



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/11/4211, 4212

Dated: 17-11-2023

Date of Test: 21-11-2023

To,

Resident Engineer
NESPAK

Construction of Multi-Level Grade Separation Flyover at Shahdra Morr,
Lahore.

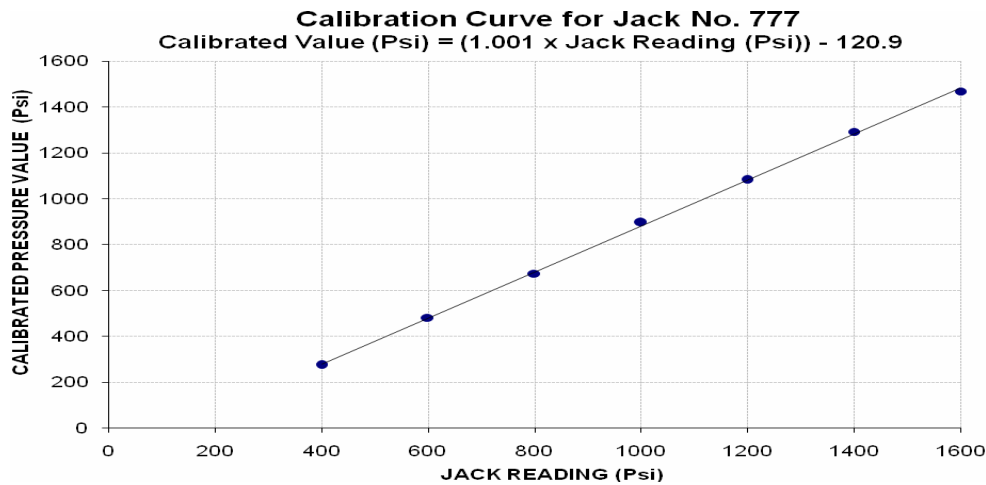
Subject: - CALIBRATION OF HYDRAULIC JACK WITH PRESSURE GAUGE
(MARK: TFL/11/4211) (Page # 1/4)

Reference to your Letter No. 4537/03/MSA/09/143, Dated: 01/11/2023 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 - 8000 (Psi)
Calibrated Range : Zero - 1600 (Psi)

Jack Reading (Psi)	400	600	800	1000	1200	1400	1600
Calibrated Load (kg)	32600	57000	80000	106400	128400	153400	174200
Calibrated Pressure (Psi)	275	480	674	896	1082	1292	1468

The Ram Area for Calibration = 261.69 in²



I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

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Dated: 17-11-2023

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To,

Resident Engineer
NESPAK

Construction of Multi-Level Grade Separation Flyover at Shahdra Morr,
Lahore.

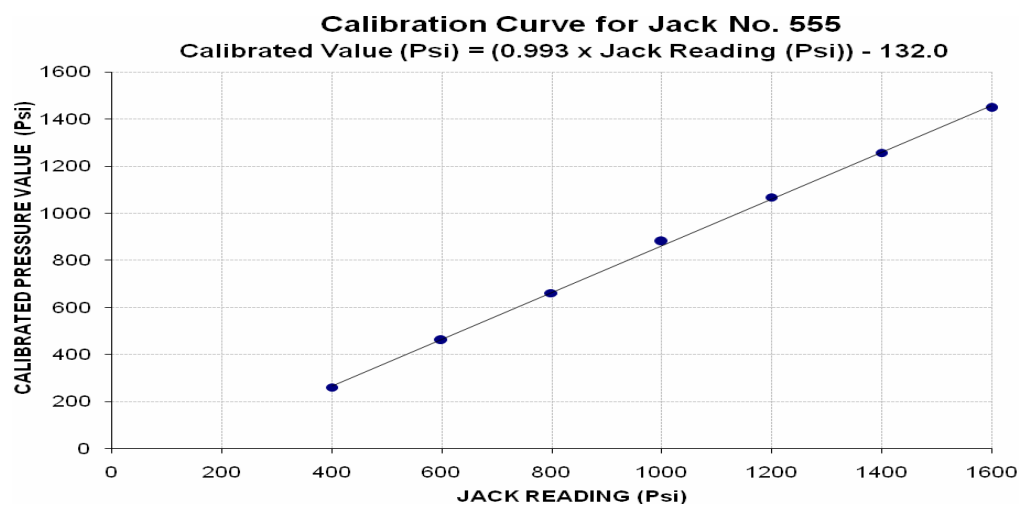
Subject: - CALIBRATION OF HYDRAULIC JACK WITH PRESSURE GAUGE
(MARK: TFL/11/4211) (Page # 2/4)

Reference to your Letter No. 4537/03/MSA/09/143, Dated: 01/11/2023 on the subject cited above. One Hydraulic Jack No. 555 with Pressure Gauge No. EN - 837-1 as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 8000 (Psi)
Calibrated Range : Zero - 1600 (Psi)

Jack Reading (Psi)	400	600	800	1000	1200	1400	1600
Calibrated Load (kg)	30800	54600	78400	104400	126600	149200	171800
Calibrated Pressure (Psi)	259	460	660	880	1067	1257	1447

The Ram Area for Calibration = 261.69 in²



I/C Testing Laboratoires
UET Lahore, Pakistan.

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Ref: CED/TFL/11/4211, 4212

Dated: 17-11-2023

Date of Test: 21-11-2023

To,

Resident Engineer
NESPAK

Construction of Multi-Level Grade Separation Flyover at Shahdra Morr, Lahore.

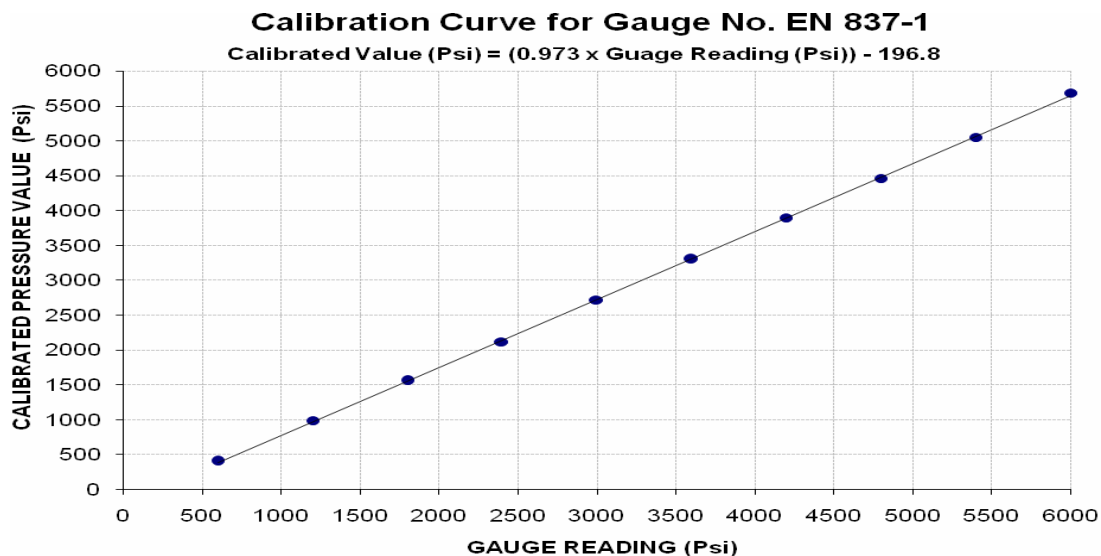
Subject: - **CALIBRATION OF PRESSURE GAUGE (MARK: TFL/11/4211)** (Page # 3/4)

Reference to your Letter No. 4537/03/MSA/09/143, Dated: 01/11/2023 on the subject cited above. One Pressure Gauge No. EN 837-1 as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 8000 (Psi)
Calibrated Range : Zero - 6000 (Psi)

Gauge Reading (Psi)	600	1200	1800	2400	3000	3600	4200	4800	5400	6000
Calibrated Load (kg)	5600	13700	21700	29500	37800	45900	54200	62100	70300	79100
Calibrated Pressure (Psi)	402	984	1559	2119	2715	3297	3893	4461	5050	5682

The Ram Area for Calibration = 198 cm²



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Ref: CED/TFL/11/4211, 4212

Dated: 17-11-2023

Date of Test: 21-11-2023

To,

Resident Engineer
NESPAK

Construction of Multi-Level Grade Separation Flyover at Shahdra Morr,
Lahore.

Subject: - **CALIBRATION OF DIAL GAUGES (MARK: TFL/11/4212)** (Page # 4/4)

Reference to your Letter No. 4537/03/MSA/09/143, Dated: 01/11/2023 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 - 50 (mm)

Standard Reading	Dial Gauge Readings			
	Dial Gauge No. I (99224)	Dial Gauge No. II (S13710)	Dial Gauge No. III (HO7096)	Dial Gauge No. IV (GE146632)
400	391	393	394	389
800	790	793	794	790
1200	1190	1193	1194	1190
1600	1589	1593	1595	1588
2000	1989	1993	1995	1992
2400	2388	2391	2396	2388
2800	2787	2791	2797	2788
3200	3187	3191	3198	3185
3600	3587	3592	3598	3585
4000	3987	3990	3998	3984
4400	4387	4390	4396	4380
4800	4786	4790	4797	4780
5000	4985	4990	4998	4980

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UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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Pakistan. Ph: 92-42-99029202

To,
 Resident Engineer
 Shahzad Ayub Associate
 New Metro City Sri Alamgir.

Reference # CED/TFL **4214** (Dr. M Kashif)
 Reference of the request letter # SAA-St-Rep-006

Dated: 20-11-2023
 Dated: 18-11-2023

Tension Test Report (Page -1/1)

Date of Test 21-11-2023
 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	0.401	3	0.387	0.11	0.118	3740	5350	75000	69960	107200	100100	1.00	12.5	SJ Steel
2	0.374	3	0.374	0.11	0.110	3620	5070	72600	72550	101600	101700	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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To,
 QA QC Manager
 Zameen Development
 Construction of Zameen Quadrangle at Plot # 49, Zafar Ali Road, Lahore

Reference # CED/TFL **4218** (Dr. M Kashif) Dated: 20-11-2023
 Reference of the request letter # ZD/QAQC/QUAD&JADE/05 Dated: 20-11-2023

Tension Test Report (Page -1/1)

Date of Test 21-11-2023
 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	0.377	3	0.376	0.11	0.111	3360	4790	67400	66870	96000	95400	1.30	16.3	SJ Steel Heat # 109, 113
2	0.381	3	0.378	0.11	0.112	3470	4940	69600	68300	99000	97300	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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Pakistan. Ph: 92-42-99029202

To,

ARE MMP/PCP
 Pack-V, Okara
 Punjab Cities Program.
 Improvement of Road from Tank to Harina wala Chowk Okara M.A. Jinnah Road.
 Length = 1.02 km.

Reference # CED/TFL **4219** (Dr. M Kashif)

Dated: 20-11-2023

Reference of the request letter # MMP/PCP/MCO/106/2023

Dated: 31-10-2023

Tension Test Report (Page -1/1)

Date of Test 21-11-2023

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	0.368	3	0.371	0.11	0.108	3840	5010	77000	78160	100400	102000	1.30	16.3	
2	0.370	3	0.372	0.11	0.109	3920	5010	78600	79400	100400	101500	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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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,

Engineer Farid ullah Shah
 The Resident Consulting Engineers
 Acrow Consultant
 Construction of Apartment Building at 45-B-1, Gulberg-III, Lahore

Reference # CED/TFL **4220** (Dr. M Kashif)
 Reference of the request letter # ACROW/C/45-B/23

Dated: 20-11-2023
 Dated: 18-11-2023

Tension Test Report (Page -1/1)

Date of Test 21-11-2023
 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	0.405	3	0.389	0.11	0.119	3570	5010	71600	66060	100400	92800	1.10	13.8	
2	0.412	3	0.393	0.11	0.121	3720	5220	74600	67670	104600	95000	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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
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University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Project Director
Punjab Industrial Estate
Rahim Yar Khan Industrial Estate
Rahim Yar Khan

Reference # CED/TFL **4222** (Dr. M Kashif)
Reference of the request letter # PIE/PD/RIE/2387

Dated: 20-11-2023
Dated: 16-11-2023

Tension Test Report (Page -1/1)

Date of Test 21-11-2023
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	0.377	3	0.376	0.11	0.111	3720	5270	74600	74020	105600	104900	1.20	15.0	SJ Steel
2	0.380	3	0.377	0.11	0.112	3720	5250	74600	73360	105200	103600	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,

M/S Rana Associates
Lahore
(Project: P-160, Gulberg Lahore.)

Reference # CED/TFL 4224 (Dr. M Kashif)
Reference of the request letter # Nil

Dated: 20-11-2023
Dated: 20-11-2023

Tension Test Report (Page -1/1)

Date of Test 21-11-2023
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	0.373	3/8	0.374	0.11	0.110	3360	4810	67400	67510	96400	96700	1.40	17.5	
2	0.375	3/8	0.375	0.11	0.110	3360	4890	67400	67110	98000	97700	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two 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,

Resident Engineer
 Construction Supervision Consultants (CSC)
 Central Asia Regional Economic Cooperation (CAREC)
 Regional Improvement Border Services (RIBS)
 ACB Loan No. 3344-Pak and 3345-Chaman BCP

Reference # CED/TFL **4225** (Dr. M Kashif)

Dated: 20-11-2023

Reference of the request letter # 5065059/CAREC-RIBS/CHAMAN/RE-755 Dated: 18-11-2023

Tension Test Report (Page -1/1)

Date of Test 21-11-2023

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	0.411	10	9.96	0.12	0.121	4350	5710	79917	79390	104902	104300	1.20	15.0	Mughal Steel
2	0.411	10	9.96	0.12	0.121	4300	5630	78998	78490	103432	102800	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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