



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/09/35442, 455

Dated: 30-09-2020

Dated of Test: 02-10-2020

To
M/S Progress Dynamics (Pvt) Ltd
Jhulay, Lahore

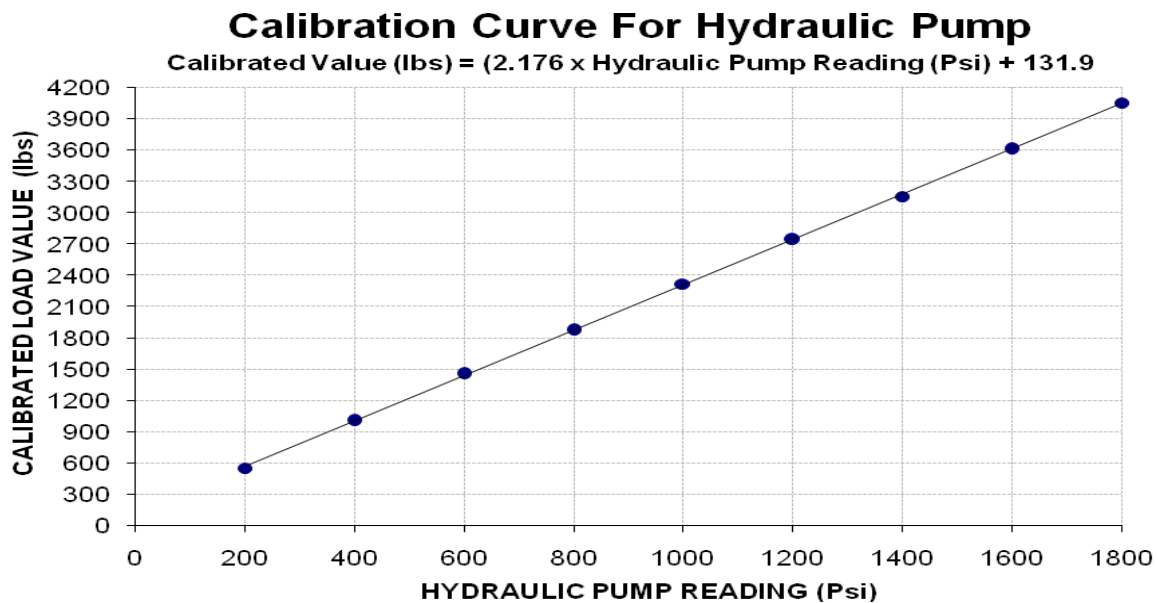
Subject: - **CALIBRATION OF HYDRAULIC PUMP (MARK: TFL/09/35442)** (Page # 1/2)

Reference to your Letter No. PD/UET-02, dated: 30/09/2020 on the subject cited above. One Hydraulic Pump as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 5800 (Psi)
Calibrated Range : Zero - 1800 (Psi)

Hydraulic Jack Reading (Psi)	200	400	600	800	1000	1200	1400	1600	1800	
Calibrated Load	(kN)	2.45	4.47	6.47	8.35	10.31	12.21	14.06	16.07	18.04
	(lbs)	551	1005	1455	1876	2318	2745	3161	3613	4055

1kN = 224.82 lbs



I/C Testing Laboratories
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/09/35442, 455

Dated: 30-09-2020

Dated of Test: 02-10-2020

To

M/S Progress Dynamics (Pvt) Ltd
Jhulay, Lahore

Subject: - CALIBRATION OF DEFLECTION GAUGES (MARK: TFL/09/35442) (Page # 2/2)

Reference to your Letter No. PD/UET-02, dated: 30/09/2020 on the subject cited above. One Deflection Gauge No. 2112-10 as received by us have been calibrated on standard calibration device. The results are tabulated as under.

Total Range : Zero - 14 (mm)
Calibrated Range : Zero - 11 (mm)

Standard Reading (mm)	Deflection Gauge Reading (mm)
0.50	0.50
1.00	1.00
1.50	1.50
2.00	2.00
2.50	2.50
3.00	3.00
3.50	3.50
4.00	4.00
4.50	4.50
5.00	5.00
5.50	5.50
6.00	6.0
6.50	6.50
7.00	7.00
7.50	7.50
8.00	8.00
8.50	8.50
9.00	9.00
9.50	9.50
10.00	10.00
10.50	10.50
11.00	11.00

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UET Lahore, Pakistan.

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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

To,
 Deputy Director (Works)
 For Mins Labour Welfare Commissioner
 Punjab, Lahore
 Establishment of Mines Labour Welfare for Mine Workers at Gulki/ Sanghar Tribal Tehsil Koh-e-Sulman District D.G. Khan
 Reference # CED/TFL **35443** (Dr. M Rizwan Riaz) Dated: 01-10-2020
 Reference of the request letter # MLW/C.E/MT/50/17/7672 Dated: 28-09-2020

Tension Test Report (Page -1/1)

Date of Test 02-10-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		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	0.360	3/8	0.367	0.11	0.106	3000	5100	60200	62530	102200	106300	1.00	12.5	
2	0.363	3/8	0.369	0.11	0.107	3000	5100	60200	61900	102200	105300	0.80	10.0	
3	0.360	3/8	0.367	0.11	0.106	2900	5100	58200	60460	102200	106400	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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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

To,
 M/S Defence Housing Authority.
 Lahore Cantt
 (U/G External Elec Sys of Additional Pockets in Sector- A & B of Commercial Broadway, Ph- VIII- (M/s MEFA)
 Reference # CED/TFL **35444** (Dr. M Rizwan Riaz) Dated: 01-10-2020
 Reference of the request letter # 408/241/E/Lab/991/06 Dated: 30-09-2020

Tension Test Report (Page -1/1)

Date of Test 02-10-2020
 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	0.369	3	0.372	0.11	0.108	4000	5100	80200	81310	102200	103700	1.10	13.8	Mughal Steel
2	0.376	3	0.375	0.11	0.110	3800	5000	76200	75810	100200	99800	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														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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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

To,
 Principal Architect
 Z.H. Kazmi & Associates
 MCB KLP Road, Sadiqabad Branch, Bahawalpur (0807)

Reference # CED/TFL **35446** (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 01-10-2020
 Dated: 01-10-2020

Tension Test Report (Page -1/1)

Date of Test 02-10-2020
 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	0.371	3	0.373	0.11	0.109	3800	4900	76200	76760	98200	99000	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,
 Resident Engineer
 AAA Jv ACC
 TurakPak
 Improvement/ Widening of Thokar Niaz Baig – Hudiyara Drain Section of N-5

Reference # CED/TFL **35447** (Dr. M Rizwan Riaz)
 Reference of the request letter # THDP/RE/01/563

Dated: 01-10-2020
 Dated: 18-09-2020

Tension Test Report (Page -1/1)

Date of Test 02-10-2020
 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 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	0.421	10	10.08	0.12	0.124	4100	5500	75324	72990	101044	98000	1.00	12.5	Mughal Steel
2	0.426	10	10.14	0.12	0.125	4100	5400	75324	72200	99207	95100	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Assistant Works Manager
 Pakistan Railways
 PR/Bridge Workshop, Jhelum
 (Installation of new Foot over Bridge at Hassan Abdal)
 Reference # CED/TFL **35448** (Dr. M Rizwan Riaz)
 Reference of the request letter # 196-S/103

Dated: 01-10-2020
 Dated: 24-09-2020

Tension Test Report (Page – 1/2)

Date of Test 02-10-2020
 Gauge length 2 inches
 Description Steel Structure Steel Strip Tensile and Bend Test as per ASTM A36

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)		(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	M.S Angle	4x4x1/2x24	27.10x9.70	262.87	11500	14500	429.17	541.12	0.70	35.00	
2			27.10x9.70	262.87	12000	14500	447.83	541.12	0.70	35.00	
3	M.S Angle	2 ¹ / ₂ x2 ¹ / ₂ x5/16x24	27.10x8.30	224.93	8400	13700	366.35	597.51	0.60	30.00	
4			27.10x8.30	224.93	8400	13600	366.35	593.14	0.60	30.00	
5	M.S Angle	3x3x3/8x24	27.00x9.90	267.30	8400	13200	308.28	484.44	0.60	30.00	
6			27.00x9.90	267.30	8400	13900	308.28	510.13	0.60	30.00	
7	M.S Angle	3 ¹ / ₂ x3 ¹ / ₂ x3/8x24	27.00x9.40	253.80	8100	12700	313.09	490.89	0.70	35.00	
8			27.00x9.40	253.80	9000	13000	347.87	502.48	0.70	35.00	
9	M.S Angle	5x5x1/2x24	27.00x12.00	324.00	9600	16200	290.67	490.50	0.70	35.00	
10			27.00x12.00	324.00	10300	17600	311.86	532.89	0.80	40.00	
11	M.S Angle	4x4x3/8x24	27.00x12.60	340.20	10400	17100	299.89	493.10	0.80	40.00	
12			27.00x12.60	340.20	10900	17000	314.31	490.21	0.75	37.50	
Only Twelve Samples for Tensile and Six samples for Bend Test											
Bend Test											
Strip Taken from M.S Angle(4"x4"x1/2"x24") Bend Test Through 180° is Satisfactory											
Strip Taken from M.S Angle(2 ¹ / ₂ "x2 ¹ / ₂ "x5/16"x24") Bend Test Through 180° is Satisfactory											
Strip Taken from M.S Angle(3"x3"x3/8"x24") Bend Test Through 180° is Satisfactory											
Strip Taken from M.S Angle(3 ¹ / ₂ "x3 ¹ / ₂ "x3/8"x24") Bend Test Through 180° is Satisfactory											
Strip Taken from M.S Angle(5"x5"x1/2"x24") Bend Test Through 180° is Satisfactory											
Strip Taken from M.S Angle(4"x4"x3/8"x24") Bend Test Through 180° is Satisfactory											

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Assistant Works Manager
 Pakistan Railways
 PR/Bridge Workshop, Jhelum
 (Installation of new Foot over Bridge at Hassan Abdal)
 Reference # CED/TFL **35448** (Dr. M Rizwan Riaz)
 Reference of the request letter # 196-S/103

Dated: 01-10-2020
 Dated: 24-09-2020

Tension Test Report (Page – 2/2)

Date of Test 02-10-2020
 Gauge length 2 inches
 Description Steel Structure Steel Strip Tensile and Bend Test as per ASTM A36

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)		(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	M.S Channel	6x3x12	24.60x7.40	182.04	5700	9300	307.17	501.17	0.60	30.00	
2			24.60x7.40	182.04	5600	9100	301.78	490.39	0.60	30.00	
3	M.S Channel	10x3 ¹ / ₂ x12	24.50x12.00	294.00	8500	13900	283.62	463.81	0.80	40.00	
4			24.50x12.00	294.00	8400	13500	280.29	450.46	0.70	35.00	
5	M.S Plate	4x1/2x15	26.00x12.00	312.00	9400	14100	295.56	443.34	0.70	35.00	
6			26.00x12.00	312.00	8500	14100	267.26	443.34	0.70	35.00	
7	M.S Plate	4x1/4x15	25.60x5.80	148.48	5200	7400	343.56	488.91	0.70	35.00	
8			25.60x5.80	148.48	5400	7400	356.78	488.91	0.60	30.00	
9	M.S Plate	4x3/8x15	25.70x9.70	249.29	8600	12500	338.43	491.90	0.70	35.00	
10			25.70x9.70	249.29	8500	12700	334.49	499.77	0.60	30.00	
11	M.S Chequered Plate	4x5/16x15	25.80x7.90	203.82	5800	9100	279.16	437.99	0.70	35.00	
12			25.70x7.90	203.03	5800	9200	280.24	444.53	0.50	25.00	

Only Twelve Samples for Tensile and Six samples for Bend Test

Bend Test

Strip Taken from M.S Channel (6"x3"x12") Bend Test Through 180° is Satisfactory

Strip Taken from M.S Channel (10x3¹/₂"x12") Bend Test Through 180° is Satisfactory

Strip Taken from M.S Plate (4"x1/2"x15") Bend Test Through 180° is Satisfactory

Strip Taken from M.S Plate (4"x1/4"x15") Bend Test Through 180° is Satisfactory

Strip Taken from M.S Plate (4"x3/8"x15") Bend Test Through 180° is Satisfactory

Strip Taken from M.S Chequered Plate (4"x5/16"x15") Bend Test Through 180° is Satisfactory

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
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To,
 Asad Raza
 Lahore
 (Project: Al-Rehman Garden E/37)

Reference # CED/TFL **35451** (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 02-10-2020
 Dated: 02-10-2020

Tension Test Report (Page -1/1)

Date of Test 02-10-2020
 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 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	0.375	3/8	0.374	0.11	0.110	3400	4900	68200	68070	98200	98100	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 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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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

To,
 Project Engineer
 Deedar Developers Pvt. Ltd
 Construction of Zameen Opal, Plat No. 16, Sector-A, Land Breeze Housing Society, Raiwind
 Road, Lahore
 Reference # CED/TFL **35453** (Dr. Qasim Khan) Dated: 02-10-2020
 Reference of the request letter # ZD/ZO/L/036 Dated: 02-10-2020

Tension Test Report (Page -1/1)

Date of Test 02-10-2020
 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	0.370	3	0.372	0.11	0.109	3600	4900	72200	72980	98200	99400	1.30	16.3	
2	0.365	3	0.370	0.11	0.107	3300	4600	66200	67800	92200	94500	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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