



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
 NESPAK

China – Pakistan Economic Corridor (CPEC), Western Route Hakla (on M1) – Yarak (D.I. Khan) Motorway, Package-3 (Trap to Kot Belian)(Ishtiaq Steel)(FABCO)

Reference # CED/TFL **33713** (Dr. Safer Abbas)

Dated: 09-08-2019

Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1034 Dated: 04-07-2019

Tension Test Report (Page – 1/1)

Date of Test 22-08-2019

Gauge length 2 inches

Description Metal Vertical Post Strip Tensile Test as per AASHTOO A-180

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	Vertical Post	3.02x0.64	1.93	7000	8700	3621.69	4501.24	0.80	40.00	
2		3.02x0.64	1.93	6600	8500	3414.74	4397.76	0.80	40.00	
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-	.	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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2. The above results pertain to sample /samples supplied to this laboratory.
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Ref: CED/TFL/08/33720

Dated: 20-08-2019

Date of Calibration - 22-08-2019

To
M/s Stronghold Pakistan (Private) Ltd
Karachi

Subject: - **CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33720)** (Page – 1/2)

Reference to your Letter No. Nil, dated: 20/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 070, Pump No. 965) as received by us has been calibrated. The results are tabulated as under:

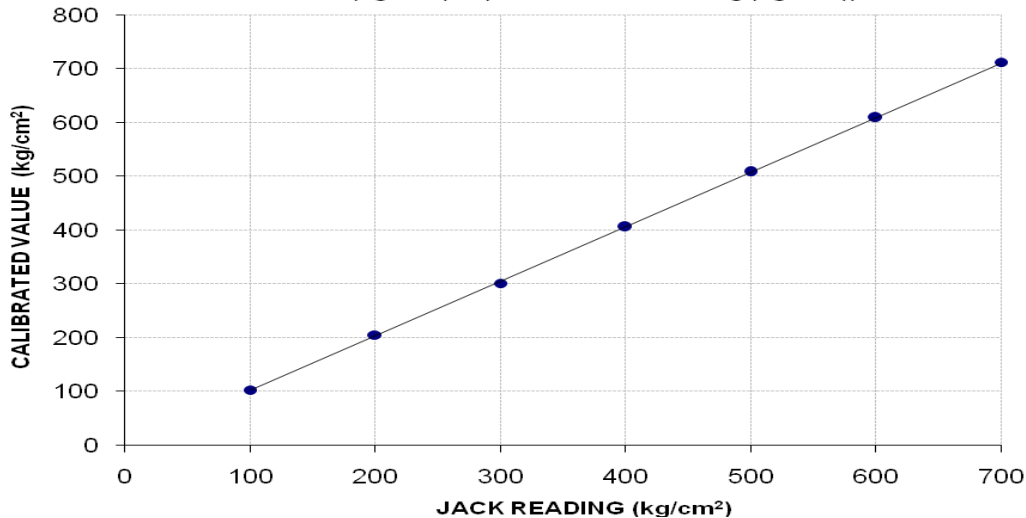
Total Range : Zero - 1000 (kg/cm²)
Calibrated Range : Zero - 700 (kg/cm²)

Hydraulic Jack Reading (kg/cm ²)	100	200	300	400	500	600	700
Calibrated Load (kg)	27600	54800	80600	108400	135800	162800	190200
Calibrated Pressure (kg/cm ²)	103.29	205.09	301.65	405.69	508.23	609.28	711.83

The Ram Area of Jack = 267.2 cm²

Calibration Curve For Jack No. 070

Calibrated Value (kg/cm²) = (1.014 x Jack Reading (kg/cm²)) + 0.641



I/C Testing Laboratories
UET Lahore, Pakistan.

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Ref: CED/TFL/08/33720

Dated: 20-08-2019

Date of Calibration - 22-08-2019

To
M/s Stronghold Pakistan (Private) Ltd
Karachi

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33720) (Page – 2/2)

Reference to your Letter No. Nil, dated: 20/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 075, Pump No. 975) as received by us has been calibrated. The results are tabulated as under:

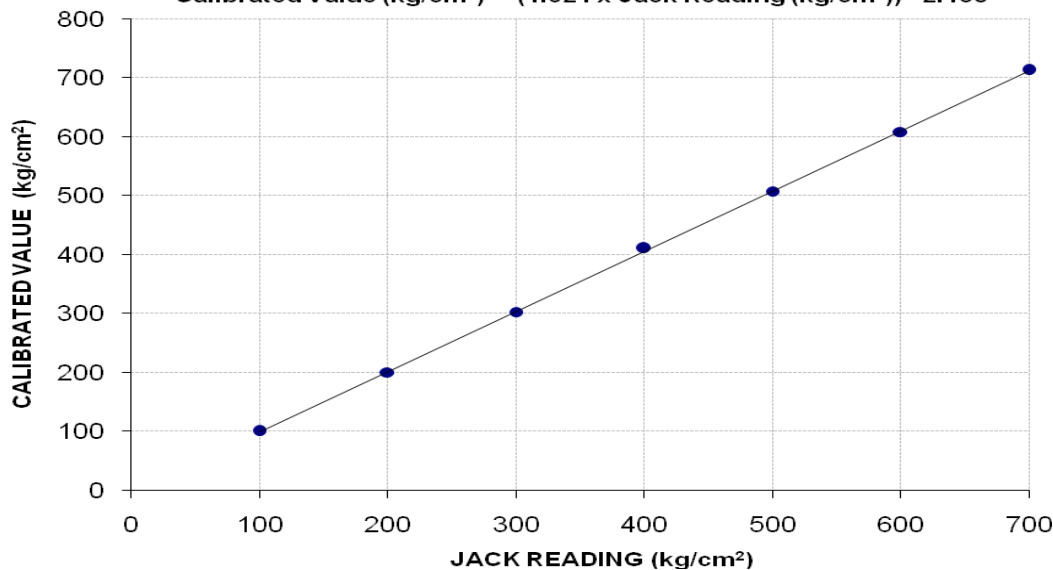
Total Range : Zero - 1000 (kg/cm²)
Calibrated Range : Zero - 700 (kg/cm²)

Hydraulic Jack Reading (kg/cm ²)	100	200	300	400	500	600	700
Calibrated Load (kg)	26800	53600	81000	109800	135600	162600	190600
Calibrated Pressure (kg/cm ²)	100.29	200.58	303.12	410.90	507.45	608.49	713.27

The Ram Area of Jack = 267.2 cm²

Calibration Curve For Jack No. 075

Calibrated Value (kg/cm²) = (1.021 x Jack Reading (kg/cm²)) - 2.138



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UET Lahore, Pakistan.

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To,
 Manager C, R & M
 Allied Bank Limited
 Allied Bank Limited MDC Building, Khanewal Road, Multen

Reference # CED/TFL **33723** (Dr. Qasim Khan) Dated: 21-08-2019
 Reference of the request letter # GHQ/S2/ENGG.CELL.MTN/MA/2019/584 Dated: 19-08-2019

Tension Test Report (Page -1/1)

Date of Test 22-08-2019
 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	0.391	3	0.382	0.11	0.115	4800	5800	96200	92100	116300	111300	0.90	11.3	
2	0.381	3	0.378	0.11	0.112	4700	5800	94200	92540	116300	114200	0.80	10.0	
3	0.370	3	0.372	0.11	0.109	4700	5800	94200	95190	116300	117500	0.90	11.3	
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and three samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
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I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Site Engineer
 Zikria Construction Company
 Construction Beacohouse A-level Canal Campus

Reference # CED/TFL **33727** (Dr. Qasim Khan)
 Reference of the request letter # Nil

Dated: 21-08-2019
 Dated: 21-08-2019

Tension Test Report (Page -1/1)

Date of Test 22-08-2019
 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	0.394	3	0.384	0.11	0.116	3600	4700	72200	68520	94200	89500	1.10	13.8	
2	0.382	3	0.378	0.11	0.112	3500	4700	70200	68790	94200	92400	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														

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Note:

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