



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

Resident Engineer  
Zeeruk Internal (Pvt) Ltd.  
Grade Separated Arrangement at Intersection of 11<sup>th</sup> Avenue with Khyab-e-Iqbal  
(E-11 Chowk), Islamabad

Reference # CED/TFL **3232** (Dr. M Kashif)

Dated: 19-05-2023

Reference of the request letter # RE/Zeeruk/11<sup>th</sup> Avenue/23/70

Dated: 05-05-2023

**Tension Test Report** (Page – 1/7)

Date of Test 26-05-2023

Gauge length 2 inches

Description Elastomeric Bearing Pad, Lamination 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 <sup>2</sup> )	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	Elastomeric Bearing Pad, Lamination Steel Plate	25.00x3.00	75.00	3000	3500	392	458	0.60	30.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only One Sample for Tensile Test</b>										
<b>Bend Test</b>										

To,

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

Note:

- 1- You can See your reports On Internet in the following web site  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports)
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Construction Manager  
 POWERCHINA SEPCO1, Pakistan  
 Design, Manufacturing, Supply, Installation, Testing and Commission of 220kV Mirpur  
 Khas Substation and Extension at Hala Road Substation.

Reference # CED/TFL 3271 (Dr. M Kashif)  
 Reference of the request letter # ADB-200/2018/393

Dated: 24-05-2023  
 Dated: 24-05-2023

**Tension Test Report** (Page -1/1)

Date of Test 26-05-2023  
 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 <sup>2</sup> )		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	0.407	10	9.91	0.12	0.120	3500	4900	64301	64550	90021	90400	1.60	20.0	
2	0.400	10	9.83	0.12	0.118	3500	5000	64301	65610	91858	93800	1.50	18.8	
3	0.411	10	9.97	0.12	0.121	3500	4900	64301	63800	90021	89400	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only three samples for tensile and three samples for bend test</b>														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

Witness by Sohaib Ali (NESPAK)

**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**

Ref: CED/TFL/05/3274

Dated: 25-05-2023

Dated of Test: 26-05-2023

To

**Resident Engineer**  
**NESPAK**  
**Construction of Multi-Level Grade Separation Flyover at Shahdra Moor, Lahore**

**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/3274) (Page -1/2)**

Reference to your Letter No. 4537/03/MSA/09/48, dated: 24/05/2023 on the subject cited above. One Hydraulic Jack (Jack No. 407, Gauge No. SF-407) as received by us has been calibrated. The results are tabulated as under:

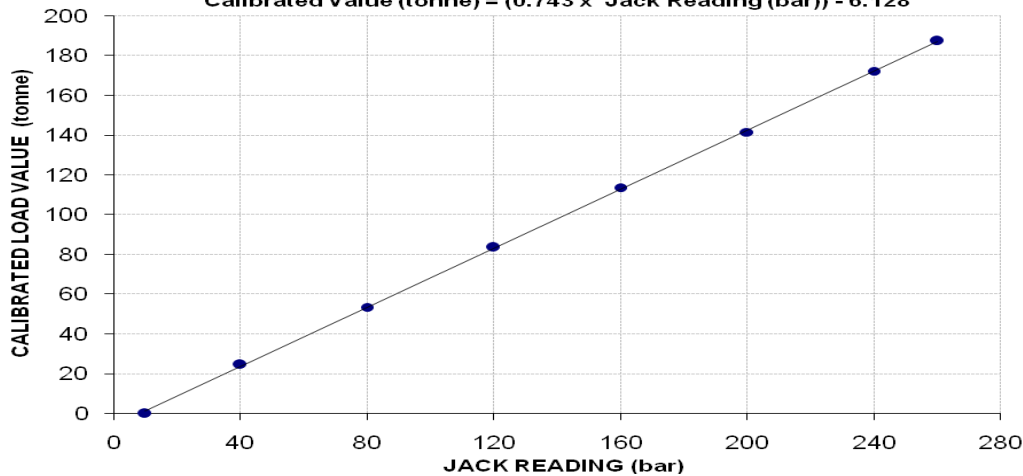
**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 260 (bar)**

Hydraulic Jack Reading (bar)	10	40	80	120	160	200	240	260	
Calibrated Load	(kg)	0	24600	53600	83600	113600	141600	172200	187400
	(tonne)	0	24.60	53.60	83.60	113.60	141.60	172.20	187.40
Calibrated Pressure (bar)	0	32.85	71.58	111.65	151.71	189.10	229.97	250.27	

The Ram Area of Jack = 734.35 cm<sup>2</sup>

**Calibration Curve For Jack No. 407**

Calibrated Value (tonne) = (0.743 × Jack Reading (bar)) - 6.128



**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**

Ref: CED/TFL/05/3274

Dated: 25-05-2023

Dated of Test: 26-05-2023

To

**Resident Engineer**  
**NESPAK**  
**Construction of Multi-Level Grade Separation Flyover at Shahdra Moor, Lahore**

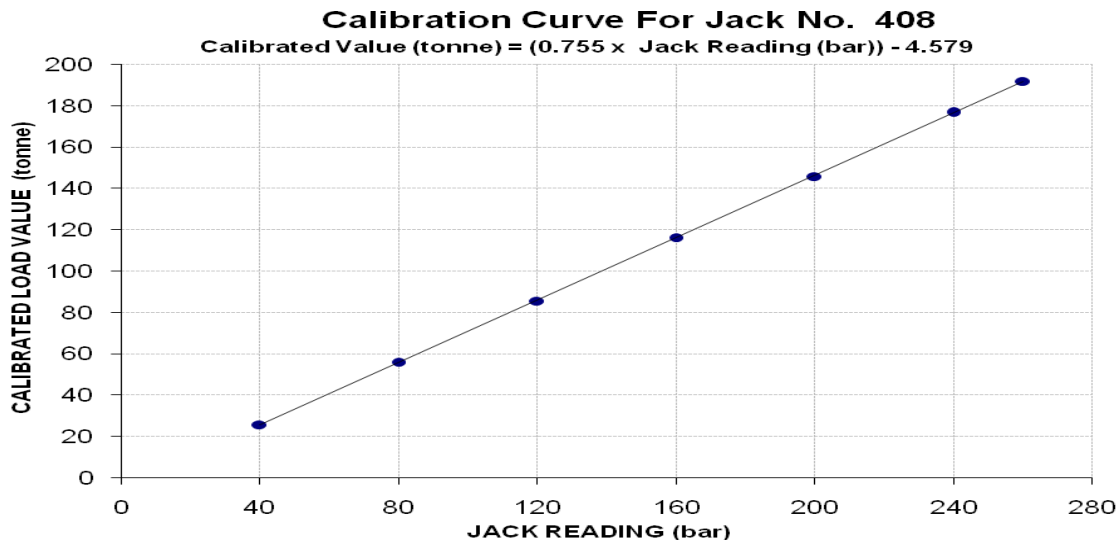
**Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/3274) (Page -2/2)**

Reference to your Letter No. 4537/03/MSA/09/48, dated: 24/05/2023 on the subject cited above. One Hydraulic Jack (Jack No. 408, Gauge No. SF-408) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 260 (bar)**

Hydraulic Jack Reading (bar)		40	80	120	160	200	240	260
Calibrated Load	(kg)	25800	56000	85600	116400	145800	176800	192000
	(tonne)	25.80	56.00	85.60	116.40	145.80	176.80	192.00
Calibrated Pressure (bar)		34.46	74.79	114.32	155.45	194.71	236.11	256.41

The Ram Area of Jack = 734.35 cm<sup>2</sup>



**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 M/S Naeem Drilling Corporation  
 Sheikhpura  
 (Rahi Business Center, Ravi Road, Lahore)

Reference # CED/TFL **3278** (Dr. M Kashif)  
 Reference of the request letter # Nil

Dated: 25-05-2023  
 Dated: 25-05-2023

**Tension Test Report** (Page -1/1)

Date of Test 26-05-2023  
 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 <sup>2</sup> )		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	0.375	3	0.375	0.11	0.110	3400	4900	68200	67940	98200	98000	1.00	12.5	SI Steel
2	0.380	3	0.377	0.11	0.112	3500	4900	70200	69130	98200	96800	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

Note:

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To,

M/S A.J Steel Wire Industries Pvt Ltd  
Karachi

Reference # CED/TFL **3284** (Dr. M Kashif)  
Reference of the request letter # Nil

Dated: 25-05-2023

Dated: 22-05-2023

**Tension Test Report** (Page – 1/1)

Date of Test 26-05-2023

Gauge length 640 mm

Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)		
1	9.53 (3/8")	432.0	458.0	7800	76.52	10500	103.01	<3.50 Not ok	xx
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
Only one sample for Test									

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,

Asstt: Executive Engineer-I  
Central Civil Division No. II'  
Pak P.W.D., Lahore  
(Construction of Carpeting Road from Mota Singh to Karbath Badian Road, District  
Lahore  
(Phase-III) (Sub Head:- Bridge)

Reference # CED/TFL **3285** (Dr. M Kashif)

Dated: 25-05-2023

Reference of the request letter # AEE-I/LCCD-II/SAP/79

Dated: 14-03-2023

**Tension Test Report** (Page -1/1)

Date of Test 26-05-2023

Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in <sup>2</sup> )		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.375	3	0.374	0.11	0.110	3000	4700	60200	60050	94200	94100	1.40	17.5	
2	0.384	3	0.379	0.11	0.113	3100	4800	62200	60610	96200	93900	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
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,

Asstt: Executive Engineer-I  
 Central Civil Division No. II'  
 Pak P.W.D., Lahore  
 (Construction of Carpeting Road from Mota Singh to Karbath Badian Road, District  
 Lahore (Phase-III) (Sub Head:- Bridge)

Reference # CED/TFL **3286** (Dr. M Kashif)  
 Reference of the request letter # AEE-I/LCCD-II/SAP/80

Dated: 25-05-2023  
 Dated: 14-03-2023

**Tension Test Report** (Page -1/1)

Date of Test 26-05-2023  
 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 <sup>2</sup> )		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	4.319	10	1.271	1.27	1.270	35800	53200	62200	62160	92400	92400	1.80	22.5	
2	4.314	10	1.271	1.27	1.268	39000	55000	67700	67790	95500	95600	1.80	22.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#10 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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**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 NESPAK  
 Construction of Flyover / Underpass at Akbar Chowk Lahore.

Reference # CED/TFL **3288** (Dr. M Kashif)  
 Reference of the request letter # 3772/103/ACF/SA/04/25

Dated: 25-05-2023  
 Dated: 19-05-2023

**Tension Test Report** (Page -1/2)

Date of Test 26-05-2023  
 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 <sup>2</sup> )		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	5.265	11	1.404	1.56	1.548	45000	71600	63600	64090	101200	102000	1.50	18.8	Batala Premium	
2	5.267	11	1.404	1.56	1.548	46000	72000	65000	65490	101800	102500	1.50	18.8		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Note: only two samples for tensile and one sample for bend test</b>															
Bend Test															
#11 Bar Bend Test Through 180° is Satisfactory															

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 NESPAK  
 Construction of Flyover / Underpass at Akbar Chowk Lahore.

Reference # CED/TFL **3288** (Dr. M Kashif)  
 Reference of the request letter # 3772/103/ACF/SA/04/19

Dated: 25-05-2023  
 Dated: 19-05-2023

**Tension Test Report** (Page -2/2)

Date of Test 26-05-2023  
 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 <sup>2</sup> )		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	0.372	3	0.373	0.11	0.109	3700	5100	74200	74540	102200	102800	1.00	12.5	Batala Premium	
2	0.373	3	0.373	0.11	0.110	3600	4800	72200	72460	96200	96700	1.00	12.5		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Note: only two samples for tensile and one sample for bend test</b>															
Bend Test															
#3 Bar Bend Test Through 180° is Satisfactory															

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 Resident Engineer  
 NESPAK  
 Construction of Flyover / Underpass at Akbar Chowk Lahore.

Reference # CED/TFL **3289** (Dr. M Kashif)  
 Reference of the request letter # 3772/103/ACF/SA/04/24

Dated: 25-05-2023  
 Dated: 19-05-2023

**Tension Test Report** (Page -1/1)

Date of Test 26-05-2023  
 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 <sup>2</sup> )		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	4.245	10	1.260	1.27	1.248	38200	57600	66300	67480	100000	101800	1.20	15.0	Batala Premium	
2	4.201	10	1.254	1.27	1.235	37000	56600	64300	66040	98300	101100	1.10	13.8		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Note: only two samples for tensile and one sample for bend test</b>															
Bend Test															
#10 Bar Bend Test Through 180° is Satisfactory															

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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