



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/04/33112

Dated: 19-04-19

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

(China Pakistan Economic Corridor (CPEC), Western Route Hakla (on M1) to D.I. Khan Motorway – Rehmani Khel to Kot Belian – Package 2C)

Subject: - **CALIBRATION OF HYDRAULIC JACK (MARK: TFL/04/33112)** (Page -1/2)

Reference to your Letter No. RE/NESPAK/P-2/CPEC-WR/771, Dated: 12/04/2019 on the subject cited above. One Hydraulic Jack (Jack No 313, Gauge No. AES-313) as received by us has been calibrated. The results are tabulated as under:

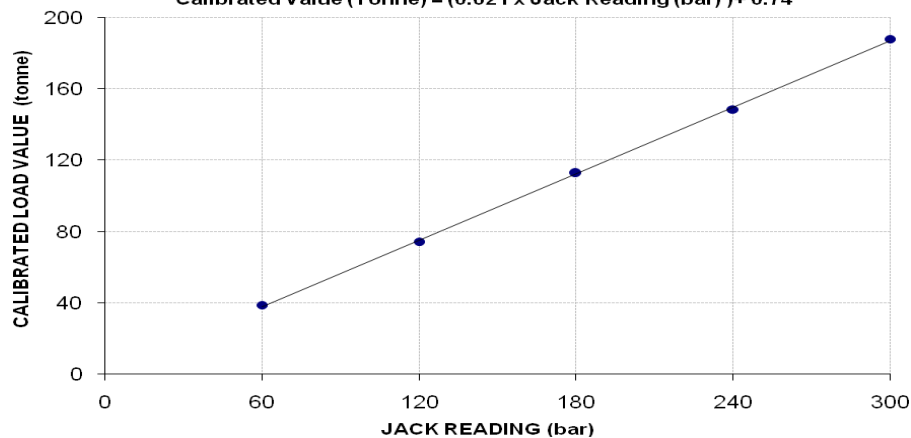
Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 300 (bar)

Hydraulic Jack Reading (bar)	60	120	180	240	300	
Calibrated Load	(Kg)	38800	74400	112800	148600	188000
	Tonne	38.80	74.40	112.80	148.60	188.00
Calibrated Pressure (bar)	63.20	121.18	183.73	242.04	306.22	

1 Tonne = 1000 Kg, The Ram Area of Jack = 602.09 cm²

Calibration Curve For Jack No. AES 313

Calibrated Value (Tonne) = (0.621 × Jack Reading (bar)) + 0.74



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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Test Floor Laboratory
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Ref: CED/TFL/04/33112

Dated: 19-04-19

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

(China Pakistan Economic Corridor (CPEC), Western Route Hakla (on M1) to D.I. Khan Motorway – Rehmani Khel to Kot Belian – Package 2C)

Subject: - **CALIBRATION OF HYDRAULIC JACK (MARK: TFL/04/33112)** (Page -2/2)

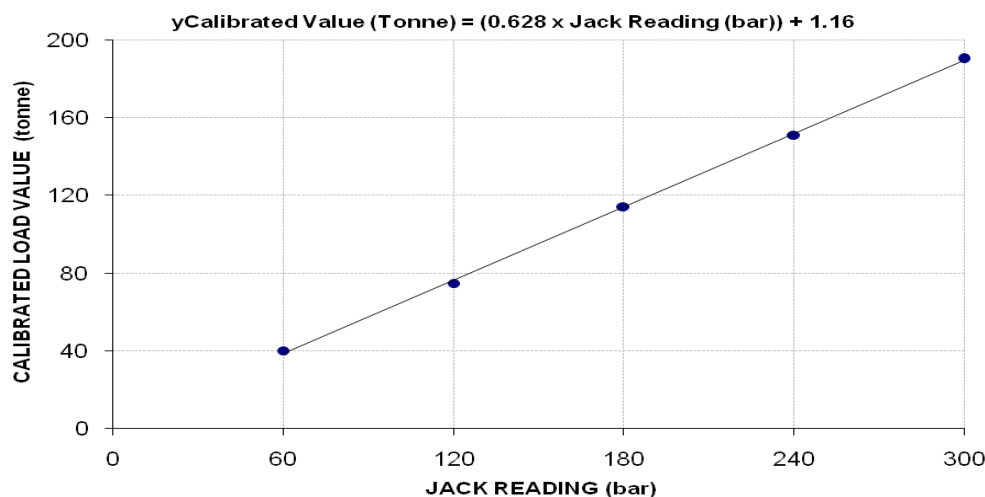
Reference to your Letter No. RE/NESPAK/P-2/CPEC-WR/771, Dated: 12/04/2019 on the subject cited above. One Hydraulic Jack (Jack No 314, Gauge No. AES-314) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 300 (bar)

Hydraulic Jack Reading (bar)		60	120	180	240	300
Calibrated Load	(Kg)	40200	74800	114400	151200	190400
	Tonne	40.20	74.80	114.40	151.20	190.40
Calibrated Pressure (bar)		65.48	121.84	186.34	246.28	310.13

1 Tonne = 1000 Kg, The Ram Area of Jack = 602.09 cm²

Calibration Curve For Jack No. AES 314



I/C Testing Laboratories
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,
 Chief Resident Engineer
 Osmani & Company (Pvt) Ltd
 Swat Motorway Project

Reference # CED/TFL **33268** (Dr. M Rizwan Riaz)
 Reference of the request letter # 293/CRE/QAT/SMP/2019

Dated: 21-05-2019
 Dated: 16-05-2019

Tension Test Report (Page – 1/3)

Date of Test 27-05-2019
 Gauge length 2 inches
 Description MS Pipe & Base Plate Steel 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
	(mm)										
1	MS Pipe	50	27.30x3.00	81.90	2500	3200	299.45	383.30	0.50	25.00	
2		50	27.20x3.00	81.60	2500	3200	300.55	384.71	0.50	25.00	
3	MS Pipe	100	27.40x3.00	82.20	3500	4500	417.70	537.04	0.50	25.00	
4		100	27.30x2.90	79.17	3500	4700	433.69	582.38	0.45	22.50	
5	MS Pipe	125	27.20x3.00	81.60	2600	3300	312.57	396.73	0.50	25.00	
6		125	27.20x3.00	81.60	2500	3300	300.55	396.73	0.50	25.00	
7	MS Pipe	450	27.40x5.90	161.66	6200	8000	376.23	485.46	0.60	30.00	
8		450	27.50x5.90	162.25	5900	8100	356.73	489.74	0.60	30.00	
9	Base Plate	25	27.50x25.00	687.50	23000	34400	328.19	490.86	0.95	47.50	
10		25	27.50x25.00	687.50	20000	34200	285.38	488.00	0.90	45.00	
Only Ten Samples for Tensile and Five Samples for Bend Test											
Bend Test											
Strip Taken from MS Pipe 50mm Bend Test Through 180° is Satisfactory											
Strip Taken from MS Pipe 100mm Bend Test Through 180° is Satisfactory											
Strip Taken from MS Pipe 125mm Bend Test Through 180° is Satisfactory											
Strip Taken from MS Pipe 450mm Bend Test Through 180° is Satisfactory											
Strip Taken from Base Plate 25mm Bend Test Through 180° is Satisfactory											

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Chief Resident Engineer
Osmani & Company (Pvt) Ltd
Swat Motorway Project

Reference # CED/TFL **33268** (Dr. M Rizwan Riaz)
Reference of the request letter # 293/CRE/QAT/SMP/2019

Dated: 21-05-2019
Dated: 16-05-2019

Weight & Size Test Report (Page – 2/3)

Date of Test 27-05-2019
Gauge length -----
Description M.S Pipe 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	50	372	90.0	4.13	59.90	53.9	3.00	
2	100	714	87.30	8.18	111.90	105.9	3.00	
3	125	889	87.50	10.16	138.40	132.4	3.00	
4	450	6399	94.60	67.64	471.50	459.5	6.00	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
Only Four Samples for Test								

I/C Testing Laboratories
UET Lahore, Pakistan.

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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Chief Resident Engineer
Osmani & Company (Pvt) Ltd
Swat Motorway Project

Reference # CED/TFL **33268** (Dr. M Rizwan Riaz)
Reference of the request letter # 293/CRE/QAT/SMP/2019

Dated: 21-05-2019
Dated: 16-05-2019

Weight & Size Test Report (Page – 3/3)

Date of Test 27-05-2019
Gauge length -----
Description Base Plate Weight and Size Test

Sr. No.	Designation	Weight	Length	Width (b)	Weight per Unit Length	Thickness	Remark
	(mm)	(g)	(mm)	(mm)	(kg/m)	(mm)	
1	25	1854	97.40	97.40	195.43	25.00	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
Only One Sample for 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,
M/S Transtech Engineering Company
NESPAK-CMEC
PTPL
Construction of 1263 MW Punjab Thermal Power Plant, Jhang (Ittefaq Steel)

Reference # CED/TFL **33283** (Dr. M Rizwan Riaz)
Reference of the request letter # TEC/UET/19042001

Dated: 23-05-2019
Dated: 22-05-2019

Tension Test Report (Page -1/2)

Date of Test 27-05-2019
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	Heat No
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.404	10	9.88	0.11	0.119	3600	5700	72200	66830	114300	105900	1.20	15.0	1942
2	0.402	10	9.86	0.11	0.118	3700	5700	74200	68950	114300	106300	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														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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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 Transtech Engineering Company
NESPAK-CMEC
PTPL
Construction of 1263 MW Punjab Thermal Power Plant, Jhang (Ittefaq Steel)

Reference # CED/TFL **33283** (Dr. M Rizwan Riaz)
Reference of the request letter # TEC/UET/19052101

Dated: 23-05-2019
Dated: 22-05-2019

Tension Test Report (Page -2/2)

Date of Test 27-05-2019
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	Heat No
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	4.189	32	31.80	1.27	1.231	43200	55000	75000	77330	95500	98500	1.40	17.5	1478
2	4.156	32	31.68	1.27	1.222	43400	55000	75400	78300	95500	99300	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
32mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Pakistan. Ph: 92-42-99029202

To,
M/S Five Star Corporation
Bahawalpur
(Construction of Noor Care Hospital Rajanpur)

Reference # CED/TFL **33287** (Dr. M Rizwan Riaz)
Reference of the request letter # 633/UET/LHR

Dated: 24-05-2019
Dated: 23-05-2019

Tension Test Report (Page -1/1)

Date of Test 27-05-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend 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	0.393	3/8	0.383	0.11	0.116	3500	5300	70200	66790	106200	101200	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Test Floor Laboratory
Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,
 Sub Divisional Officer
 Building Sub Division
 Kamoke
 (Re-Const. Of School Building of Govt. FD Islamia High School District Gujranwala)

Reference # CED/TFL **33288** (Dr. M Rizwan Riaz)
 Reference of the request letter # 151/K

Dated: 24-05-2019
 Dated: 06-04-2019

Tension Test Report (Page -1/1)

Date of Test 27-05-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend 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	0.375	3/8	0.375	0.11	0.110	3300	4500	66200	66000	90200	90000	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/8" Dia 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,
 Assistant Engineer (C)
 University of Sargodha
 Construction of 03 Nos. Residences for BPS (20 & above) at Main Campus University of
 Sargodha (M/s N.M.T Engineers & Builders)

Reference # CED/TFL **33290** (Dr. M Rizwan Riaz)
 Reference of the request letter # SU/P.D(W)/15034

Dated: 24-05-2019
 Dated: 22-05-2019

Tension Test Report (Page -1/1)

Date of Test 27-05-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend 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	0.403	3/8	0.388	0.11	0.118	3000	4600	60200	55850	92200	85700	1.40	17.5	
2	0.407	3/8	0.390	0.11	0.120	2800	4700	56200	51590	94200	86600	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Amna/Noor
 32-C/1
 Gulberg III Lahore

Reference # CED/TFL **33291** (Dr. M Rizwan Riaz)
 Reference of the request letter # ST/TF04/19

Dated: 24-05-2019
 Dated: 24-05-2019

Tension Test Report (Page -1/1)

Date of Test 27-05-2019
 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	0.381	3	0.378	0.11	0.112	3700	4800	74200	72760	96200	94400	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
M/S Ali & Company
Lahore
(Ali Trade Center)

Reference # CED/TFL **33293** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 27-05-2019
Dated: 27-05-2019

Tension Test Report (Page -1/1)

Date of Test 27-05-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile 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	0.376	3	0.375	0.11	0.110	3100	4700	62200	61880	94200	93900	1.00	12.5	
2	0.379	3	0.377	0.11	0.111	3000	4300	60200	59390	86200	85200	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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