



**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/03/1025

Dated: 07-03-2022

Date of Test: 14-03-2022

To,  
DGM (Lab)  
Future Developments Holdings (Pvt) Limited  
Development of Capital Smart City

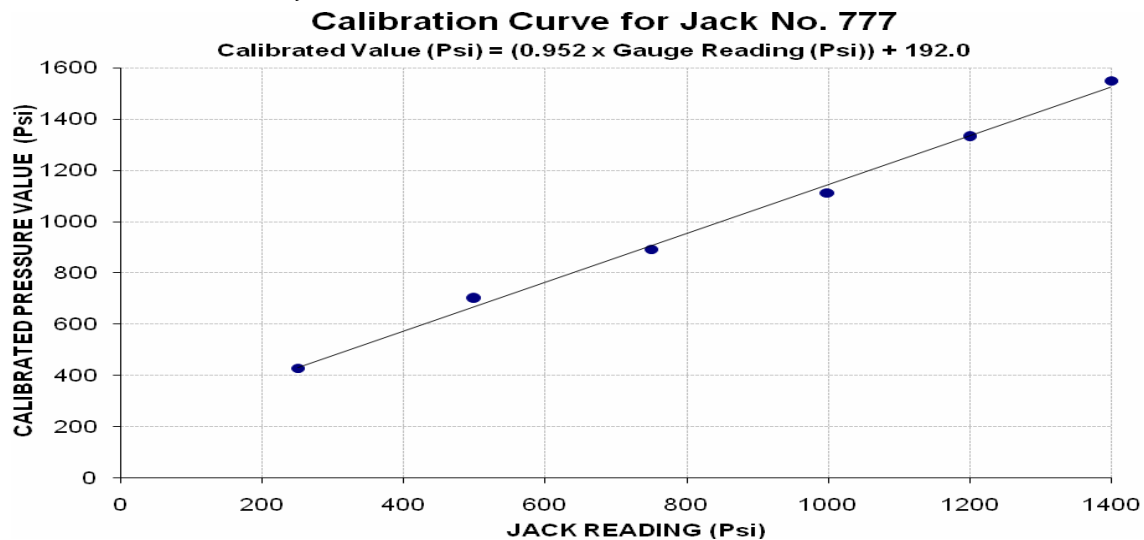
Subject: - CALIBRATION OF HYDRAULIC JACK WITH PRESSURE GAUGE  
(MARK: TFL/03/1025) (Page # 1/2)

Reference to your Letter No. FDHL/CSC/02/2022/0222, Dated: 28/02/2022 on the subject cited above. One Hydraulic Jack No. 777 with Pressure Gauge No. EN 837-1 as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 10000 (Psi)**  
**Calibrated Range : Zero - 1400 (Psi)**

Hydraulic Jack Reading (Psi)	250	500	750	1000	1200	1400
Calibrated Load (kg)	50600	82933	105867	131867	158000	183867
Calibrated Pressure (Psi)	426	699	892	1111	1331	1549

The Ram Area of Jack = 261.69 in<sup>2</sup>



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

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Ref: CED/TFL/03/1025

Dated: 07-03-2022

Date of Test: 14-03-2022

To,  
DGM (Lab)  
Future Developments Holdings (Pvt) Limited  
Development of Capital Smart City

Subject: - CALIBRATION OF DIAL GAUGES (MARK: TFL/03/1025) (Page # 2/2)

Reference to your Letter No. FDHL/CSC/02/2022/0222, Dated: 28/02/2022 on the subject cited above. Three Dial Gauges as received by us have been calibrated on standard calibration device. The results are tabulated as under.

**Total Range : Zero - 50 (mm)**  
**Calibrated Range : Zero - 30 (mm)**

Standard Reading	Dial Gauge Readings		
	Dial Gauge No. I (16K220157)	Dial Gauge No. II (16F083307)	Dial Gauge No. III (16F083345)
200	199	197	198
400	399	397	399
600	598	597	597
800	798	798	798
1000	997	997	998
1200	1198	1196	1197
1400	1400	1396	1397
1600	1598	1596	1596
1800	1799	1796	1797
2000	1999	1996	1997
2200	2199	2197	2197
2400	2399	2397	2396
2600	2599	2597	2597
2800	2800	2797	2797
3000	2999	2997	2997

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

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To,  
M/S Gunj Bukhash Builders  
Lahore

Reference # CED/TFL **1047** (Dr. Rizwan Azam)  
Reference of the request letter # GBB-UET-01

Dated: 10-03-2022

Dated: 10-03-2022

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

Date of Test 14-03-2022  
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	9.53 (3/8")	432.0	461.0	10700	104.97	11500	112.82	>3.50	xx
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
<b>Only one sample for Test</b>									

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

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To,  
M/S Beybani Construction Co.  
Islamabad  
(Civil Work for NG Compression Part (2C))  
(FFC Mirpur Mathelo)

Reference # CED/TFL **1049** (Dr. Waseem Abbas)  
Reference of the request letter # Nil

Dated: 11-03-2022  
Dated: 11-03-2022

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

Date of Test 14-03-2022  
Gauge length 8 inches  
Description Plain Steel Bar Tensile and Bend Test

Sr. No.	Weight (lbs/ft)	Diameter/ size		Area (mm <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (MPa) Actual	Ultimate Stress (MPa) Actual	Elongation (inch)	% Elongation	Reduction of Area (mm <sup>2</sup> )	% Reduction of Area	Remarks
		Nominal (inch)	Actual (mm)	Nominal	Actual									
1	6.210	1-1/4	31.74	----	791.1	24600	39000	305	484	2.70	33.8	411.87	47.9	
2	6.167	1-1/4	31.63	----	785.6	24200	39000	302	487	2.90	36.3	390.57	50.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile test</b>														
Bend Test														

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

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To,  
M/S Project Managers  
Lahore  
(Allied Bank Limited Plot No. 14 Block A3 Gulberg III Lahore)

Reference # CED/TFL **1054** (Dr. Rizwan Azam)  
Reference of the request letter # Nil

Dated: 11-03-2022  
Dated: 11-03-2022

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

Date of Test 14-03-2022  
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	0.383	3	0.378	0.11	0.113	3900	5100	78200	76400	102200	100000	1.10	13.8	FF Steel
2	0.384	3	0.379	0.11	0.113	3900	5200	78200	76250	104200	101700	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

Witness by M. Anas (Officer Civil ABL)

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

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To,  
 Resident Engineer  
 Pillar & Sons  
 Rumanza Golf & Country Club, DHA Multan

Reference # CED/TFL **1055** (Dr. Rizwan Azam)  
 Reference of the request letter # P&S/OTH/GEN/00072

Dated: 11-03-2022  
 Dated: 11-03-2022

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

Date of Test 14-03-2022  
 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	4.396	10	1.283	1.27	1.292	32000	42600	55600	54580	74000	72700	1.40	17.5	SJ Steel
2	4.302	10	1.269	1.27	1.265	44000	56600	76400	76700	98300	98700	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														

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

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To,  
 Sr. Engineer (Civil), WASO  
 PAEC, BINO Bahawalpur

Reference # CED/TFL **1058** (Dr. M Rizwa Riaz)  
 Reference of the request letter # WASO-BINO-21-002

Dated: 14-03-2022

Dated: 11-03-2022

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

Date of Test 14-03-2022  
 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	3400	5200	68200	68820	104200	105300	1.20	15.0	
2	0.372	3/8	0.373	0.11	0.109	3400	5200	68200	68590	104200	104900	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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 Laboratories**  
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To,  
 Planning & Coordination Engineer  
 REDO Engineering & Construction (Pvt) Ltd  
 Lahore

Reference # CED/TFL **1059** (Dr. M Rizwa Riaz)  
 Reference of the request letter # Nil

Dated: 14-03-2022  
 Dated: 14-03-2022

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

Date of Test 14-03-2022  
 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	0.374	3	0.374	0.11	0.110	3500	4800	70200	70210	96200	96300	1.30	16.3	
2	0.374	3	0.374	0.11	0.110	3500	4800	70200	70140	96200	96200	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														

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To,  
Construction Manager  
Guarantee Engineers (Pvt) Ltd  
Construction of Beaconhouse School System TNS 2 Gulberg-III Lahore

Reference # CED/TFL **1061** (Dr. M Rizwa Riaz)  
Reference of the request letter # TNS/GE/ST/011

Dated: 14-03-2022  
Dated: 13-03-2022

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

Date of Test 14-03-2022  
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	0.379	10	9.57	0.12	0.111	3700	4800	67975	73200	88184	95000	1.30	16.3	
2	0.375	10	9.52	0.12	0.110	3600	4700	66138	71940	86347	94000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm Bar Bend Test Through 180° is Satisfactory														

Witness by Muhammad Ali Khan (Assistant Manager.) D.M.C

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

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