



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 (Talib Enterprises Lahore)

Reference # CED/TFL **32554** (Dr. Usman Akmal)
 Reference of the request letter # CRE/EA/M.P-III/317 -2019

Dated: 01-02-2019
 Dated: 31-01-2019

Tension Test Report (Page – 1/1)

Date of Test 07-02-2019
 Gauge length 2 inches
 Description Steel Plate Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(Kg)	(Kg)	(MPa)	(MPa)	(in)		
1	10	26.00x10.00	260.00	10500	13300	396.17	501.82	0.55	27.50	
2	12	26.60x12.00	319.20	14200	18900	436.41	580.86	0.70	35.00	
3	14	26.50x14.00	371.00	16500	20400	436.29	539.42	0.80	40.00	
4	16	26.10x16.00	417.60	15500	22000	364.12	516.81	0.90	45.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Four Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
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Ref: CED/TFL/02/32561

Dated: 04-02-19

To
Resident Engineer
NESPAK - Zeeruk Jv
CPEC (Western Route), Package-II Isakhel

Subject: - **CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32561)** (Page -1/2)

Reference to your Letter No. RE/NESPAK/P-2/CPEC-WR/695, Dated: 31/01/2019 on the subject cited above. One Hydraulic Jack (Jack No. AES-315, Gauge No. AES-315) as received by us has been calibrated. The results are tabulated as under:

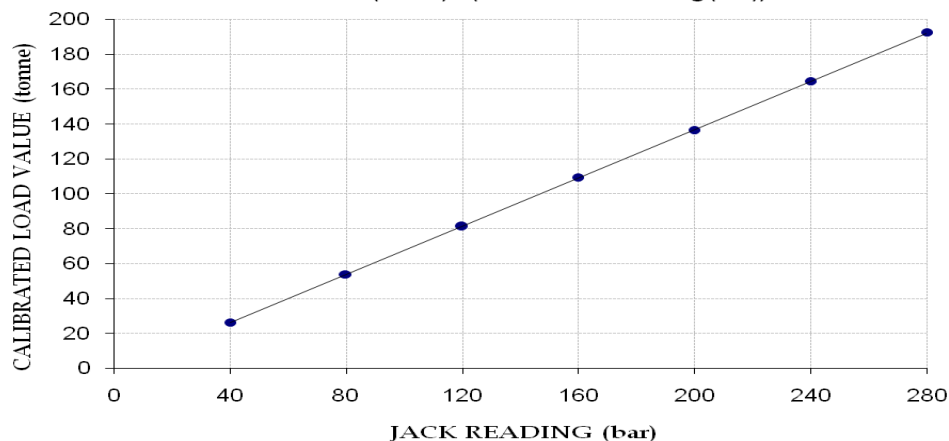
Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 280 (bar)

Hydraulic Jack Reading (bar)	40	80	120	160	200	240	280	
Calibrated Load	(kg)	26200	53800	81200	109400	136400	164400	192400
	(Tonne)	26.20	53.80	81.20	109.40	136.40	164.40	192.40
Calibrated Pressure (bar)	37.86	77.74	117.34	158.09	197.10	237.56	278.02	

1 Tonne = 1000 Kg, The Ram Area of Jack = 678.67 cm²

Calibration Curve For Jack No. AES-315

Calibrated Value (tonne) = (0.692 x Jack Reading (bar))- 1.6



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CPEC (Western Route), Package-II Isakhel

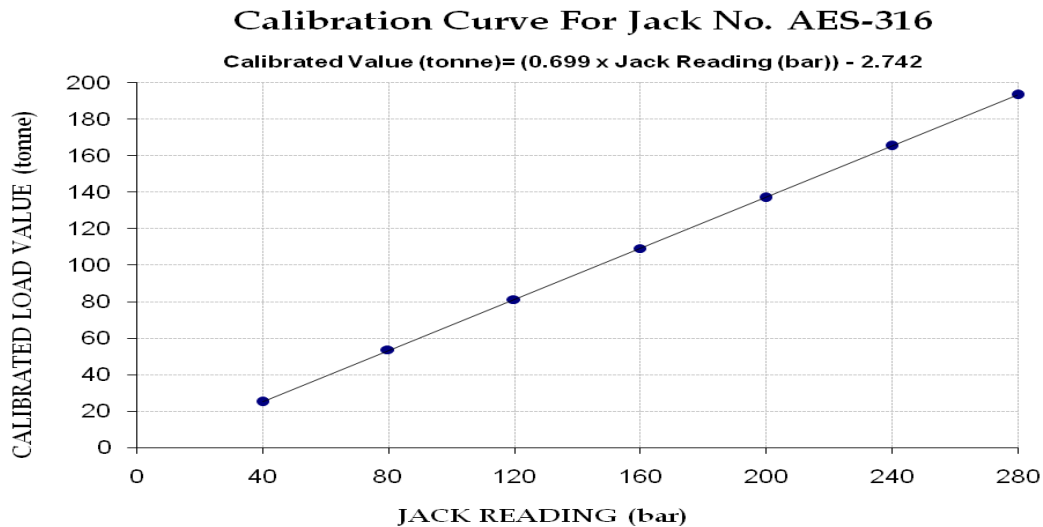
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32561) (Page -2/2)

Reference to your Letter No. RE/NESPAK/P-2/CPEC-WR/695, Dated: 31/01/2019 on the subject cited above. One Hydraulic Jack (Jack No. AES-316, Gauge No. AES-316) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 280 (bar)

Hydraulic Jack Reading (bar)	40	80	120	160	200	240	280	
Calibrated Load	(kg)	25000	53600	81200	109200	136800	165200	193200
	(Tonne)	25.00	53.60	81.20	109.20	136.80	165.20	193.20
Calibrated Pressure (bar)	36.13	77.45	117.34	157.80	197.68	238.72	279.18	

1 Tonne = 1000 Kg, The Ram Area of Jack = 678.67 cm²



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To,
 SQN LDR
 GE (AIR) Rafiqui
 (Rehabilitation of Parallel Taxi Track at PAF Base Rafiqui
 Reference # CED/TFL **32581** (Dr. Waseem Abbas)
 Reference of the request letter # 6000-432/145/E-6

Dated: 06-02-2019
 Dated: 31-01-2019

Tension Test Report (Page -1/1)

Date of Test 07-02-2019
 Gauge length 8 inches
 Description Plain Steel Bar Tensile Test

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 inch)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	6.022	1 ¹ / ₂	1.501	-----	1.770	49600	87800	-----	61770	-----	109400	1.30	16.3	
2	5.969	1 ¹ / ₂	1.495	-----	1.755	48200	86600	-----	60550	-----	108800	1.40	17.5	
3	6.022	1 ¹ / ₂	1.501	-----	1.770	49800	88000	-----	62010	-----	109600	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile test														
Bend Test														

I/C Testing Laboratoires
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Ref: CED/TFL/02/32586

Dated: 06-02-2019

To
M/S Hammad Pipe Factory
Lahore

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/32586)

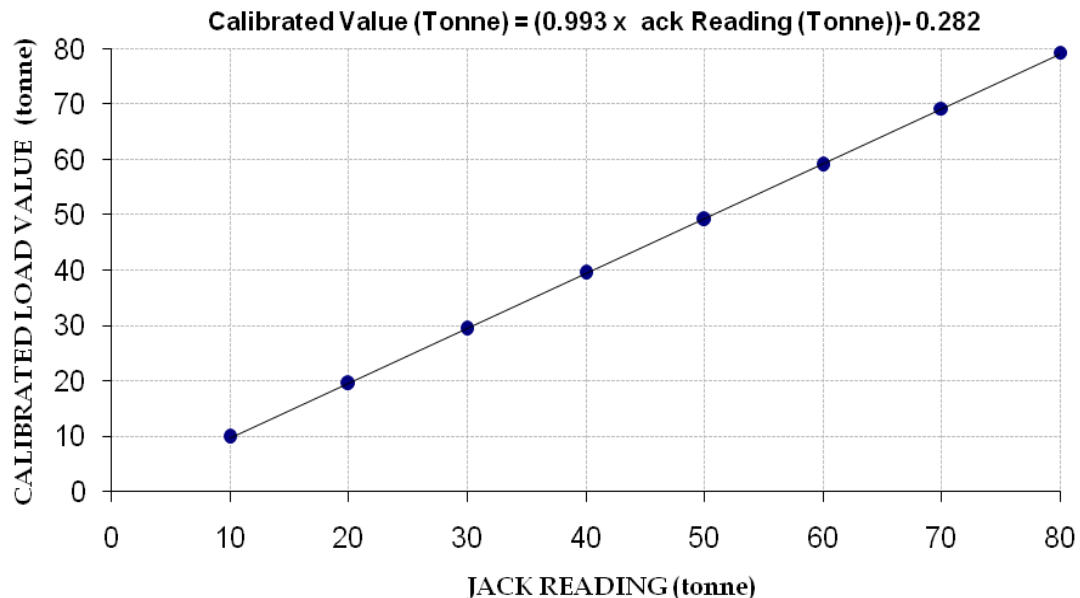
Reference to your Letter No. Nil, Dated: 06/02/2019 on the subject cited above. One Hydraulic Jack as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 100 (Tonne)
Calibrated Range : Zero - 80 (Tonne)

Hydraulic Jack Reading (Tonne)	10	20	30	40	50	60	70	80	
Calibrated Load	(kg)	9900	19500	29400	39500	49200	59100	69300	79400
	Tonne	9.90	19.50	29.40	39.50	49.20	59.10	69.30	79.40

1 Tonne = 1000 Kg

Calibration Curve For Jack



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