



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/11/4268

Dated: 28-11-2023

Dated of Test: 04-12-2023

To

Deputy Director (QCD)
Water and Sanitation Agency
Faisalabad
(M/s Saleem Engineer RCC Pipe Manufacturing Factory 32-X-7 Madina Town,
Faisalabad.)

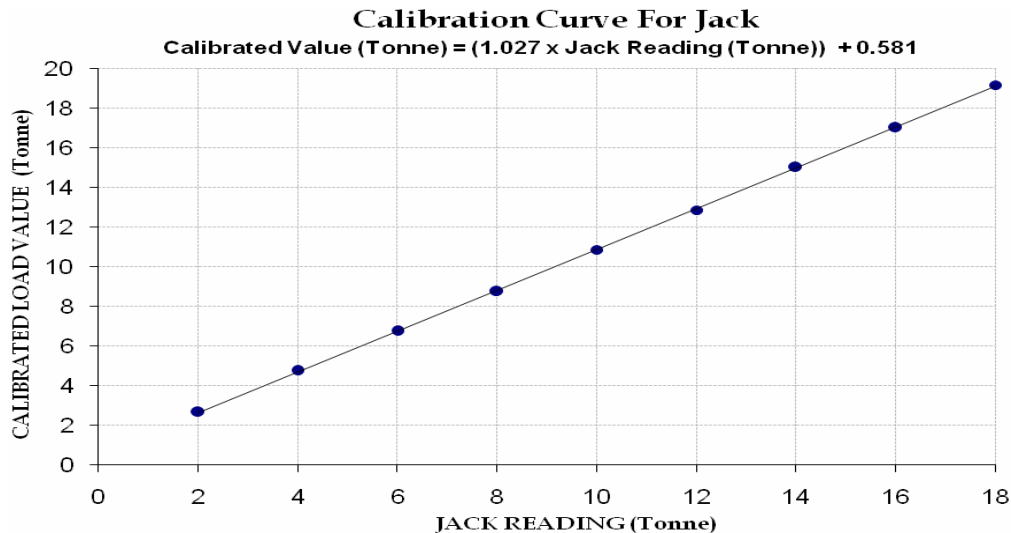
Subject: - CALIBRATION OF HYDRAULIC JACK WITH GAUGE
(MARK: TFL/11/4268)

Reference to your Letter No. 99/DD(QCD)/WASA/2023, Dated: 02/09/2023 on the subject cited above. One Hydraulic Jack with Gauge as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 20 (Tonne)
Calibrated Range : Zero - 18 (Tonne)

Hydraulic Jack Reading (Tonne)	2	4	6	8	10	12	14	16	18	
Calibrated Load	(kg)	2650	4750	6750	8750	10850	12850	15000	17000	19150
	(Tonne)	2.65	4.75	6.75	8.75	10.85	12.85	15.00	17.00	19.15

1000 kg = 1 Tonne



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University of Engineering and Technology Lahore, 54890
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To,

Resident Engineer
 NESPAK
 Development of a Controlled Access Corridor Facility from Niazi Interchange to Babu Sabu Interchange, Lahore, Package – II (km 3+650 to km 7+300)

Reference # CED/TFL **4280** (Dr. M Rizwan Riaz)

Dated: 30-11-2023

Reference of the request letter # 3772/103/NBI(P-II)/MWA/04/81

Dated: 11-11-2023

Tension Test Report (Page -1/1)

Date of Test

04-12-2023

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 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	0.386	3	0.380	0.11	0.113	3600	5300	72200	70010	106200	103100	0.90	11.3	S.J Steel
2	0.381	3	0.378	0.11	0.112	3500	5200	70200	68880	104200	102400	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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UET Lahore, Pakistan.

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To,

Sub Divisional Officer
Buildings Sub Division
Nankana Sahid
(Construction of PHP Post at Chak No. 5 District Nankana Sahib)

Reference # CED/TFL **4281** (Dr. M Rizwan Riaz)
Reference of the request letter # 1265/SDO/BS.D.NNS

Dated: 30-11-2023
Dated: 03-11-2023

Tension Test Report (Page -1/1)

Date of Test 04-12-2023
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 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	0.378	3	0.376	0.11	0.111	3500	5100	70200	69380	102200	101100	1.50	18.8	
2	0.396	3	0.385	0.11	0.116	3600	5900	72200	68250	118300	111900	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples 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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To,

Resident Engineer
NESPAK

Development of a Controlled Access Corridor Facility from Niazi Interchange to Babu Sabu Interchange, Lahore, Package – II (km 3+650 to km 7+300)
(WMI 7009)

Reference # CED/TFL **4283** (Dr. M Rizwan Riaz)

Dated: 30-11-2023

Reference of the request letter # 3772/103/NBI(P-II)/MWA/04/93

Dated: 16-11-2023

Tension Test Report (Page – 1/2)

Date of Test 04-12-2023

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)		Young's Modulus of Elasticity	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa		
1	15.24 (0.6")	1102.0	1107.0	24300	238.38	27300	267.81	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only one sample for Test										

Witness by M Saleem (M.S NESPAK)

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

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Resident Engineer
NESPAK

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(WMI 7009)

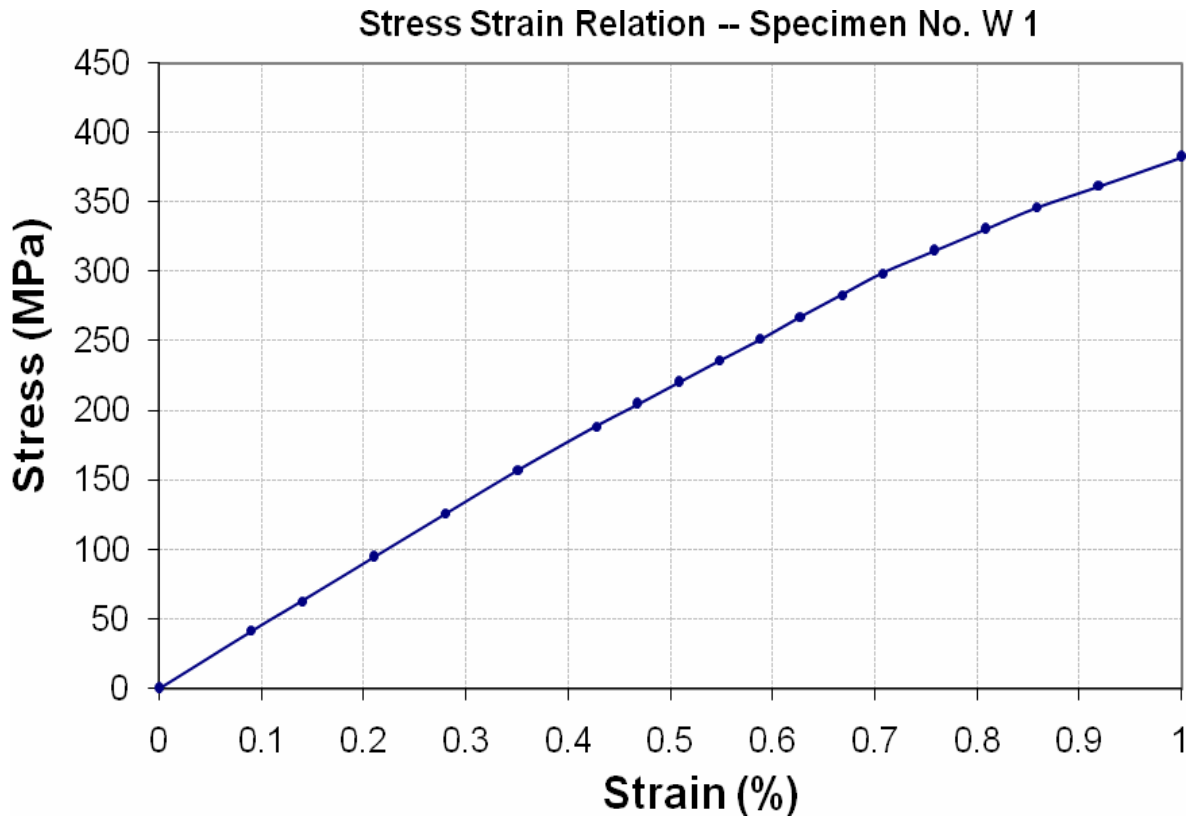
Reference # CED/TFL **4283** (Dr. M Rizwan Riaz)

Dated: 30-11-2023

Reference of the request letter # 3772/103/NBI(P-II)/MWA/04/93

Dated: 16-11-2023

Graph (Page – 2/2)



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To,

General Manager
Army Welfare Trust
Construction of Room Tubewell in AWT Housing Scheme Phase -2, Lahore

Reference # CED/TFL **4284** (Dr. M Rizwan Riaz)
Reference of the request letter # AWRES/Dev-N/Ph-2

Dated: 01-12-2023
Dated: 28-11-2023

Tension Test Report (Page -1/1)

Date of Test 04-12-2023
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	0.370	3	0.372	0.11	0.109	3200	4500	64200	64890	90200	91300	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend Test														

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To,

M/S S.J Re-Rolling Steel Mills
 Sheikhpura
 (HQ DW&CE (Navy) Sector E-8 Naval Complex Islammabad.)

Reference # CED/TFL **4286** (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 01-12-2023
 Dated: 30-11-2023

Tension Test Report (Page -1/1)

Date of Test 04-12-2023
 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 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	0.378	3	0.376	0.11	0.111	2300	3800	46100	45670	76200	75500	1.20	15.0	SJ Steel G-40
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,

M/S S.J Re-Rolling Steel Mills
 Sheikhpura
 (HQ DW&CE (Navy) Sector E-8 Naval Complex Islammabad.)

Reference # CED/TFL 4287 (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 01-12-2023
 Dated: 30-11-2023

Tension Test Report (Page -1/1)

Date of Test 04-12-2023
 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 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	0.111	3600	5100	72200	71790	102200	101700	1.10	13.8	S.J Steel G-60
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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