



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/09/33898

Dated: 26-09-19

Dated of Test: 01-10-19

To
Chief Resident Engineer
Osmani & Co. (Pvt) Ltd
Swat Motorway Project

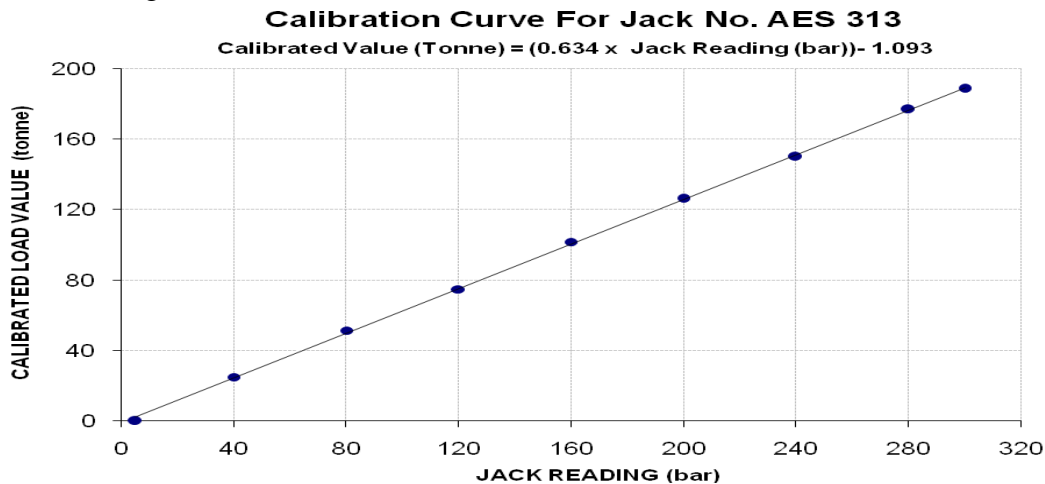
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/09/33898) (Page -1/2)

Reference to your Letter No. 333/CRE/QAT/SMP/2019, Dated: 25/09/2019 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)	5	40	80	120	160	200	240	280	300	
Calibrated Load	(kg)	0	24800	51400	74900	101600	126200	150000	176900	188700
	Tonne	0	24.80	51.40	74.90	101.60	126.20	150.00	176.90	188.70
Calibrated Pressure (bar)	0	40.39	83.72	122.00	165.49	205.56	244.32	288.14	307.36	

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



Ref: CED/TFL/09/33898

Dated: 26-09-19

I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
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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

Dated of Test: 01-10-19

To
Chief Resident Engineer
Osmani & Co. (Pvt) Ltd
Swat Motorway Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/09/33898) (Page -2/2)

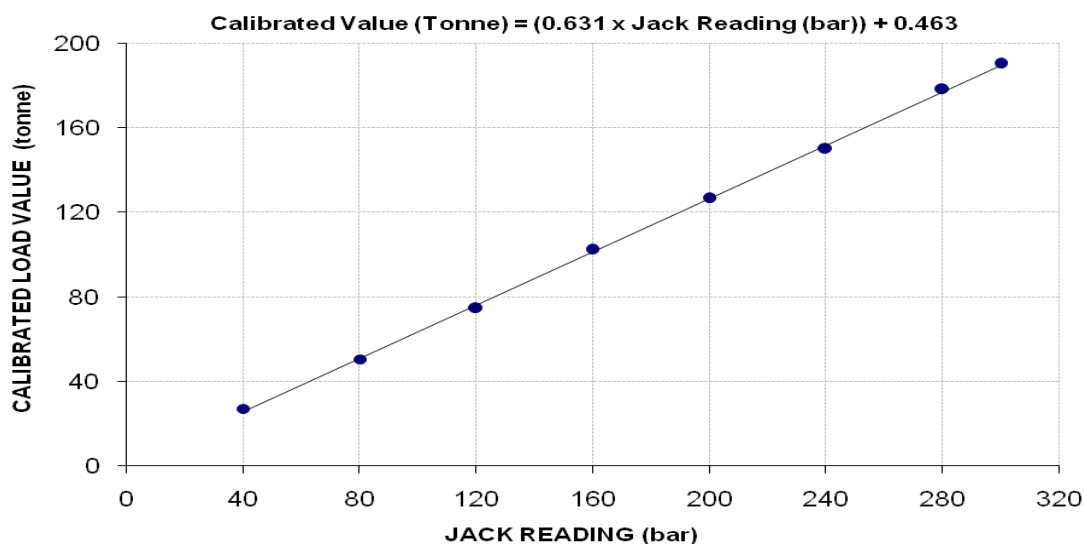
Reference to your Letter No. 333/CRE/QAT/SMP/2019, Dated: 25/09/2019 on the subject cited above. One Hydraulic Jack (Jack No 314, Gauge No. AES-314) as received by us has been calibrated. The results are tabulated as under:

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

Hydraulic Jack Reading (bar)	40	80	120	160	200	240	280	300	
Calibrated Load	(kg)	27100	50400	74600	102400	126700	150000	178200	190400
	Tonne	27.10	50.40	74.60	102.40	126.70	150.00	178.20	190.40
Calibrated Pressure (bar)	44.14	82.09	121.51	166.79	206.37	244.32	290.26	310.13	

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

Calibration Curve For Jack No. AES 314



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,
 Resident Engineer
 EGC (Pvt) Ltd
 KQ Road Project N-25
 Additional work under USAID for Kalat Tool Plaza

Reference # CED/TFL **33902** (Dr. Waseem Abbas)
 Reference of the request letter # RE/KQC-N-25/Add/347

Dated: 26-09-2019
 Dated: 16-09-2019

Tension Test Report (Page – 1/1)

Date of Test 01-10-2019
 Gauge length 2 inches
 Description Galvanized Steel Pipe 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 ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	75	25.50x5.10	130.05	6600	7800	497.85	588.37	0.40	20.00	
2		25.20x5.10	128.52	5400	6600	412.18	503.78	0.50	25.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test										
Bend Test										

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,
 A.Senior Engineer
 University of Education Lahore
 Strengthening of University of Education (Main/Township Campus) Construction of Student
 Hostel Building
 (AF Steel)
 Reference # CED/TFL **33913** (Dr. Waseem Abbas) Dated: 30-09-2019
 Reference of the request letter # UE/Engg/UE/2019/573 Dated: 25-09-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019
 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	0.376	3	0.375	0.11	0.110	3500	4700	70200	69850	94200	93800	1.00	12.5	
2	0.381	3	0.378	0.11	0.112	3800	4900	76200	74690	98200	96400	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Resident Engineer
 NESPAK
 Development Packages – Quetta City, Clearing / Aligning /Extension of Sabzal Road
 (Abbas Steel)

Reference # CED/TFL **33914** (Dr. Waseem Abbas)
 Reference of the request letter # 3962/101/IUK/440

Dated: 30-09-2019
 Dated: 14-09-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019
 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	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.402	10	9.86	0.12	0.118	4400	5500	80835	82010	101044	102600	1.10	13.8	
2	0.409	10	9.93	0.12	0.120	4400	5400	80835	80760	99207	99200	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 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,
 Project Manager
 A.S Enterprises
 (Style Textile Mill)(AA Associates)(FF Steel)

Reference # CED/TFL **33916** (Dr. Waseem Abbas)
 Reference of the request letter # USD/ASE/17

Dated: 30-09-2019
 Dated: 30-09-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019
 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	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.422	10	10.09	0.12	0.124	3600	5200	66138	64040	95533	92500	1.20	15.0	
2	0.422	10	10.10	0.12	0.124	3600	5100	66138	63950	93696	90600	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.

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 Al-Hamd General Engineering Services
Lahore
(Whool Food Pvt Ltd at Layyah)

Reference # CED/TFL **33917** (Dr. Waseem Abbas)
Reference of the request letter # 04-Layyah

Dated: 30-09-2019
Dated: 28-09-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019
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	0.362	3	0.368	0.11	0.106	2900	4700	58200	60040	94200	97400	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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,
 Manager Civil
 Orient
 Orient Sqaure Hostel Tower Project FTC Johar Town, Lahore

Reference # CED/TFL **33918** (Dr. Waseem Abbas) Dated: 30-09-2019
 Reference of the request letter # ORIENT/AFCO/Hostel Tower/Steel/008 Dated: 28-09-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019
 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	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	4.258	32	32.06	1.25	1.252	33400	55000	58907	58820	97002	96900	1.50	18.8	
2	4.235	32	31.98	1.25	1.245	32400	54800	57143	57370	96650	97100	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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,
 Sub Divisional Officer
 Building Sub Division
 No. 19, Lahore
 (Construction of Public Toilet Block Near Elephant House and Cafeteria in Lahore Zoo Lahore)

Reference # CED/TFL **33919** (Dr. Waseem Abbas)
 Reference of the request letter # 2298

Dated: 30-09-2019
 Dated: 03-07-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019

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	0.375	3/8	0.375	0.11	0.110	3300	4800	66200	66000	96200	96000	1.40	17.5	
2	0.373	3/8	0.374	0.11	0.110	3300	4900	66200	66380	98200	98600	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend 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 Fairmay Investments
Gulberg III, Lahore

Reference # CED/TFL **33920** (Dr. Waseem Abbas)
Reference of the request letter # Nil

Dated: 30-09-2019
Dated: 30-09-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019

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	0.366	3	0.370	0.11	0.108	3100	5000	62200	63440	100200	102400	1.20	15.0	
2	4.193	10	1.253	1.27	1.232	48800	60000	84700	87270	104200	107300	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#10 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

Ref: CED/TFL/09/33921

Dated: 30-09-19

Dated of Test: 01-10-19

To,
Amjad Engineering Services
Lahore

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/09/33921) (Page -1/2)

Reference to your Letter No. Nil, Dated: 30/09/2019 on the subject cited above. One Pressure Gauge No. AES-3501 as received by us has been calibrated. The results are tabulated as under:

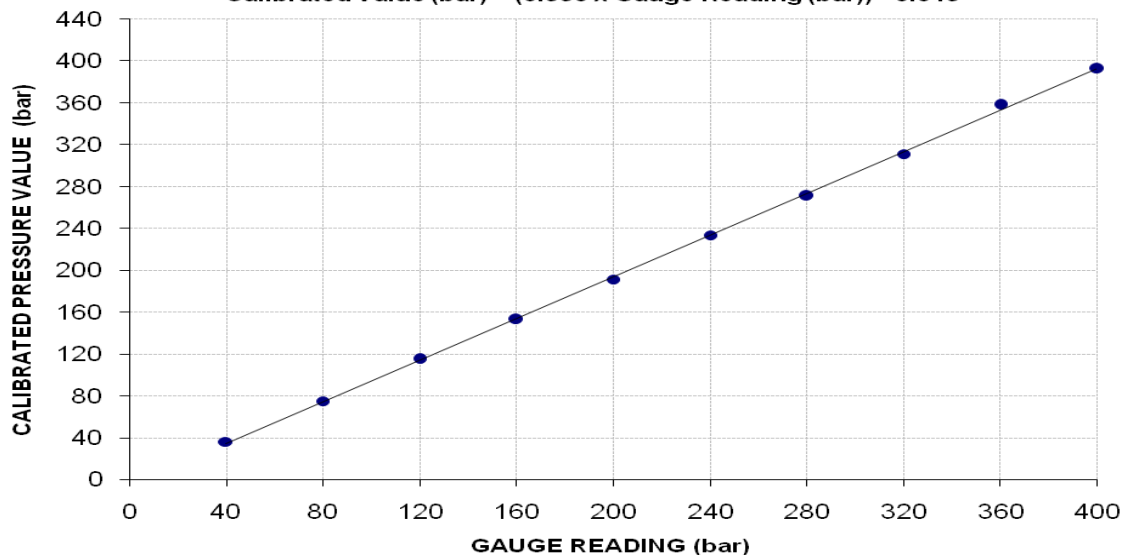
Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 400 (bar)

Pressure Gauge Reading (bar)	40	80	120	160	200	240	280	320	360	400
Calibrated Load (kg)	7300	15100	23200	30900	38600	47100	54700	62800	72300	79300
Calibrated Pressure (bar)	36.16	74.79	114.91	153.05	191.19	233.29	270.93	311.05	358.10	392.78

The Ram Are use for Calibration = 198 cm^2

Calibration Curve for Pressure Gauge No. AES-3501

Calibrated Value (bar) = $(0.995 \times \text{Gauge Reading (bar)}) - 5.349$



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

Ref: CED/TFL/09/33921

Dated: 30-09-19

Dated of Test: 01-10-19

To,
Amjad Engineering Services
Lahore

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/09/33921) (Page -2/2)

Reference to your Letter No. Nil, Dated: 30/09/2019 on the subject cited above. One Pressure Gauge No. AES-3502 as received by us has been calibrated. The results are tabulated as under:

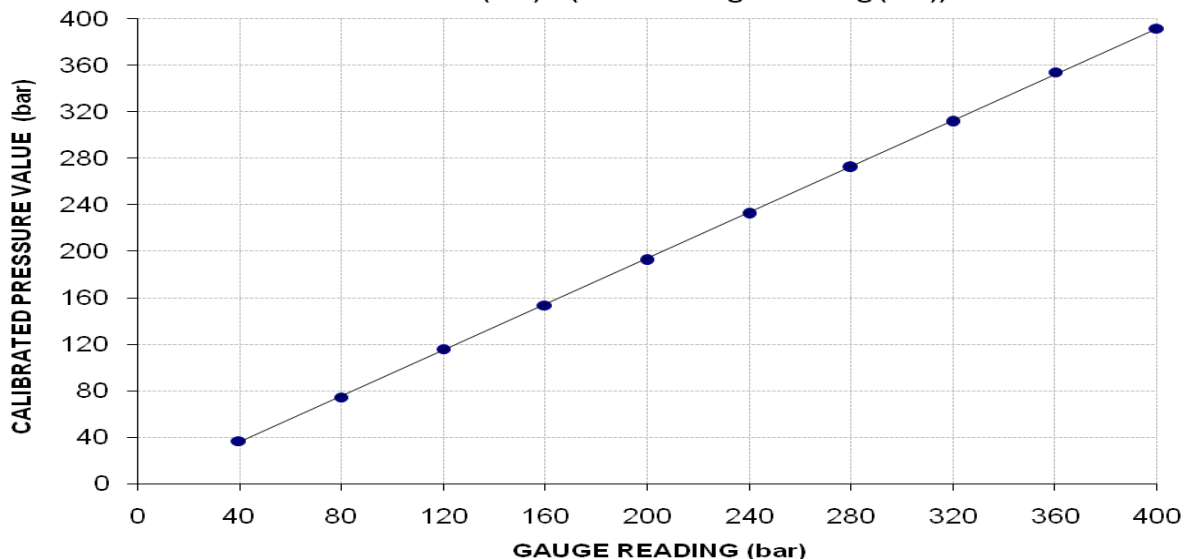
Total Range : Zero - 1000 (bar)
Calibrated Range : Zero - 400 (bar)

Pressure Gauge Reading (bar)	40	80	120	160	200	240	280	320	360	400
Calibrated Load (kg)	7400	15000	23400	31000	38800	46900	55000	62900	71500	79100
Calibrated Pressure (bar)	36.65	74.30	115.90	153.54	192.18	232.30	272.42	311.55	354.14	391.78

The Ram Area used for Calibration = 198 cm²

Calibration Curve for Pressure Gauge No. AES-3502

Calibrated Value (bar) = (0.989 × Gauge Reading (bar)) - 4.193



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,
 Resident Engineer
 Dar Engineering
 Punjab Agriculture Food and Durg Authority's Science Enclave, Lahore Pakistan
 (Heat No. P-57 - Kamran Steel)

Reference # CED/TFL **33922** (Dr. Waseem Abbas) Dated: 30-09-2019
 Reference of the request letter # DB-78/DAR/RE/ME/2019/0254 Dated: 30-09-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019
 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	0.367	3	0.371	0.11	0.108	3200	4800	64200	65360	96200	98100	1.20	15.0	
2	0.371	3	0.373	0.11	0.109	3200	4800	64200	64710	96200	97100	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Deputy Manager (S & A)
 M/S Educational Services (Pvt) Ltd

Reference # CED/TFL **33924** (Dr. Waseem Abbas)
 Reference of the request letter # Nil

Dated: 01-10-2019
 Dated: 30-09-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019
 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	0.438	3	0.405	0.11	0.129	3900	5100	78200	66700	102200	87300	1.00	12.5	
2	0.376	3	0.375	0.11	0.111	4000	5100	80200	79740	102200	101700	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,
 Additional Director Development
 DHA Phase-XI (Rahbar)
 Construction of DHA Girls School at Block- 'B' Sector-I, DHA Phase-XI (Rahbar)

Reference # CED/TFL **33930** (Dr. Irfan ul Hussan) Dated: 01-10-2019
 Reference of the request letter # 700/3/Girls School/Ph-XI/Project/2868 Dated: 30-09-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019
 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	0.372	3/8	0.373	0.11	0.109	3100	4800	62200	62450	96200	96700	1.10	13.8	Ittefaq Steel
2	0.372	3/8	0.373	0.11	0.109	3100	4900	62200	62430	98200	98700	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
DCRE/RE-1
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project
(M/s Steel Cmples)

Reference # CED/TFL **33932** (Dr. Safer Abbas)
Reference of the request letter # LSMP/RE-1/2019/1115

Dated: 01-10-2019
Dated: 01-10-2019

Tension Test Report (Page – 1/2)

Date of Test 01-10-2019
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 "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	782.0	17200	168.73	19800	194.24	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Only one sample for Test										

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

I/C Testing Laboratoires
UET Lahore, Pakistan.

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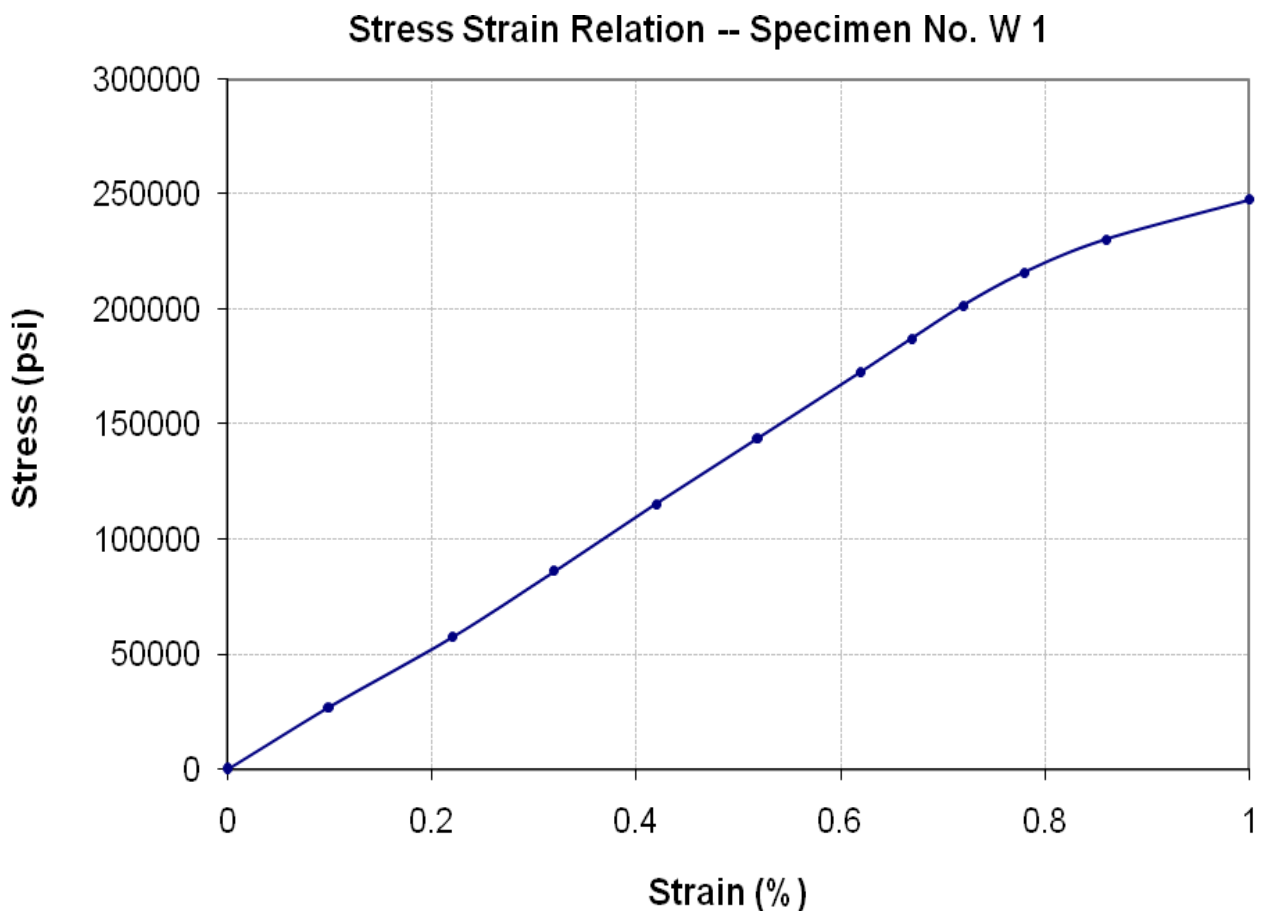
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
DCRE/RE-1
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Reference # CED/TFL **33932** (Dr. Safer Abbas)
Reference of the request letter # LSMP/RE-1/2019/1115

Dated: 01-10-2019
Dated: 01-10-2019

Graph (Page – 2/2)



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,
M/S Salman Traders
Lahore

Reference # CED/TFL **33933** (Dr. Waseem Abbas)
Reference of the request letter # Nil

Dated: 01-10-2019
Dated: 01-10-2019

Tension Test Report (Page -1/1)

Date of Test 01-10-2019
Gauge length 8 inches
Description Plain Steel Bar Tensile Test

Sr. No.	Weight (kg/m)	Diameter/ size		Area (mm ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (MPa) Actual	Ultimate Stress (MPa) Actual	Elongation (inch)	% Elongation	Remarks
		Nominal (mm)	Actual (mm)	Nominal	Actual							
1	7.306	36	34.42	-----	930.8	30200	60000	318	632	3.50	43.8	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test												
Bend Test												

I/C Testing Laboratoires
UET Lahore, Pakistan.

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