



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 Defence Housing Authority.
Lahore Cantt
(Infra Development Works, DHA Ph-IX Prism (Pkg-II, III & IV) (M/s NLC)

Reference # CED/TFL **35015** (Dr. Safer Abbass)
Reference of the request letter # 408/241/E/Lab/924/2920

Dated: 22-06-2020
Dated: 18-06-2020

Tension Test Report (Page -1/1)

Date of Test 23-06-2020
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	0.373	3	0.374	0.11	0.110	3100	4800	62200	62240	96200	96400	1.40	17.5	S.J. Steel
2	0.371	3	0.373	0.11	0.109	3200	4900	64200	64710	98200	99100	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.

Note:

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STRUCTURAL ENGINEERING DIVISION
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To,
M/S Transtech Engineering Company
NESPAK-CMEC
PTPL
Construction of 1263 MW Punjab Thermal Power Plant, Jhang (Ittefaq Steel)

Reference # CED/TFL **35016** (Dr. Waseem Abbas)
Reference of the request letter # TEC/UET/20060902

Dated: 22-06-2020
Dated: 19-06-2020

Tension Test Report (Page -1/2)

Date of Test 23-06-2020
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	4.291	32	32.19	1.25	1.261	48400	60000	85362	84570	105821	104900	1.20	15.0	2054
2	4.267	32	32.10	1.25	1.254	50200	60600	88537	88220	106879	106500	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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To,
M/S Transtech Engineering Company
NESPAK-CMEC
PTPL
Construction of 1263 MW Punjab Thermal Power Plant, Jhang (City Steel)

Reference # CED/TFL **35016** (Dr. Waseem Abbas)
Reference of the request letter # TEC/UET/20051401

Dated: 22-06-2020
Dated: 19-06-2020

Tension Test Report (Page -2/2)

Date of Test 23-06-2020
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	0.415	10	10.01	0.12	0.122	4200	5500	77161	75850	101044	99400	1.00	12.5	11B
2	0.417	10	10.04	0.12	0.123	4000	5500	73487	71900	101044	98900	1.00	12.5	
3	4.136	32	31.60	1.25	1.216	29600	48600	52205	53660	85715	88200	1.50	18.8	38
4	4.095	32	31.45	1.25	1.204	30200	48400	53263	55300	85362	88700	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
32mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
M/S GHS Construction Co.
Lahore

Reference # CED/TFL **35017** (Dr. Safer Abbass)
Reference of the request letter # Nil

Dated: 22-06-2020
Dated: 22-06-2020

Tension Test Report (Page -1/1)

Date of Test 23-06-2020
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	0.365	3/8	0.370	0.11	0.107	3700	4900	74200	76010	98200	100700	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 Laboratories
UET Lahore, Pakistan.

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To,
 Assistant Director (Engg.)
 Walled City of Lahore Authority
 Conservation of Mir Chakar-e-Azam tomb at satgarah

Reference # CED/TFL **35020** (Dr. Safer Abbass) Dated: 22-06-2020
 Reference of the request letter # CONS/WING/A.D. (ENGG.)/WCLA/2020 Dated: 19-06-2020

Tension Test Report (Page -1/1)

Date of Test 23-06-2020
 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	0.384	3/8	0.379	0.11	0.113	3700	5700	74200	72250	114300	111400	1.20	15.0	
2	0.383	3/8	0.379	0.11	0.113	3700	5700	74200	72460	114300	111700	1.00	12.5	
3	0.381	3/8	0.378	0.11	0.112	3800	5700	76200	74780	114300	112200	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only three samples for tensile and three samples for bend test

Bend Test

3/8" Dia Bar Bend Test Through 180° is Satisfactory

3/8" Dia Bar Bend Test Through 180° is Satisfactory

3/8" Dia Bar Bend Test Through 180° is Satisfactory

I/C Testing Laboratories
UET Lahore, Pakistan.

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To,
M/S Defence Housing Authority.
Lahore Cantt
(Const of Mosque Sector-C, DHA Ph-IX (M/s Zain Saad)

Reference # CED/TFL **35021** (Dr. Safer Abbass)
Reference of the request letter # 408/241/E/Lab/927/049

Dated: 22-06-2020
Dated: 22-06-2020

Tension Test Report (Page -1/1)

Date of Test 23-06-2020
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	0.372	3	0.373	0.11	0.109	3200	4900	64200	64550	98200	98900	1.20	15.0	S.J Steel
2	0.372	3	0.373	0.11	0.109	3200	4900	64200	64550	98200	98900	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
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To,
 Site Engineer
 Samad Rubber Works (Pvt) Ltd (Apparel Division)
 Plot # 02 Fiazi Street 21 km Feroz Pur Road Lahore

Reference # CED/TFL **35022** (Dr. Safer Abbass)
 Reference of the request letter # Nil

Dated: 22-06-2020
 Dated: 22-06-2020

Tension Test Report (Page -1/1)

Date of Test 23-06-2020
 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	0.377	3	0.376	0.11	0.111	3500	5100	70200	69610	102200	101500	1.20	15.0	
2	0.371	3	0.373	0.11	0.109	3500	4900	70200	70770	98200	99100	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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,
 M/S Model Steel Enterprises (Pvt) Limited
 Darogawala, Lahore

Reference # CED/TFL **35031** (Dr. M Yousaf)
 Reference of the request letter # Nil

Dated: 23-06-2020

Dated: 23-06-2020

Tension Test Report (Page -1/1)

Date of Test 23-06-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	0.380	3/8	0.377	0.11	0.112	3700	4900	74200	73100	98200	96900	1.10	13.8	
2	0.380	3/8	0.377	0.11	0.112	3200	4650	64200	63160	93200	91800	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

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Ref: CED/TFL/06/35032
2020

Dated: 23-06-

Dated of Test: 23-06-2020

To
Resident Engineer - I
NESPAK
Construction Underpass at Firdous Market, Lahore

Subject: - **CALIBRATION OF HYDRAULIC JACK WITH PRESSURE GAUGE**
(MARK: TFL/06/35032) (Page # 1/1)

Reference to your Letter No. 3772/FMU/103/MWA/04/45, dated: 23/06/2020 on the subject cited above. One Hydraulic with Pressure Gauge (No. 1106318802) as received by us has been calibrated. The results are tabulated as under:

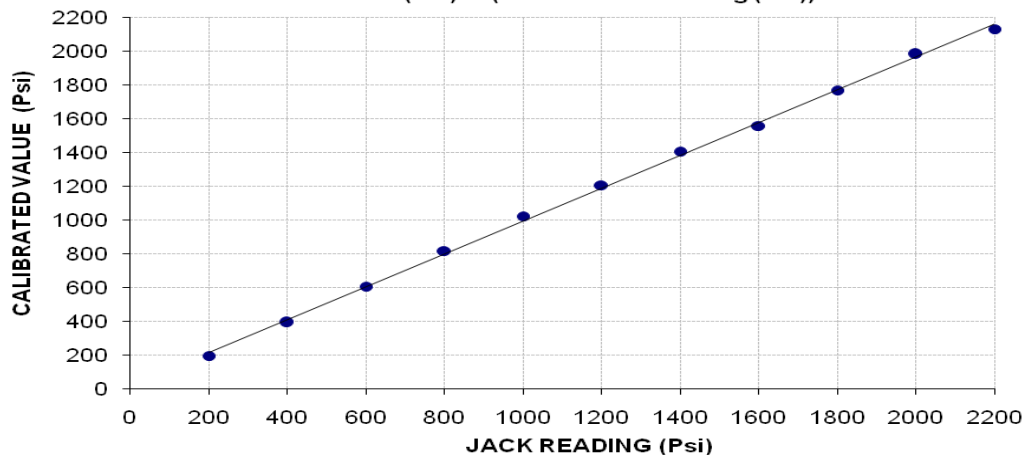
Total Range : Zero - 8600 (Psi)
Calibrated Range : Zero - 2200 (Psi)

Hydraulic Jack Reading (Psi)	200	400	600	800	1000	1200	1400	1600	1800	2000	2200
Calibrated Load (kg)	16800	33600	51800	69800	87400	103200	120300	133200	151400	169600	182200
Calibrated Pressure (Psi)	196.28	392.55	605.18	815.48	1021.10	1205.70	1405.48	1556.19	1768.82	1981.45	2128.66

The Ram Area of Jack = 188.7 in² (Witness by Muhammad Saleem (Material Specialist NESPAK))

Calibration Curve For Jack

Calibrated Value (Psi) = (0.971 x Jack Reading (Psi)) + 22.94



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