



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/02/938

Dated: 23-02-2022

Dated: 25-02-2022

To
M/S CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/938) (Page -1/4)

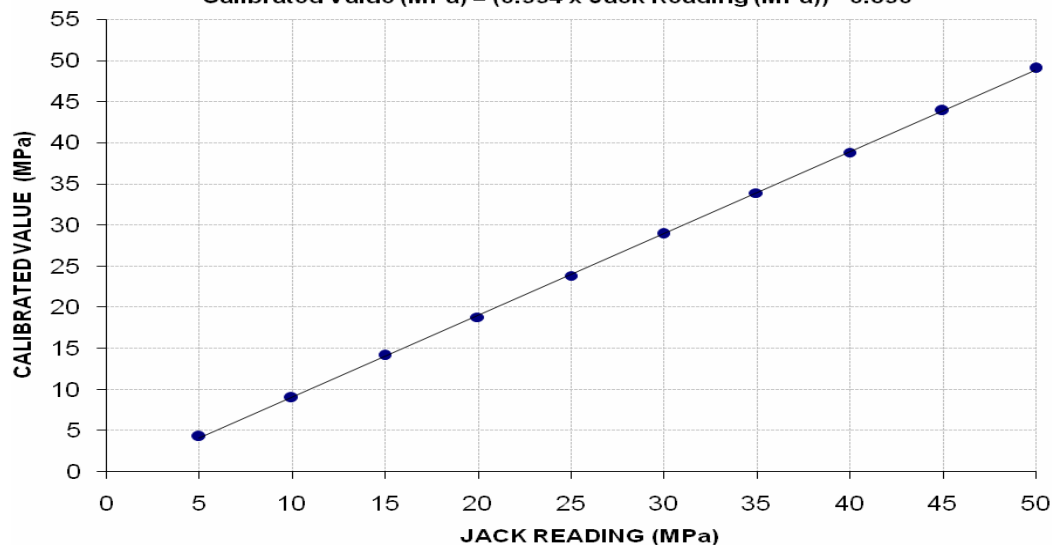
Reference to your Letter No. CGGC-MD-2022.02, dated: 22/02/2022 on the subject cited above. One Hydraulic Jack (Jack No. 1403, Gauge No. 2688) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 50 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45	50
Calibrated Load (Kg)	13000	27400	43000	57200	72400	87800	103000	118000	133400	149000
Calibrated Pressure (Mpa)	4.28	9.02	14.15	18.82	23.83	28.89	33.90	38.83	43.90	49.04

The Ram Area of Jack = 298 cm²

Calibration Curve For Jack No. 1403 (Gauge # 2688)
Calibrated Value (MPa) = (0.994 x Jack Reading (MPa)) - 0.890



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/938

Dated: 23-02-2022

Dated: 25-02-2022

To
M/S CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/938) (Page -1/4)

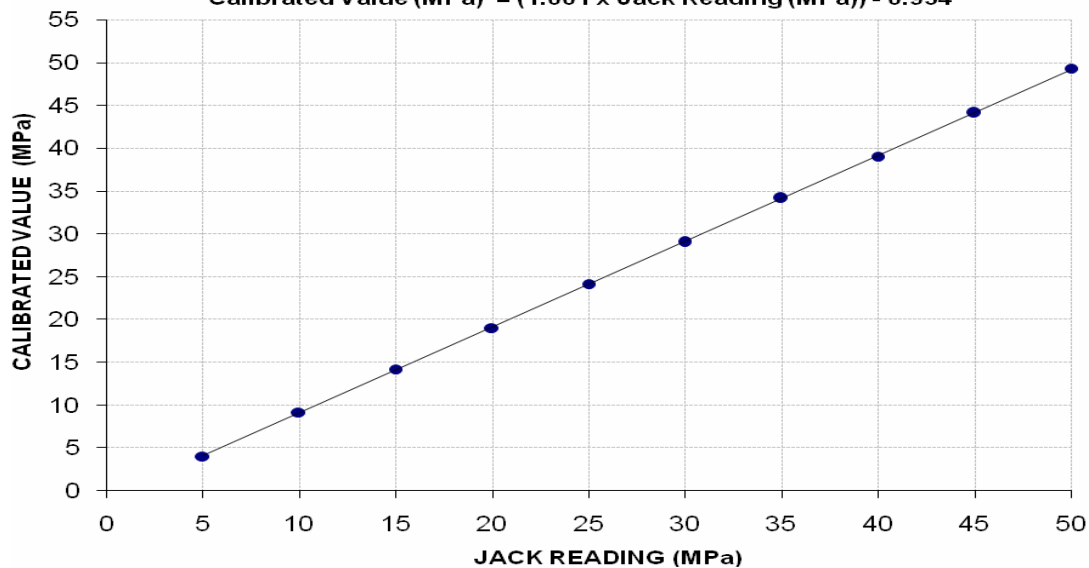
Reference to your Letter No. CGGC-MD-2022.02, dated: 22/02/2022 on the subject cited above. One Hydraulic Jack (Jack No. 1403, Gauge No. 2872) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 50 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45	50
Calibrated Load (Kg)	12200	27800	43200	57800	73400	88200	103800	118600	134000	149800
Calibrated Pressure (Mpa)	4.01	9.15	14.22	19.02	24.16	29.03	34.16	39.03	44.10	49.30

The Ram Area of Jack = 298 cm²

Calibration Curve For Jack No. 1403 (Gauge # 2872)
Calibrated Value (MPa) = (1.001 x Jack Reading (MPa)) - 0.934



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/938

Dated: 23-02-2022

Dated: 25-02-2022

To
M/S CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/938) (Page -3/4)

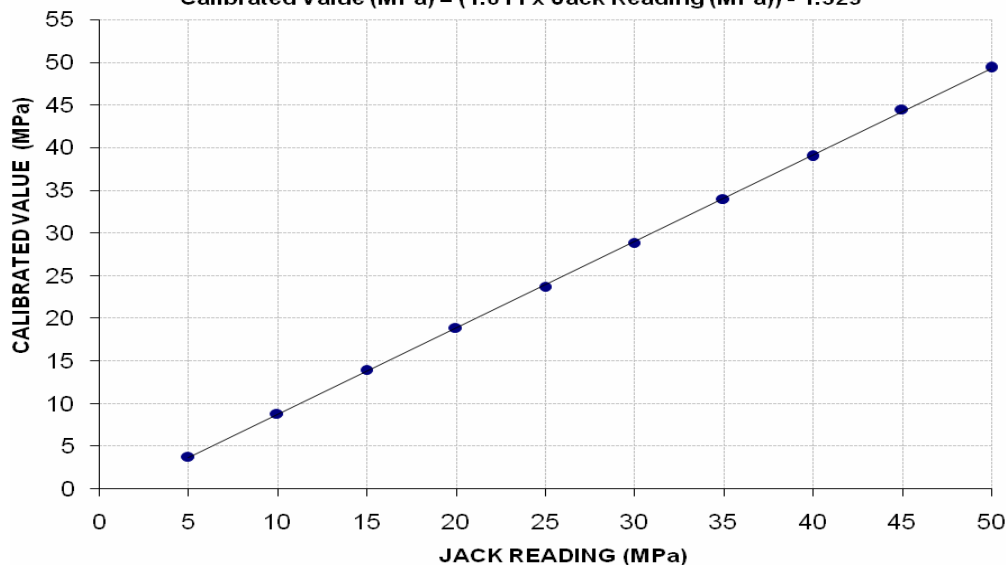
Reference to your Letter No. CGGC-MD-2022.02, dated: 22/02/2022 on the subject cited above. One Hydraulic Jack (Jack No. 17175, Gauge No. 2872) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 50 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45	50
Calibrated Load (Kg)	1850	4300	6800	9200	11550	14050	16550	18950	21650	24000
Calibrated Pressure (Mpa)	3.80	8.84	13.98	18.91	23.74	28.88	34.02	38.95	44.50	49.33

The Ram Area of Jack = 47.71 cm²

Calibration Curve For Jack No. 17175 (Gauge # 2872)
Calibrated Value (MPa) = (1.011 x Jack Reading (MPa)) - 1.329



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/938

Dated: 23-02-2022

Dated: 25-02-2022

To
M/S CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Hydro Power Project

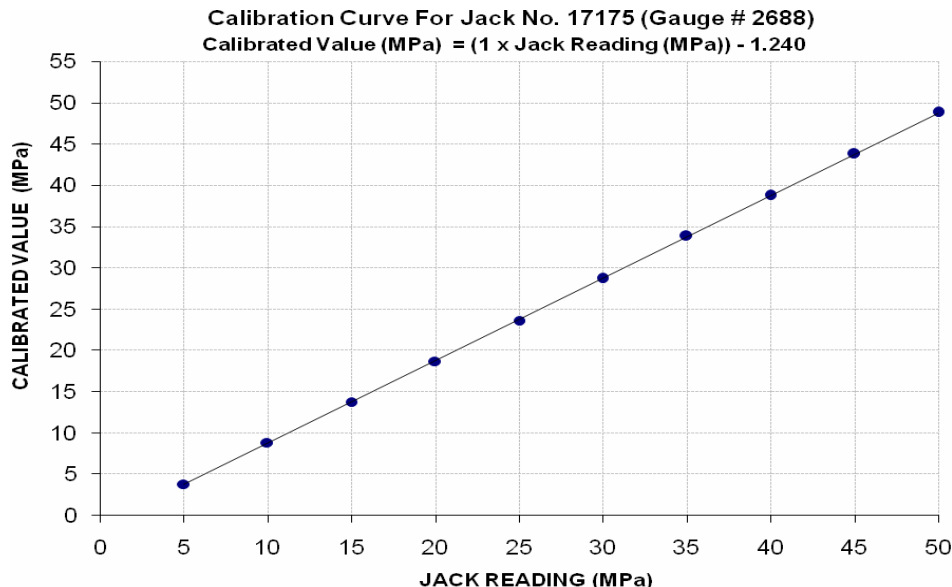
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/02/938) (Page -4/4)

Reference to your Letter No. CGGC-MD-2022.02, dated: 22/02/2022 on the subject cited above. One Hydraulic Jack (Jack No. 17175, Gauge No. 2688) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 50 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40	45	50
Calibrated Load (Kg)	1850	4300	6700	9100	11500	13950	16450	18850	21300	23750
Calibrated Pressure (Mpa)	3.80	8.84	13.77	18.71	23.64	28.67	33.81	38.75	43.78	48.82

The Ram Area of Jack = 47.71 cm²



I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/941

Dated: 23-02-2022

Date of Test: 25-02-2022

To

Resident Engineer (Structure)
NESPAK
Construction of Flyover and At-Grade Improvement at Shahkaam Chowk Lahore

Subject: - TEST RESULT REPORT FOR BEARING DEVICE (PAD)
as per AASHTO M-125-06 (Page – 1/2)

Reference to your letter no. 4047/13/05/AZL/69, Dated: 23/02/2022 on the above mentioned subject. One Elastomeric Bearing Rubber Pad (EBRP) has been received by us. The same was tested and results are given below.

Laboratory : TEST FLOOR LAB
Machine : SHIMADZU
Sample No. : 1/1
Dimensions of EBRP : 500 x 401 x 83.55 mm

TEST RESULTS -

1 5% of Design Load : 6.75 Ton
2 Design Load : 135 Ton
3 Time for application of each load : 2 min.
4 Effective rubber thickness : 60mm

Sr. no.	Dial gauge	Dial gauge reading at 5% of design load	Dial gauge reading at 100 % design load	Average deflection (mm)	Compressive strain (Average deflection/ Effective rubber thickness)
1	1	9	58	1.016	0.017
	2	0	31		

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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/02/941

Dated: 23-02-2022

Date of Test: 25-02-2022

To

Resident Engineer (Structure)
NESPAK
Construction of Flyover and At-Grade Improvement at Shahkaam Chowk Lahore

Subject: - TEST RESULT REPORT FOR BEARING DEVICE (PAD)
as per AASHTO M-125-06 (Page – 2/2)

Reference to your letter no. 4047/13/05/AZL/69, Dated: 23/02/2022 on the above mentioned subject. One Elastomeric Bearing Rubber Pad (EBRP) has been received by us. The same was tested and results are given below.

Laboratory : **TEST FLOOR LAB**
Machine : **SHIMADZU**
Sample No. : **1/1**
Dimensions of EBRP : **500 x 401 x 83.55 mm**

TEST RESULTS - SHORT DURATION

Load Duration : **5+5 minutes**
Test Load : **185 TONS**
Bulging Pattern : **Uniform Buldging.**
Laminated Parallelism : **Parallel**
Cracks : **No crack is observed**

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,
 Project Engineer
 Defence Housing Authority, Gujranwala
 Construction Works of DHA Housing Scheme Gujranwala

Reference # CED/TFL **951** (Dr.Ali Ahmed)
 Reference of the request letter # 111/15/PE/RS/Pkg-1/112

Dated: 25-02-2022
 Dated: 24-02-2022

Tension Test Report (Page -1/1)

Date of Test 25-02-2022
 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	4.702	11	1.327	1.56	1.382	43400	66600	61400	69210	94100	106300	1.60	20.0	Batala Steel
2	4.691	11	1.325	1.56	1.379	43400	66400	61400	69370	93900	106200	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#11 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,
 Chief Engineer
 Zaitoon
 New Lahore City,
 Construction of 27-Com Plaza Ph-III NLC
 (M/s Milana Engineering)

Reference # CED/TFL **952** (Dr. Ali Ahmed)
 Reference of the request letter # NLC/CE/Const/029

Dated: 25-02-2022
 Dated: 21-02-2022

Tension Test Report (Page -1/1)

Date of Test 25-02-2022
 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	3200	5000	64200	64960	100200	101500	1.20	15.0	Batala Premium
2	0.363	3	0.368	0.11	0.107	3300	5100	66200	68260	102200	105500	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:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample /Signed Samples



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

I/C Testing Laboratories
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples