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

To,
DCRE
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Reference # CED/TFL **33687** (Dr. Waseem Abbas) Dated: 05-08-2019
Reference of the request letter # LSMP/RE-II/St/19/413 Dated: 22-07-2019

Tension Test Report (Page – 1/2)

Date of Test 20-08-2019
Gauge length 2 inches
Description Bearing Pad 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^2)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	**Bearing Pad Steel Plate**	**16.40x2.70**	**44.28**	**1000**	**1300**	**221.54**	**288.01**	**0.70**	**35.00**	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only One Sample for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
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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/08/33687 Dated: 05-08-19

To

DCRE
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Subject: - **TEST RESULT REPORT FOR BEARING DEVICE (PAD) (SIZE TEST)** (Page # 2/2)

Reference to your letter no. LSMP/RE-II/St/19/413, Dated: 22/07/2019 on the above mentioned subject. One Elastromeric Bearing Rubber Pad (EBRP) has been received by us. The same was tested and results are given below.

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Test Results

No. of Steel Plate	**:**	**5**
Thickness of Steel Plate	**:**	**3.10 mm (Average)**
Thickness of Rubber between Steel Plates	**:**	**Non Uniform**
		(Max : 15.50 mm)
		(Min : 10.60 mm)
Cover of Rubber to top steel plate	**:**	**8.00 mm**
Cover of Rubber to bottom steel plate	**:**	**5.80 mm**

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UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
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To,
Engineer's Representative
NESPAK
Construction of Pakistan Kidney & Liver Institute and Research Center, Lahore Hospital
Package C-I, Phase – I

Reference # CED/TFL **33708** (Dr. Waseem Abbas) Dated: 07-08-2019
Reference of the request letter # 3836/13/AA/10/C-1-MEP-FF-MTR-52 Dated: 06-08-2019

Tension Test Report (Page – 1/2)

Date of Test 20-08-2019
Gauge length 2 inches
Description MS Seamless 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
	(inch)	(mm)	(mm^2)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	**1-1/2**	**27.50x3.30**	**90.75**	**3800**	**4900**	**410.78**	**529.69**	**0.40**	**20.00**	
2	**1-1/2**	**27.50x3.30**	**90.75**	**3500**	**4700**	**378.35**	**508.07**	**0.50**	**25.00**	
3	**3**	**27.50x5.40**	**148.50**	**6400**	**8800**	**422.79**	**581.33**	**0.40**	**20.00**	
4	**3**	**27.50x5.40**	**148.50**	**6800**	**9500**	**449.21**	**627.58**	**0.50**	**25.00**	
5	**4**	**27.50x5.70**	**156.75**	**5900**	**7700**	**369.24**	**481.89**	**0.50**	**25.00**	
6	**4**	**27.50x5.70**	**156.75**	**5800**	**7600**	**362.99**	**475.64**	**0.50**	**25.00**	
-	-	-	-	-	-	-	-	-	-	
Only Six Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Department of Civil Engineering
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To,
Engineer's Representative
NESPAK
Construction of Pakistan Kidney & Liver Institute and Research Center, Lahore Hospital
Package C-I, Phase – I

Reference # CED/TFL **33708** (Dr. Waseem Abbas) Dated: 07-08-2019
Reference of the request letter # 3836/13/AA/10/C-1-MEP-FF-MTR-52 Dated: 06-08-2019

Weight &Size Test Report (Page – 2/2)

Date of Test 20-08-2019
Gauge length -------
Description MS Seamless Pipe Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	External Diameter	Internal Diameter	Thickness	Remark
	(inch)	(g)	(cm)	(kg/m)	(mm)	(mm)	(mm)	
1	**1**	**786**	**30.30**	**2.59**	**33.40**	**26.40**	**3.50**	
2	**1-1/2**	**1076**	**30.30**	**3.55**	**48.60**	**41.60**	**3.50**	
3	**2**	**1528**	**30.50**	**5.01**	**60.50**	**53.00**	**3.75**	
4	**2- 1/2**	**2700**	**30.10**	**8.97**	**73.20**	**62.80**	**5.20**	
5	**3**	**3390**	**30.80**	**11.01**	**89.40**	**78.40**	**5.50**	
6	**4**	**4716**	**30.10**	**15.67**	**114.40**	**102.50**	**5.95**	
7	**6**	**8314**	**30.30**	**27.44**	**168.40**	**154.60**	**6.90**	
-	**-**	**-**	-	**-**	**-**	**-**	**-**	
-	**-**	**-**	-	**-**	**-**	**-**	**-**	
Only Six Samples for Test								

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/08/33717 Dated: 19-08-19

To
M/S CGGC
CGGC Suki Kinari Project Management in Pakistan

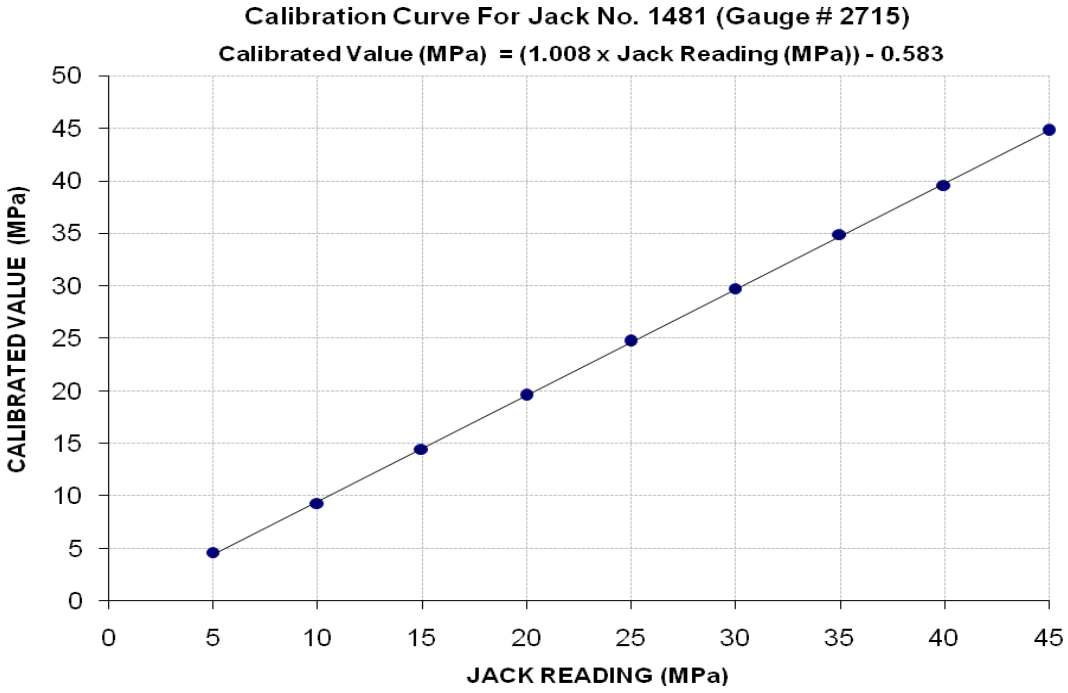
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33717)** (Page -1/8)

Reference to your Letter No. Nil, dated: 19/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 1481, Gauge No. 2715) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	14000	28200	44000	59400	75100	90400	106000	120200	136000
Calibrated Pressure (Mpa)	4.61	9.28	14.48	19.55	24.71	29.75	34.88	39.56	44.76

The Ram Area of Jack = 298 cm^2



I/C Testing Laboratoires
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Ref: CED/TFL/08/33717 Dated: 19-08-19

To
M/S CGGC
CGGC Suki Kinari Project Management in Pakistan

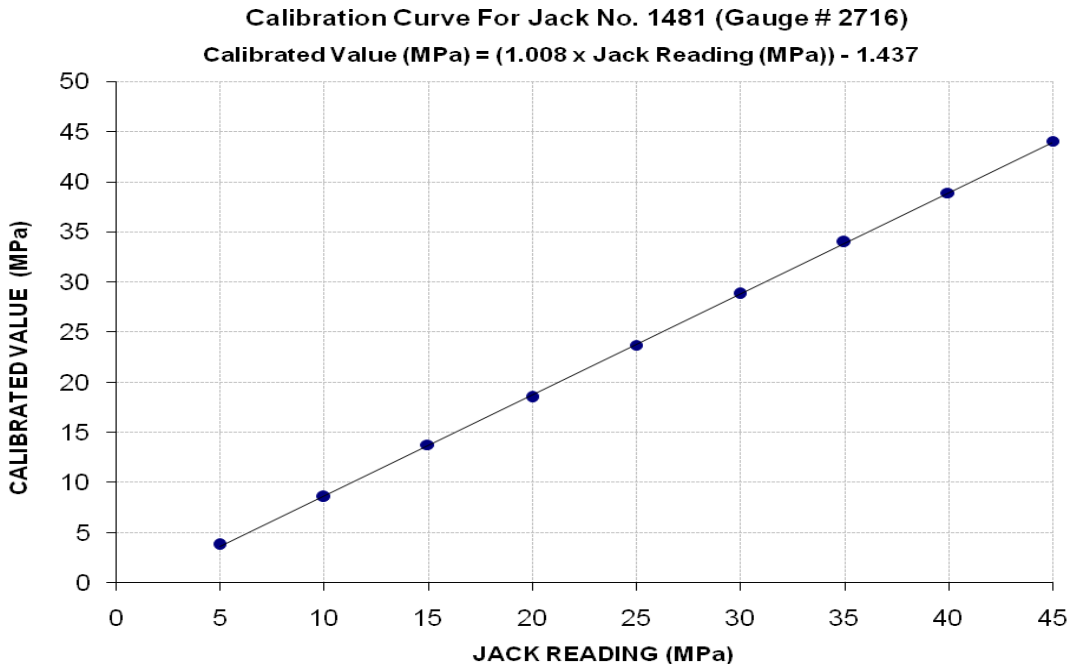
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33717)** (Page -2/8)

Reference to your Letter No. Nil, dated: 19/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 1481, Gauge No. 2716) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	11600	26000	41800	56200	72000	87600	103200	118200	133800
Calibrated Pressure (Mpa)	3.82	8.56	13.76	18.50	23.69	28.83	33.96	38.90	44.03

The Ram Area of Jack = 298 cm^2



I/C Testing Laboratoires
UET Lahore, Pakistan.

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Ref: CED/TFL/08/33717 Dated: 19-08-19

To
M/S CGGC
CGGC Suki Kinari Project Management in Pakistan

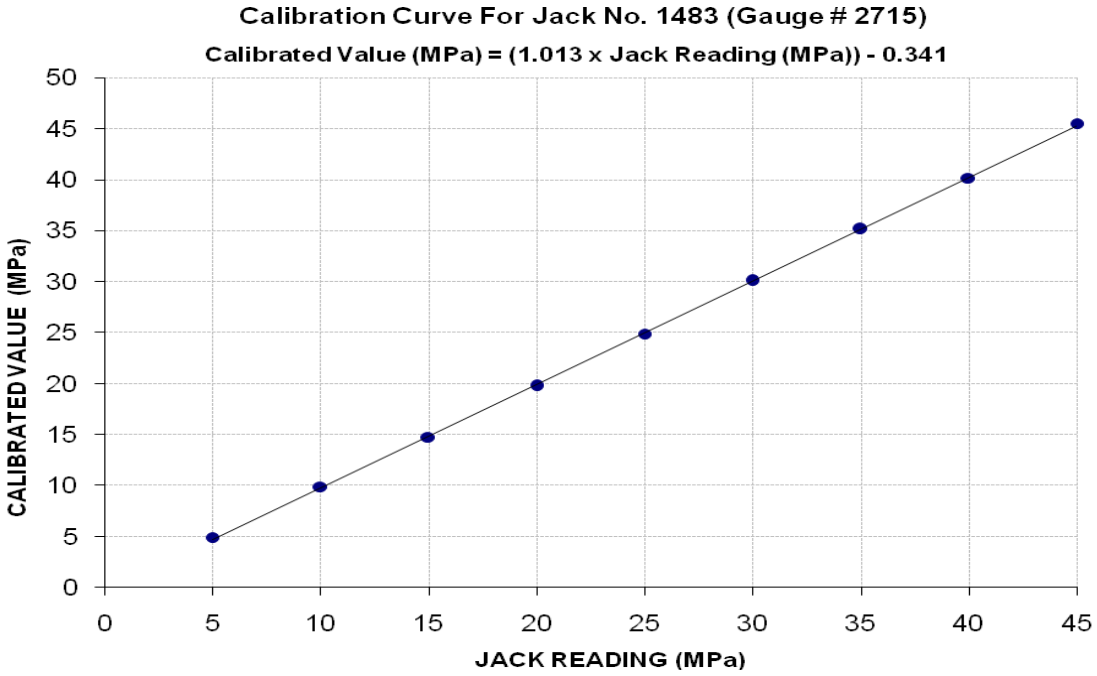
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33717)** (Page -3/8)

Reference to your Letter No. Nil, dated: 19/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 1483, Gauge No. 2715) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	15000	30000	44800	60000	75600	91400	106800	122000	138200
Calibrated Pressure (Mpa)	4.94	9.87	14.74	19.75	24.88	30.08	35.15	40.15	45.48

The Ram Area of Jack = 298 cm^2



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University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

Ref: CED/TFL/08/33717 Dated: 19-08-19

To
M/S CGGC
CGGC Suki Kinari Project Management in Pakistan

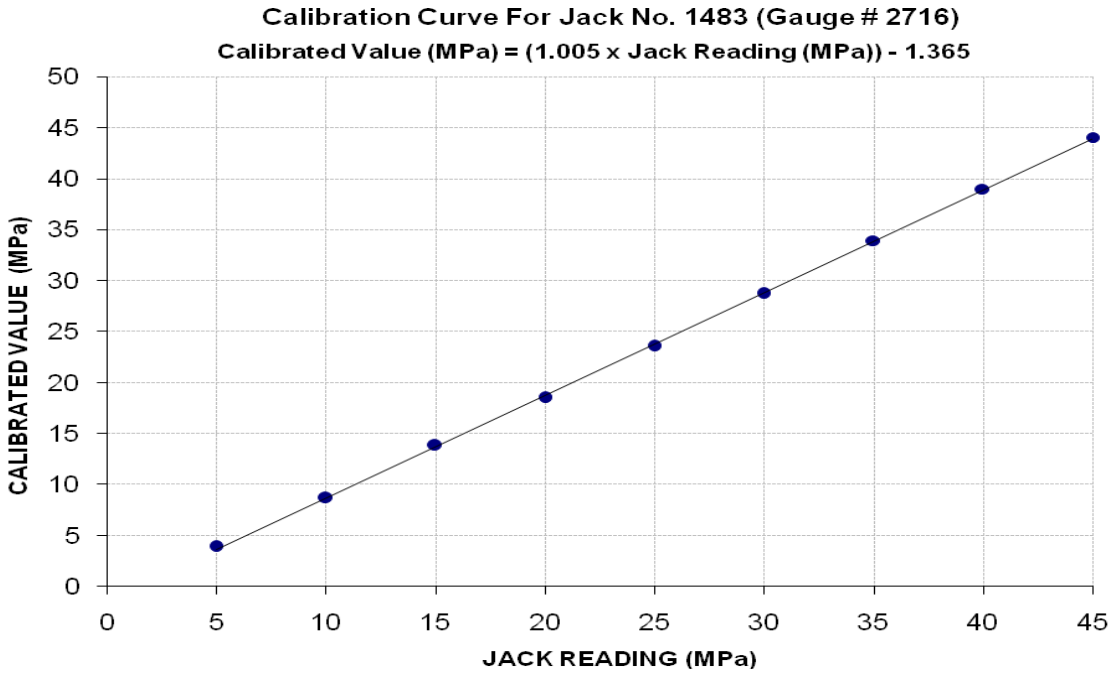
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33717)** (Page -4/8)

Reference to your Letter No. Nil, dated: 19/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 1483, Gauge No. 2716) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	11800	26400	42000	56200	71600	87200	103000	118400	133800
Calibrated Pressure (Mpa)	3.88	8.69	13.82	18.50	23.56	28.70	33.90	38.96	44.03

The Ram Area of Jack = 298 cm^2



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STRUCTURAL ENGINEERING DIVISION

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Pakistan. Ph: 92-42-99029202

Ref: CED/TFL/08/33717 Dated: 19-08-19

To
M/S CGGC
CGGC Suki Kinari Project Management in Pakistan

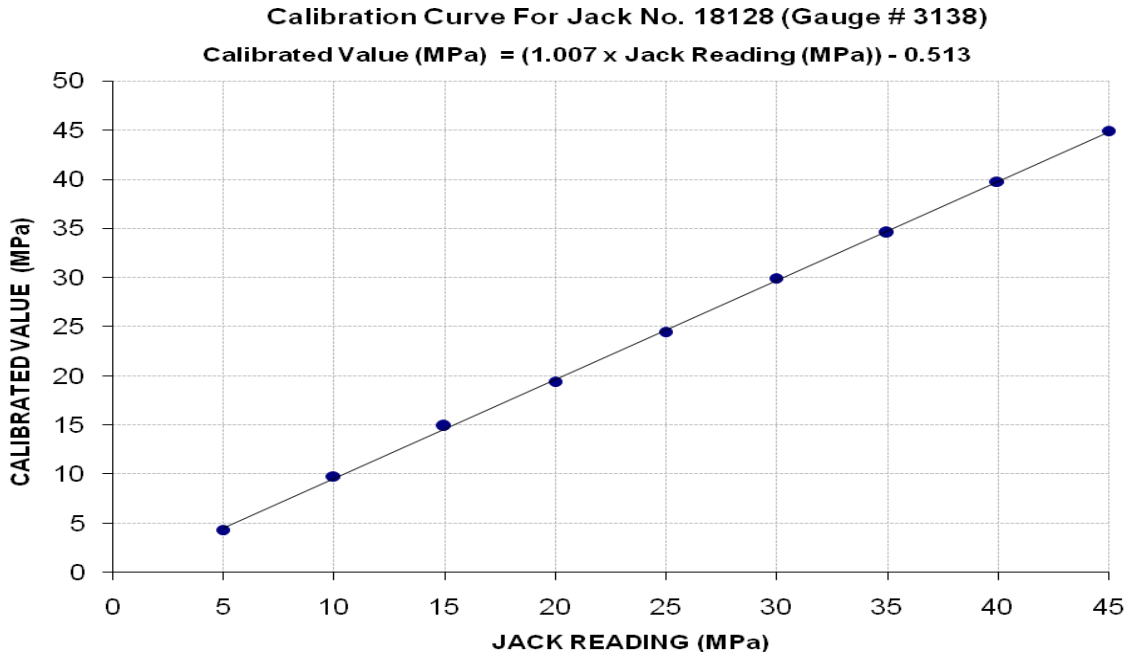
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33717)** (Page -5/8)

Reference to your Letter No. Nil, dated: 19/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 18128, Gauge No. 3138) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	2100	4750	7250	9450	11900	14550	16800	19350	21850
Calibrated Pressure (Mpa)	4.32	9.76	14.90	19.42	24.46	29.91	34.53	39.77	44.91

The Ram Area of Jack = 47.71 cm^2



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Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

Ref: CED/TFL/08/33717 Dated: 19-08-19

To
M/S CGGC
CGGC Suki Kinari Project Management in Pakistan

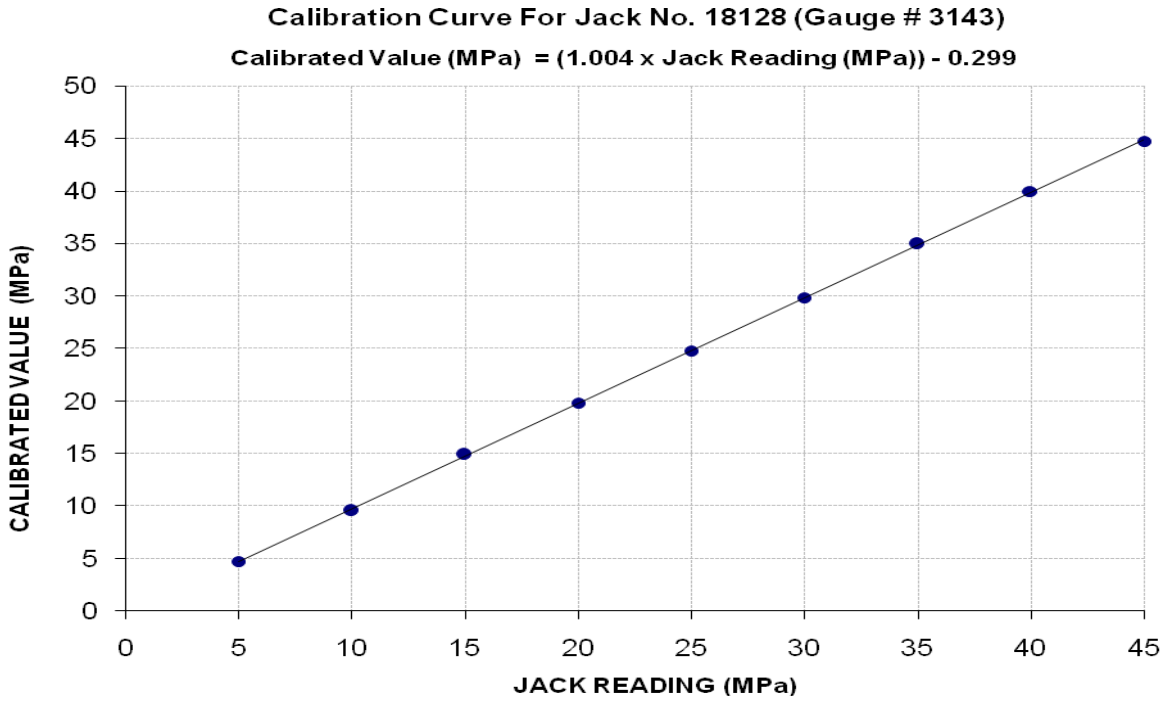
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33717)** (Page -6/8)

Reference to your Letter No. Nil, dated: 19/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 18128, Gauge No. 3143) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	2300	4650	7250	9650	12050	14500	17000	19450	21750
Calibrated Pressure (Mpa)	4.73	9.56	14.90	19.84	24.77	29.81	34.94	39.98	44.71

The Ram Area of Jack = 47.71 cm^2



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STRUCTURAL ENGINEERING DIVISION

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Ref: CED/TFL/08/33717 Dated: 19-08-19

To
M/S CGGC
CGGC Suki Kinari Project Management in Pakistan

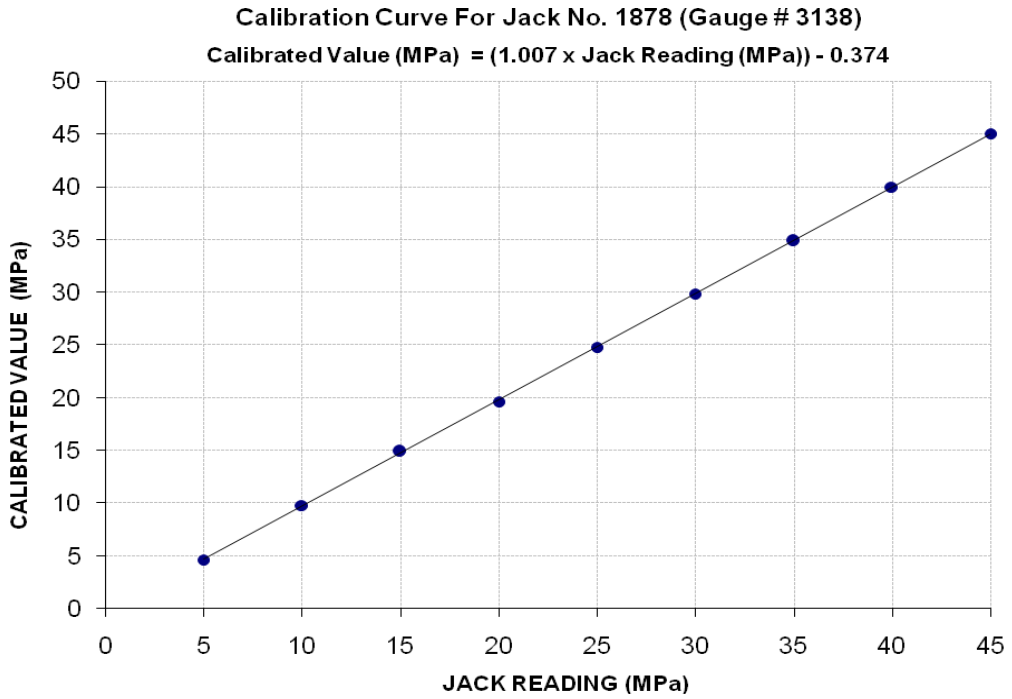
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33717)** (Page -7/8)

Reference to your Letter No. Nil, dated: 19/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 1878, Gauge No. 3138) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	2250	4750	7250	9550	12050	14500	16950	19450	21900
Calibrated Pressure (Mpa)	4.62	9.76	14.90	19.63	24.77	29.81	34.84	39.98	45.02

The Ram Area of Jack = 47.71 cm^2



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Ref: CED/TFL/08/33717 Dated: 19-08-19

To
M/S CGGC
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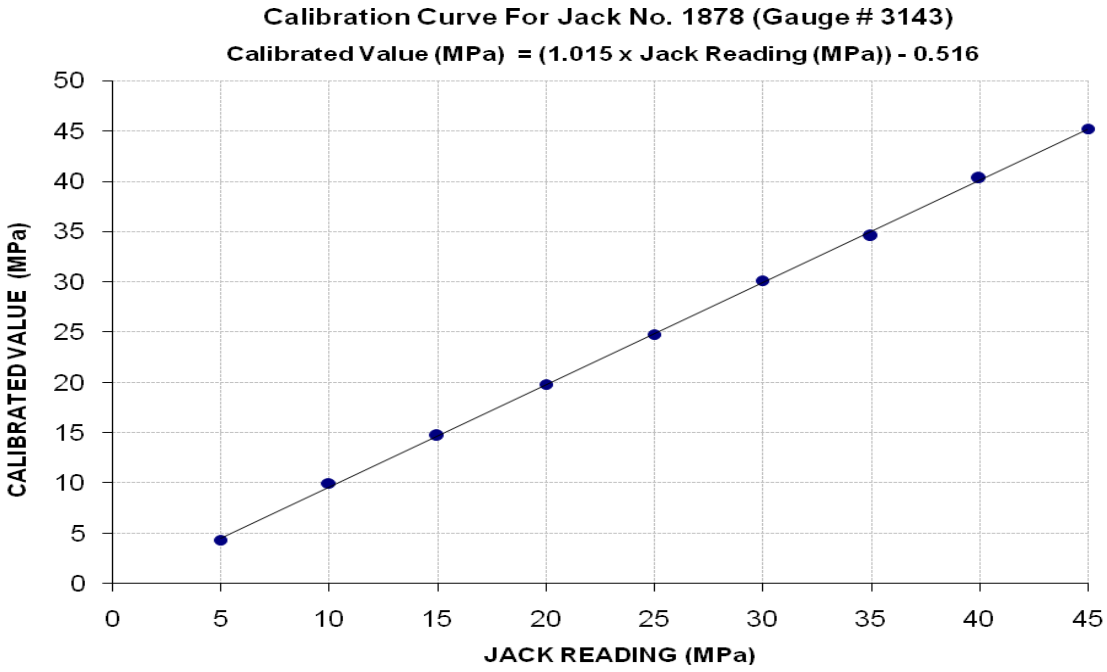
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/08/33717)** (Page -8/8)

Reference to your Letter No. Nil, dated: 19/08/2019 on the subject cited above. One Hydraulic Jack (Jack No. 1878, Gauge No. 3143) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 45 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45
Calibrated Load (Kg)	2100	4850	7150	9650	12050	14650	16800	19600	22000
Calibrated Pressure (Mpa)	4.32	9.97	14.70	19.84	24.77	30.11	34.53	40.29	45.22

The Ram Area of Jack = 47.71 cm^2



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STRUCTURAL ENGINEERING DIVISION

Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
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To,
Deputy Manager
Kamal Hosiery Mills, Faisalabad
Construction of FGS, Warping 1st Floor & Store Shell Godowns

Reference # CED/TFL **33719** (Dr. Safeer Abbas) Dated: 20-08-2019
Reference of the request letter # KHM/CIVIL/01-2019 Dated: 19-08-2019

Tension Test Report (Page -1/1)

Date of Test 20-08-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ size		Area (in^2)		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	0.378	3	0.376	0.11	0.111	3200	5000	64200	63530	100200	99300	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180º is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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