # MW/MMPL-2/2019/02

Dated: 27-06-2019
 Dated: 27-06-2019

Tension Test Report (Page -1/1)

Date of Test 27-06-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ size		Area (in ²)		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	0.372	3	0.373	0.11	0.109	4000	4900	80200	80730	98200	98900	1.10	13.8	
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Note: only one sample for tensile test														
Bend Test														

I/C Testing Laboratoires
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