



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
 EA Consulting (Pvt) Ltd
 Sukkur – Multan Motorway Project Section-III (CSCEC)

Reference # CED/TFL **33062** (Dr. Qasim Khan)
 Reference of the request letter # RE/EA/M.P-III/381-2018

Dated: 12-04-2019
 Dated: 12-04-2019

Tension Test Report (Page – 1/1)

Date of Test 19-04-2019
 Gauge length 2 inches
 Description W-Beam Strip Tensile and Bend Test as per ASHTO M180

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	W-Beam	2.78x0.28	0.78	3400	4500	4375.80	5791.51	0.60	30.00	
2		2.78x0.28	0.78	3300	4400	4247.10	5662.81	0.55	27.50	
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-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test										
Bend Test										

I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

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To,
M/S CSCEC Pakistan
Peshawar–Karachi Motorway (Sukkur–Multan Section 2) Project

Reference # CED/TFL **33069** (Dr. Qasim Khan)
Reference of the request letter # CSCEC/PKM/SEC 2/2019/05

Dated: 15-04-2019
Dated: 15-04-2019

Tension Test Report (Page – 1/2)

Date of Test 19-04-2019
Gauge length 2 inches
Description Metal Post (Pipe) and Metal Plate Strip Tensile and Bend Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	Metal Post (Pipe)	24.00x8.20	196.80	7600	10900	378.84	543.34	0.60	30.00	
2		24.00x8.20	196.80	6900	10800	343.95	538.35	0.60	30.00	
3	Metal Plate	28.10x21.20	595.72	23600	34200	388.63	563.19	0.90	45.00	
4		28.10x21.20	595.72	23200	33900	382.05	558.25	0.90	45.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Four Samples for Tensile and One Sample for Bend Test										
Bend Test										
Strip Taken from Metal Post (Pipe) Bend Test Through 180° is Satisfactory										

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
M/S CSCEC Pakistan
Peshawar–Karachi Motorway (Sukkur–Multan Section 2) Project

Reference # CED/TFL **33069** (Dr. Qasim Khan)
Reference of the request letter # CSCEC/PKM/SEC 2/2019/05

Dated: 15-04-2019

Dated: 15-04-2019

Thickness Test Report (Page – 2/2)

Date of Test 19-04-2019
Gauge length -----
Description Metal Post (Pipe) and Metal Plate Thickness Test

Sr. No.	Designation	Thickness	Remark
		(mm)	
1	Metal Post (Pipe)	8.20	
2	Base Plate	21.20	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
Only Two Samples for Test			

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To,
Resident Engineer
EA Consulting (Pvt) Ltd
Sukkur – Multan Motorway Project Section-III (CSCEC)
(Beijing Xin Fang Sheng Hardware and Alternating Appliance Co. Ltd)

Reference # CED/TFL **33082** (Dr. Qasim Khan)
Reference of the request letter # CRE/EA/M.P-III/388-2019

Dated: 16-04-2019
Dated: 15-04-2019

Tension Test Report (Page – 1/1)

Date of Test 19-04-2019
Gauge length -----
Description Fence Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter Single Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	3.45	520	5.10	
2	3.45	520	5.10	
3	3.45	540	5.30	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only Three Samples for Test				

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Ref: CED/TFL/04/33084, 33094

Dated: 16-04-19

To
Resident Engineer
NESPAK
Construction of Under Passes at Kashmir Bridge along Canal Faisalabad

Subject: - **CALIBRATION OF HYDRAULIC JACK (MARK: TFL/04/33084)** (Page # 1/2)

Reference to your Letter No. 3994/103/AS/01/09, dated: 11/04/2019 on the subject cited above. One Hydraulic No. XJ999150 as received by us has been calibrated. The results are tabulated as under:

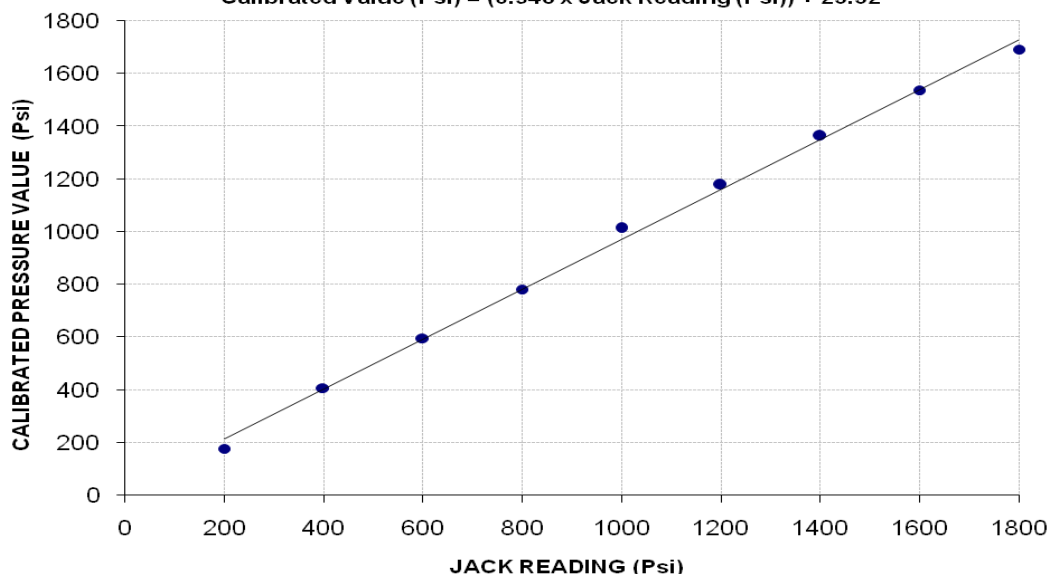
Total Range : Zero - 10000 (Psi)
Calibrated Range : Zero - 1800 (Psi)

Hydraulic Jack Reading (Psi)	200	400	600	800	1000	1200	1400	1600	1800
Calibrated Load (kg)	19400	44400	65000	85200	110600	128600	148800	167800	184600
Calibrated Pressure (Psi)	177.81	406.95	595.76	780.91	1013.71	1178.70	1363.84	1537.99	1691.97

The Ram Area of Jack = 240.53 in²

Calibration Curve for Jack No. XJ999150

Calibrated Value (Psi) = (0.948 x Jack Reading (Psi)) + 23.32



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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Ref: CED/TFL/04/33084, 33094

Dated: 16-04-19

To
Resident Engineer
NESPAK
Construction of Under Passes at Kashmir Bridge along Canal Faisalabad

Subject: - **CALIBRATION OF PRESSURE GAUGE (MARK: TFL/04/33084)** (Page # 2/2)

Reference to your Letter No. 3994/103/AS/01/09, dated: 11/04/2019 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:

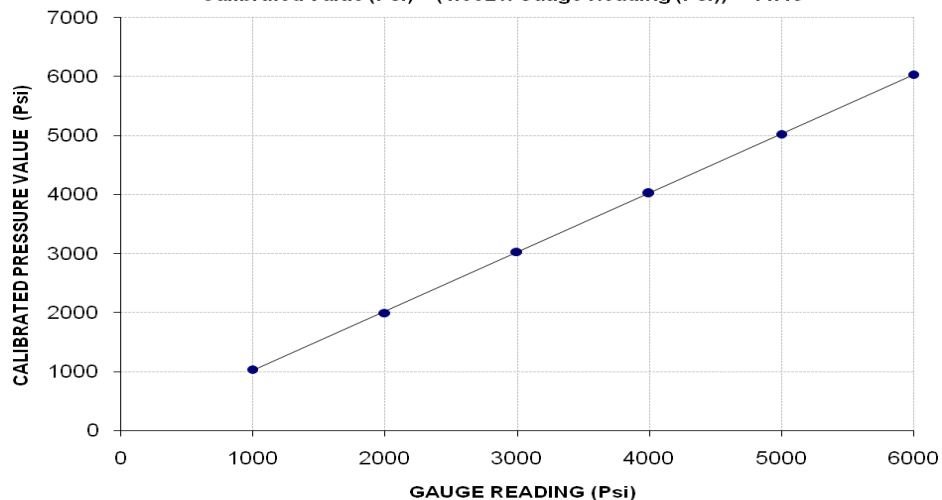
Total Range : Zero - 10000 (Psi)
Calibrated Range : Zero - 6000 (Psi)

Pressure Gauge Reading (Psi)	1000	2000	3000	4000	5000	6000
Calibrated Load (kg)	14400	27700	42100	55900	69900	84000
Calibrated Pressure (Psi)	1034.40	1989.78	3024.18	4015.48	5021.15	6034.00

The Ram Area of Calibration = 198 cm²

Calibration Curve for Pressure Gauge No. EN 837-1

Calibrated Value (Psi) = (1.002 × Gauge Reading (Psi)) + 11.49



I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
M/S Defence Housing Authority.
Lahore Cantt
(Infra Dev Works oh Ph-IX (Pkg-II, III & IV) DHA Lahore)(M/s NLC)

Reference # CED/TFL **33105** (Dr. Usman Akmal)
Reference of the request letter # 408/241/E/Lab/530/15269

Dated: 18-04-2019
Dated: 18-04-2019

Tension Test Report (Page -1/1)

Date of Test 19-04-2019
Gauge length -----
Description Deformed Steel Bar Tensile 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	0.423	1/4	8.28	32.26	53.90	1600	2600	487	291	791	473	
2	0.425	1/4	8.30	32.26	54.13	1800	2700	547	326	821	489	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test												
Bend Test												

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 DGM Civil (Line-III)
 MLCF Iskanderabad
 Civil Works of 7300 TPD New Line-III, MLCFL

Reference # CED/TFL **33106** (Dr. Usman Akmal)
 Reference of the request letter # MLCFL/LINE-III/CIVIL/2019/17

Dated: 18-04-2019
 Dated: 01-04-2019

Tension Test Report (Page -1/1)

Date of Test 19-04-2019
 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	0.415	10	10.01	0.11	0.122	3600	5500	72200	65070	110200	99500	1.20	15.0	Ittfaq Steel
2	0.417	10	10.03	0.11	0.123	3600	5500	72200	64740	110200	98900	1.10	13.8	
3	0.409	10	9.93	0.11	0.120	3800	4900	76200	69740	98200	90000	0.90	11.3	Bilal Steel
4	0.413	10	9.99	0.11	0.122	3800	4900	76200	68920	98200	88900	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

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To,
M/S Zikria Construction Company
Ferozpur Road, Lahore
(Construction of Beaconhouse School A-Level Faisalabad)

Reference # CED/TFL **33107** (Dr. Qasim Khan)
Reference of the request letter # Nil

Dated: 18-04-2019
Dated: 18-04-2019

Tension Test Report (Page -1/1)

Date of Test 19-04-2019
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	0.383	3	0.379	0.11	0.113	3300	5600	66200	64600	112300	109700	1.30	16.3	
2	0.382	3	0.378	0.11	0.112	3300	5600	66200	64820	112300	110000	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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,
 Construction Manager
 CM Engineering (Pvt) Ltd
 Long Haul Project Site ID: 4351, 4507, 4560, 4622, 4642, 6527, 4242, 5528, 5576, 5582

Reference # CED/TFL **33108** (Dr. Qasim Khan) Dated: 18-04-2019
 Reference of the request letter # CME/Steel/Long Haul/326 Dated: 17-04-2019

Tension Test Report (Page -1/1)

Date of Test 19-04-2019
 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	0.371	10	9.46	0.11	0.109	3100	4900	62200	62700	98200	99100	1.20	15.0	
2	0.368	10	9.43	0.11	0.108	3100	4900	62200	63120	98200	99800	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

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