



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
 NESPAK

Lahore Knowledge Park (Package 1: Construction of Entrance Gate, Security Road, Boundary Wall and Watch Tower of Lahore Knowledge Park)

Reference # CED/TFL 34988 (Dr. Qasim Khan)
 Reference of the request letter # 3957/13/MS/10/294

Dated: 16-06-2020
 Dated: 15-06-2020

Tension Test Report (Page – 1/2)

Date of Test 22-06-2020

Gauge length 2 inches

Description Angle Iron Steel Strip Tensile and Bend Test as per ASTM A-36

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)										
1	Angle Iron	75x75x6	26.60x6.00	159.60	5100	8300	313.48	510.17	0.70	35.00	S-1
2			26.60x6.00	159.60	5100	8000	313.48	491.73	0.70	35.00	
3	Angle Iron	75x75x6	26.60x6.00	159.60	5900	8900	362.65	547.05	0.70	35.00	S-2
4			26.60x6.00	159.60	5800	8800	356.50	540.90	0.70	35.00	
5	Angle Iron	75x75x6	26.60x6.00	159.60	5300	8200	325.77	504.02	0.70	35.00	S-3
6			26.60x6.00	159.60	5000	8000	307.33	491.73	0.70	35.00	
7	Angle Iron	75x75x9	28.90x8.95	258.66	9100	14300	345.14	542.36	0.60	30.00	S-1
8			28.90x8.95	258.66	9200	14500	348.93	549.94	0.60	30.00	
9	Angle Iron	75x75x9	28.90x8.85	255.77	9000	14300	345.20	548.48	0.70	35.00	S-2
10			28.90x8.85	255.77	9100	14900	349.04	571.50	0.60	30.00	
11	Angle Iron	75x75x9	28.90x9.00	260.10	8900	14400	335.67	543.11	0.70	35.00	S-3
12			28.90x9.00	260.10	9000	14900	339.45	561.97	0.65	32.50	
Only One Sample for Tensile Test											
Bend Test											
Strip Taken from Angle Iron (75x75x6mm) Bend Test Through 180° is Satisfactory (S-1)											

I/C Testing Laboratories
UET Lahore, Pakistan.

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Strip Taken from Angle Iron (75x75x6mm) Bend Test Through 180° is Satisfactory (S-2)
Strip Taken from Angle Iron (75x75x6mm) Bend Test Through 180° is Satisfactory (S-3)
Strip Taken from Angle Iron (75x75x9mm) Bend Test Through 180° is Satisfactory (S-1)
Strip Taken from Angle Iron (75x75x9mm) Bend Test Through 180° is Satisfactory (S-2)
Strip Taken from Angle Iron (75x75x9mm) Bend Test Through 180° is Satisfactory (S-3)

Witness by Hassan Saqlain (A.E (IDAP))

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
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NESPAK

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Reference # CED/TFL **34988** (Dr. Qasim Khan)

Dated: 16-06-2020

Reference of the request letter # 3957/13/MS/10/294

Dated: 15-06-2020

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

Date of Test 22-06-2020

Gauge length -----

Description Angle Iron Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Area	L-1	L-2	Thickness	Remark
	(mm)	(g)	(mm)	(kg/m)	(mm)	(mm)	(mm)	
1	75x75x6	456	73.40	6.21	73.30	74.80	6.00	S-1
2	75x75x6	458	73.50	6.23	73.40	74.80	6.00	S-2
3	75x75x6	457	73.60	6.21	73.40	74.70	6.00	S-3
4	75x75x9	715	73.70	9.70	76.80	77.00	8.95	S-1
5	75x75x9	705	73.6	9.58	75.70	76.70	8.85	S-2
6	75x75x9	710	73.40	9.67	77.00	76.00	9.00	S-3
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
Only Six Samples for Test								

Witness by Hassan Saqlain (A.E (IDAP))

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To,
 Project Coordinator
 BPS (Private) Ltd
 Alpha Homes Apartments Raiwind Road, Lahore

Reference # CED/TFL **35011** (Dr. Safer Abbass)
 Reference of the request letter # Nil

Dated: 19-06-2020
 Dated: 19-05-2020

Tension Test Report (Page -1/1)

Date of Test 22-06-2020
 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	0.369	3	0.372	0.11	0.109	3800	4900	76200	77150	98200	99500	1.20	15.0	
2	0.378	3	0.376	0.11	0.111	3900	4900	78200	77420	98200	97300	1.20	15.0	
3	4.037	10	1.229	1.27	1.186	32600	52800	56600	60560	91700	98100	1.70	21.3	
4	2.061	10	0.878	1.27	0.606	31600	52600	54900	114970	91300	191400	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only four samples for tensile and four sample for bend test

Bend Test

#3 Dia Bar Bend Test Through 180° is Satisfactory

#3 Dia Bar Bend Test Through 180° is Satisfactory

#10 Dia Bar Bend Test Through 180° is Satisfactory

#10 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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To,
 Resident Engineer
 Al-Imam Enterprises (Pvt) Ltd
 Construction of Penta Square, Phase-V, D.H.A, Lahore

Reference # CED/TFL **35012** (Dr. Qasim Khan) Dated: 19-06-2020
 Reference of the request letter # Al-Imam/746/PS-1/DHA/LHE/1094 Dated: 09-06-2020

Tension Test Report (Page -1/2)

Date of Test 22-06-2020
 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	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.372	10	9.48	0.12	0.109	3300	4800	60627	66480	88184	96700	1.10	13.8	Kamran Steel
2	0.374	10	9.50	0.12	0.110	3500	4900	64301	70190	90021	98300	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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To,
 Resident Engineer
 Al-Imam Enterprises (Pvt) Ltd
 Construction of Penta Square, Phase-V, D.H.A, Lahore

Reference # CED/TFL **35012** (Dr. Qasim Khan) Dated: 19-06-2020
 Reference of the request letter # Al-Imam/746/PS-1/DHA/LHE/1099 Dated: 15-06-2020

Tension Test Report (Page -2/2)

Date of Test 22-06-2020
 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	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.406	10	9.91	0.12	0.119	3500	5200	64301	64590	95533	96000	1.50	18.8	Al Moiz Staal
2	0.409	10	9.93	0.12	0.120	3700	5300	67975	67880	97370	97300	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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To,
 Project Manager
 Liberty Condominiums
 Construction of Gulberg Grove, Lahore

Reference # CED/TFL **35013** (Dr. Waseem Abbas)
 Reference of the request letter # LC/T/2/19

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

Tension Test Report (Page -1/1)

Date of Test 22-06-2020
 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	0.367	3	0.371	0.11	0.108	3300	4800	66200	67390	96200	98100	1.00	12.5	
2	0.370	3	0.372	0.11	0.109	3500	4900	70200	70840	98200	99200	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Dia Bar Bend Test Through 180° is Satisfactory														

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Ref: CED/TFL/06/35014, 019

Dated: 22-06-2020

Dated of Test: 22-06-2020

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

Subject: - **CALIBRATION OF HYDRAULIC JACK WITH PRESSURE GAUGE**
(MARK: TFL/06/34957) (Page # 1/1)

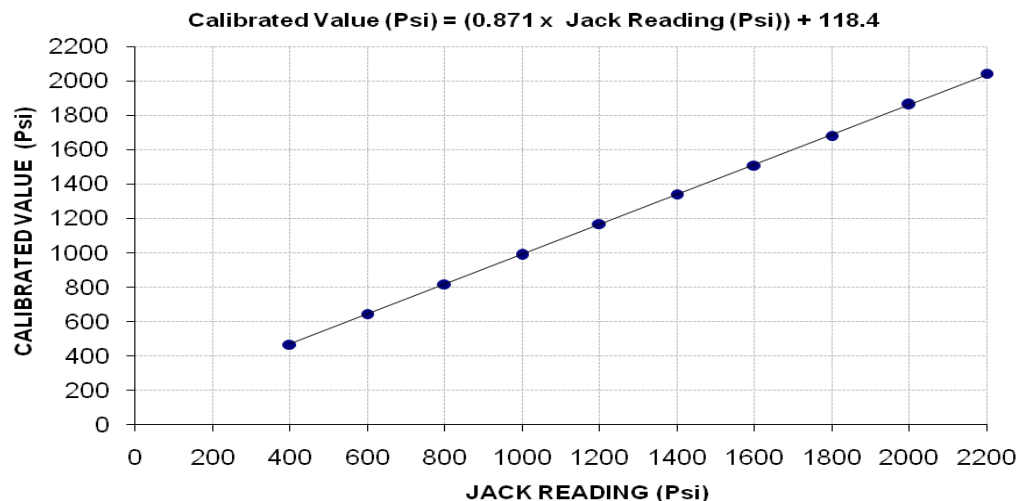
Reference to your Letter No. 3772/FMU/103/MWA/04/42, dated: 20/06/2020 on the subject cited above. One Hydraulic with Pressure Gauge (No. EN 837-1) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 6000 (Psi)
Calibrated Range : Zero - 2200 (Psi)

Hydraulic Jack Reading (Psi)	400	600	800	1000	1200	1400	1600	1800	2000	2200
Calibrated Load (kg)	39800	55200	70000	84500	100000	114600	129200	143800	159400	174800
Calibrated Pressure (Psi)	464.99	644.91	817.82	987.22	1168.31	1338.88	1509.46	1680.03	1862.29	2042.20

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

Calibration Curve For Jack



I/C Testing Laboratoires
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