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/09/33848 Dated: 18-09-2019

To,
Executive Engineer (Civil)
MEPCO H.Q's. Multan
(Spun Hollow PC Poles Manufactured at Different Pole Plant for MEPCO)

Subject: **- CALIBRATION OF DYNAMOMETER (MARK: TFL/09/33848)** (Page – 1/2)

Ref: Your letter No. 1554, dated: 12/09/2019 on the subject cited above. One Dynamometer as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 10000 (kg)
Calibrated Range : Zero - 3000 (kg)

Dynamometer Readings (kg)	Calibrated Readings		Dynamometer Readings (kg)	Calibrated Readings	
	(kN)	(kg)		(kN)	(kg)
200	2.00	204	1800	15.00	1529
400	3.50	357	2000	16.75	1707
600	5.25	535	2200	18.25	1860
800	7.00	714	2400	20.00	2039
1000	8.50	866	2600	22.00	2243
1200	10.00	1019	2800	23.50	2396
1400	11.50	1172	3000	25.50	2599
1600	13.25	1351			

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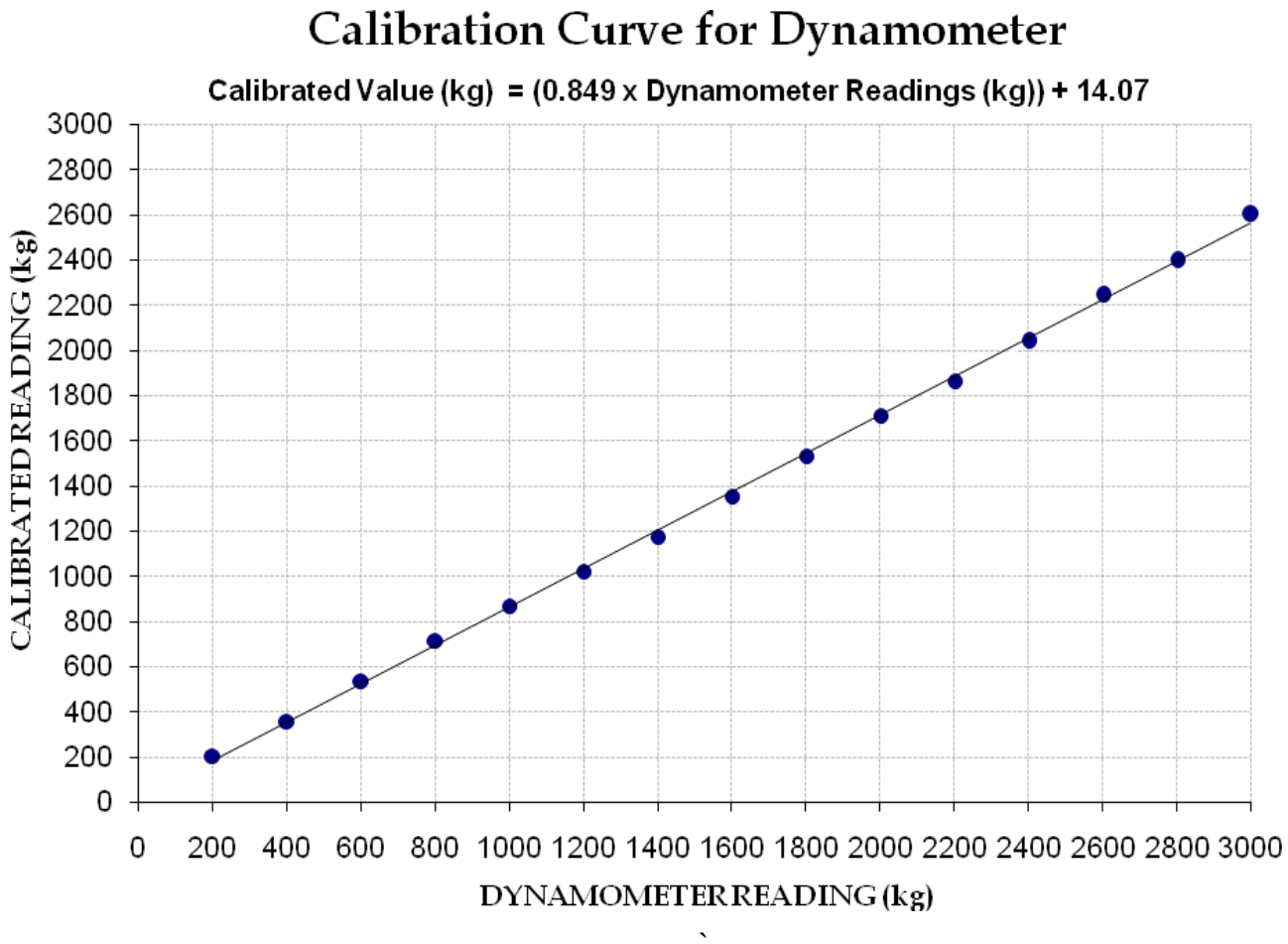
Ref: CED/TFL/09/33848 Dated: 18-09-2019

To,
Executive Engineer (Civil)
MEPCO H.Q's. Multan
(Spun Hollow PC Poles Manufactured at Different Pole Plant for MEPCO)

Subject: **- CALIBRATION OF DYNAMOMETER (MARK: TFL/09/33848)** (Page – 2/2)



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STRUCTURAL ENGINEERING DIVISION

Test Floor Laboratory
Department of Civil Engineering
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To,
Resident Engineer (PMD)
AL-Imam Enterprises Pvt.Ltd
Construction of Penta Square, Phase-V, DHA, Lahore

Reference # CED/TFL 33825 (Dr. Ali Ahmed) Dated: 13-09-2019
Reference of the request letter # Al-Imam/746/PS-1/DHA/LHE/932 Dated: 13-09-2019

Seamless/Flattening Test Report

Date of Test 18-09-2019
Description MS Pipe Seamless Test as per ASTM A 106

Sr. No.	Designation	Test Type	Observation/Results
1	Pipe(25mm)	Ductility	No crack was observed
		Soundness	No evidence of lamination noticed
2	Pipe(50mm)	Ductility	No crack was observed
		Soundness	No evidence of lamination noticed
3	Pipe(100mm)	Ductility	No crack was observed
		Soundness	No evidence of lamination noticed
-	-	-	-
		-	-
-	-	-	-
		-	-
-	-	-	-
		-	-
	Only Three Samples for Test		

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Resident Engineer (PMD)
AL-Imam Enterprises Pvt.Ltd
Construction of Penta Square, Phase-V, DHA, Lahore

Reference # CED/TFL 33825 (Dr. Ali Ahmed) Dated: 13-09-2019
Reference of the request letter # Al-Imam/746/PS-1/DHA/LHE/932 Dated: 13-09-2019

Weight &Size Test Report (Page – 2/2)

Date of Test 18-09-2019
Gauge length -------
Description MS Pipes Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	External Diameter	Internal Diameter	Wall Thickness	Remark
	(mm)	(g)	(mm)	(kg/m)	(mm)	(mm)	(mm)	
1	25	157	60.00	2.62	33.30	26.10	3.60	
2	50	309	60.10	5.14	60.20	52.70	3.75	
3	100	938	60.30	15.56	114.20	102.80	5.70	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
Only Three Samples for Test								

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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/09/33835 Dated: 16-09-19

Date of Test: 18-09-19

To,
M/S Hamza Corporation
Lahore

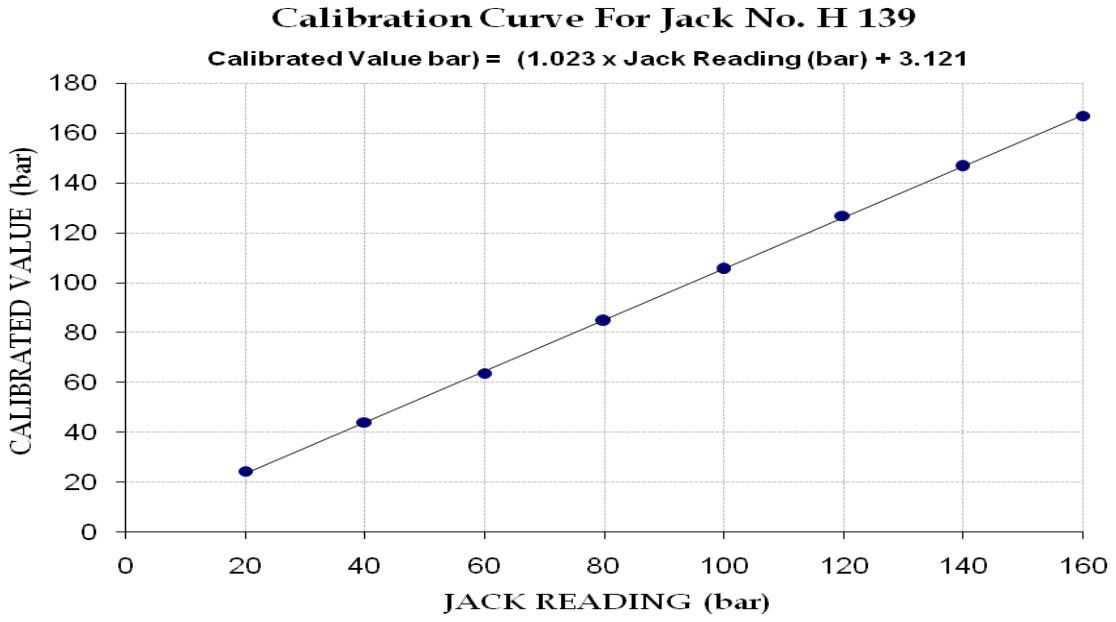
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/09/33835)**

Reference to your Letter No. Nil, Dated: 16/09/2019 on the subject cited above. One Hydraulic Jack No H 139 as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 410 (bar)
Calibrated Range : Zero - 160 (bar)

Hydraulic Jack Reading (bar)	20	40	60	80	100	120	140	160
Calibrated Load (k g)	28200	51200	74000	98400	122600	147400	170400	193800
Calibrated Pressure (bar)	24.26	44.04	63.65	84.64	105.46	126.79	146.58	166.71

The Ram Area of Jack = 1140.095 cm^2



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STRUCTURAL ENGINEERING DIVISION

Test Floor Laboratory
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To,
M/S Defence Housing Authority.
Lahore Cantt
(Infra Develment Works Sector-M (Extn), DHA PH-V)(M/s AAJ Engrs)

Reference # CED/TFL **33841** (Dr. Ali Ahmed) Dated: 17-09-2019
Reference of the request letter # 408/241/E/Lab/696/75 Dated: 16-09-2019

Tension Test Report (Page -1/1)

Date of Test 18-09-2019
Gauge length ------
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A496

Sr. No.	Weight	Diameter/ size		Area (mm^2)		Yield load	Breaking Load	Yield Stress (Mpa)		Ultimate Stress (Mpa)		Remarks
	(Kg/m)	Nominal (in)	Actual (mm)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	
1	0.111	5/32	4.25	12.82	14.15	700	800	536	485	612	554	
2	0.114	5/32	4.30	12.82	14.55	800	900	612	540	689	607	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test												
Bend Test												
5/32**"** 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
Department of Civil Engineering
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To,
M/S Defence Housing Authority.
Lahore Cantt
(Infra Dev Works (Pkg-II, III & IV), DHA Ph-IX (Prism)(M/s NLC)

Reference # CED/TFL **33844** (Dr. Ali Ahmed) Dated: 17-09-2019
Reference of the request letter # 408/241/E/Lab/699/1521 Dated: 17-09-2019

Tension Test Report (Page -1/1)

Date of Test 18-09-2019
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	0.369	3	0.372	0.11	0.109	4000	5300	80200	81210	106200	107600	0.90	11.3	S.J Steel
2	0.364	3	0.369	0.11	0.107	3800	5000	76200	78200	100200	102900	0.90	11.3	
3	4.247	10	1.261	1.27	1.248	44000	58200	76400	77690	101100	102800	1.30	16.3	
4	4.229	10	1.258	1.27	1.243	43600	57200	75700	77310	99300	101500	1.20	15.0	
5	5.350	11	1.415	1.56	1.573	51200	65800	72400	71760	93000	92300	1.40	17.5	
6	5.341	11	1.414	1.56	1.570	48200	63600	68100	67670	89900	89300	1.50	18.8	
Note: only six samples for tensile and three samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180º is Satisfactory														
#10 Bar Bend Test Through 180º is Satisfactory														
#11 Bar Bend Test Through 180º is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
M/S Defence Housing Authority.
Lahore Cantt
(Proposed Commercial Plaza, DRGCC Ph-III, DHA Ph-VI)(M/s Construct)

Reference # CED/TFL **33845** (Dr. Ali Ahmed) Dated: 17-09-2019
Reference of the request letter # 408/241/E/Lab/697/3593 Dated: 17-09-2019

Tension Test Report (Page -1/1)

Date of Test 18-09-2019
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	0.361	3	0.367	0.11	0.106	3600	5000	72200	74870	100200	104000	1.00	12.5	Kamran Steel
2	0.365	3	0.370	0.11	0.107	3400	4800	68200	69860	96200	98700	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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To,
DCRE
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Reference # CED/TFL **33846** (Dr. Ali Ahmed) Dated: 17-09-2019
Reference of the request letter # LSM/RE-II/St/19/492 Dated: 16-09-2019

Tension Test Report (Page – 1/1)

Date of Test 18-09-2019
Gauge length -------
Description Tension Wire & Chain Link Wire Tensile Test

Sr. No.	Diameter of Single Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	**3.10**	**7.00**	Tension Wire
2	**3.10**	**7.00**	
3	**2.80**	**2.00**	Chain Link Wire
4	**2.80**	**2.00**	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
Only Four Samples for Test			

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To,
DCRE/RE-1
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Reference # CED/TFL **33847** (Dr. Ali Ahmed) Dated: 17-09-2019
Reference of the request letter # LSMP/RE-1/2019/1064 Dated: 17-09-2019

Tension Test Report (Page – 1/1)

Date of Test 18-09-2019
Gauge length -------
Description Chain Link Wire & Tension Wire Tensile Test

Sr. No.	Diameter Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	**3.00**	**4.50**	**Chain Link Wire**
2	**3.00**	**4.50**	
3	**3.10**	**6.50**	**Tension Wire**
4	**3.10**	**6.50**	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
Only Four Samples for Test			

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