To,

Zhao Tao (Laboratory Manager for KKH-02)
China Gezhouba Group Co., Ltd.
Dasu Hydropower Project (HPP-DASU-KKH-02)

Reference # CED/TFL **7174** (Dr. Rizwan Riaz) Dated: 03-07-2025
Reference of the request letter # CGGC/KKH-02/QC/Lab-028 Dated: 02-07-2025

Tension Test Report (Page -1/1)

Date of Test 07-07-2025
Gauge length 600 mm
Description Steel Strand Tensile Test as per ASTM A-416

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		% Elongation	Remarks / Coil No.
	(mm)	(kg/1000m)	(kg/1000m)	(kg)	(kN)	(kg)	(kN)		
1	**15.24 (0.6")**	**1102.0**	**1106.0**	**24400**	**239.36**	**27000**	**264.87**	**>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

Test Performed and Verified by:

To,

Engr. Rashid (Site Engineer)
Husnain Kareemain
House 1337-T DHA Phase-7 Lahore

Reference # CED/TFL **7183** (Dr. Rizwan Riaz) Dated: 04-07-2025
Reference of the request letter # Nil Dated: 04-07-2025

Tension Test Report (Page-1/1)

Date of Test 07-07-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.375**	**3**	**0.374**	**0.110**	**0.11**	**34.70**	**53.20**	**70889**	**70813**	**108682**	**108566**	**1.2**	**15.0**	-
2	**0.370**	**3**	**0.372**	**0.110**	**0.109**	**34.70**	**53.00**	**70889**	**71660**	**108274**	**109452**	**0.9**	**11.3**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Mr. Saleem Tahir (Project Manager ICPL)
Izhar Construction (Pvt.) Ltd.
OMBRe' Holdings (Pvt.) Ltd. Raiwind, Lahore

Reference # CED/TFL **7186** (Dr. Rizwan Riaz) Dated: 04-07-2025
Reference of the request letter # OMBRe'/Steel/019 Dated: 03-07-2025

Tension Test Report (Page-1/1)

Date of Test 07-07-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (mm)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.402**	**10**	**0.388**	**0.120**	**0.118**	**38.70**	**52.00**	**72472**	**73632**	**97378**	**98938**	**1.2**	**15.0**	-
2	**0.407**	**10**	**0.390**	**0.120**	**0.12**	**37.70**	**51.00**	**70599**	**70824**	**95506**	**95810**	**1.2**	**15.0**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test
10mm Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Mr. Zeeshan Ullah (Head of Department)
City Schools (Pvt.) Ltd.
Iqbal Campus Sialkot A Level Block

Reference # CED/TFL **7187** (Dr. Rizwan Riaz) Dated: 04-07-2025
Reference of the request letter # TCS/D&C/HO/002/2025 Dated: 04-07-2025

Tension Test Report

Date of Test 07-07-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.375**	**3**	**0.374**	**0.110**	**0.11**	**37.20**	**49.20**	**75996**	**75936**	**100511**	**100431**	**0.7**	**8.8**	-
2	**0.375**	**3**	**0.375**	**0.110**	**0.11**	**38.70**	**49.50**	**79060**	**78842**	**101124**	**100844**	**0.7**	**8.8**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 1 Samples for Bend test

Bend Test
3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Mr. Zeeshan Ullah (Head of Department)
City Schools (Pvt.) Ltd.
Bahria Campus Lahore Building-A, 3rd Floor)

Reference # CED/TFL **7187** (Dr. Rizwan Riaz) Dated: 04-07-2025
Reference of the request letter # TCS/D&C/HO/001/2025 Dated: 04-07-2025

Tension Test Report

Date of Test 07-07-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.371**	**3**	**0.373**	**0.110**	**0.109**	**35.50**	**46.70**	**72523**	**73185**	**95403**	**96274**	**1.0**	**12.5**	-
2	**0.369**	**3**	**0.372**	**0.110**	**0.108**	**36.20**	**47.20**	**73953**	**74987**	**96425**	**97774**	**0.9**	**11.3**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

M/s Tariq Zia & Co.
Construction of Society Masjid Iqbal Enclave Phase-IV Lahore
-

Reference # CED/TFL **7188** (Dr. Rizwan Riaz) Dated: 04-07-2025
Reference of the request letter # Nil Dated: 04-07-2025

Tension Test Report (Page-1/1)

Date of Test 07-07-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.398**	**3**	**0.386**	**0.110**	**0.117**	**37.00**	**48.20**	**75587**	**71055**	**98468**	**92564**	**1.3**	**16.3**	**3"/8**
2	**0.367**	**3**	**0.371**	**0.110**	**0.108**	**34.00**	**44.50**	**69459**	**70780**	**90909**	**92639**	**1.3**	**16.3**	**3"/8**
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,

Engr. Rashid (Site Engineer)
Husnain Kareemain
House 1337-T DHA Phase-7 Lahore

Reference # CED/TFL **7183** (Dr. Rizwan Riaz) Dated: 04-07-2025
Reference of the request letter # Nil Dated: 04-07-2025

Tension Test Report (Page-1/1)

Date of Test 07-07-2025
Gauge Length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Actual Weight Per Unit Length (lb/ft)	Nominal Size (#)	Actual Diameter (inch)	Area (in^2)		Yield Load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
				Nominal	Actual	(kN)	(kN)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.375**	**3**	**0.374**	**0.110**	**0.11**	**34.70**	**53.20**	**70889**	**70813**	**108682**	**108566**	**1.2**	**15.0**	-
2	**0.370**	**3**	**0.372**	**0.110**	**0.109**	**34.70**	**53.00**	**70889**	**71660**	**108274**	**109452**	**0.9**	**11.3**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: Only 2 Samples for Tensile and 1 Samples for Bend test														

Bend Test
3 Bar Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

Ref: CED/TFL/07/7191 Dated: 04-07-2025

Dated of Test: 07-07-2025 (Dr. Rizwan Riaz)

To

Laboratory Manager
China Gezhouba Group Company Limited
300 MW Balakot Hydro Power Project.

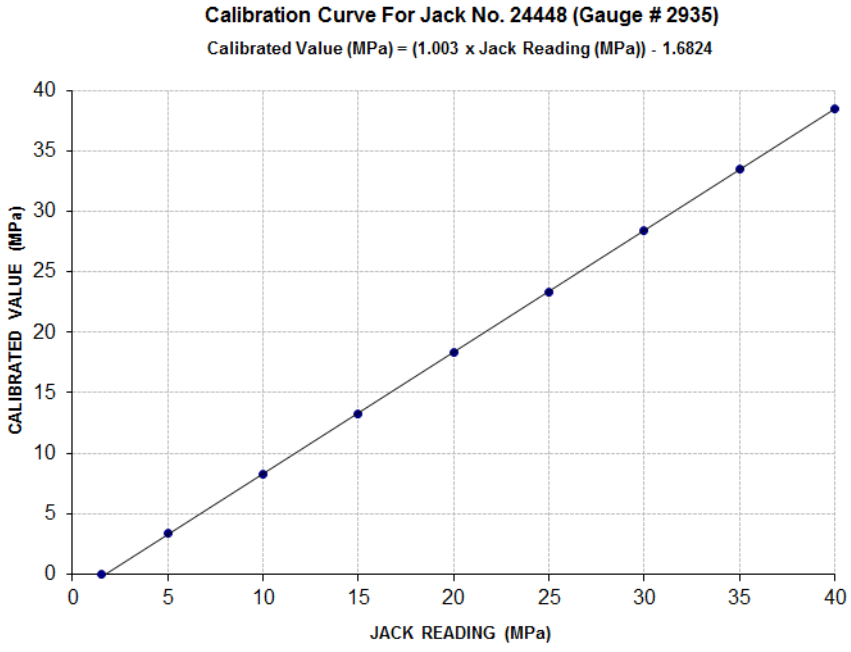
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/07/7191)** (Page -1/8)

Reference to your Letter No. Nil, dated: 04/07/2025 on the subject cited above. One Hydraulic Jack (Jack No. 24448, Gauge No. 2935) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 40 (MPa)

Hydraulic Jack Reading (MPa)	**1.5**	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Calibrated Load (kg)	**0**	**16600**	**40600**	**65200**	**90400**	**115200**	**140000**	**165200**	**189800**
Calibrated Pressure (MPa)	**0**	**3.37**	**8.23**	**13.22**	**18.33**	**23.36**	**28.39**	**33.50**	**38.49**

The Ram Area of Jack = 483.56 cm^2



Test Performed and Verified by:

Ref: CED/TFL/07/7191 Dated: 04-07-2025

Dated of Test: 07-07-2025 (Dr. Rizwan Riaz)

To

Laboratory Manager
China Gezhouba Group Company Limited
300 MW Balakot Hydro Power Project.

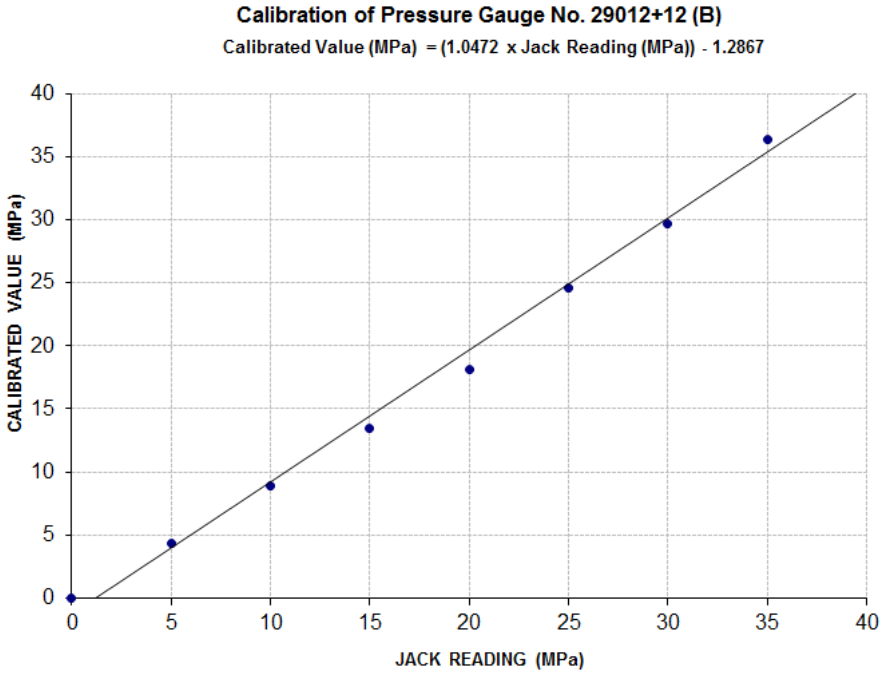
Subject: **- CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/7191)** (Page -2/8)

Reference to your Letter No. Nil, dated: 04/07/2025 on the subject cited above. One Pressure Gauge (Gauge No. 29012+12 B) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 40 (MPa)

Hydraulic Jack Reading (MPa)	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Calibrated Load (kg)	**8800**	**18000**	**27200**	**36600**	**49700**	**60000**	**73400**	**83500**
Calibrated Pressure (MPa)	**4.36**	**8.92**	**13.47**	**18.13**	**24.62**	**29.72**	**36.36**	**41.36**

The Ram Area of Jack = 198 cm^2



Test Performed and Verified by:

Ref: CED/TFL/07/7191 Dated: 04-07-2025

Dated of Test: 07-07-2025 (Dr. Rizwan Riaz)

To

Laboratory Manager
China Gezhouba Group Company Limited
300 MW Balakot Hydro Power Project.

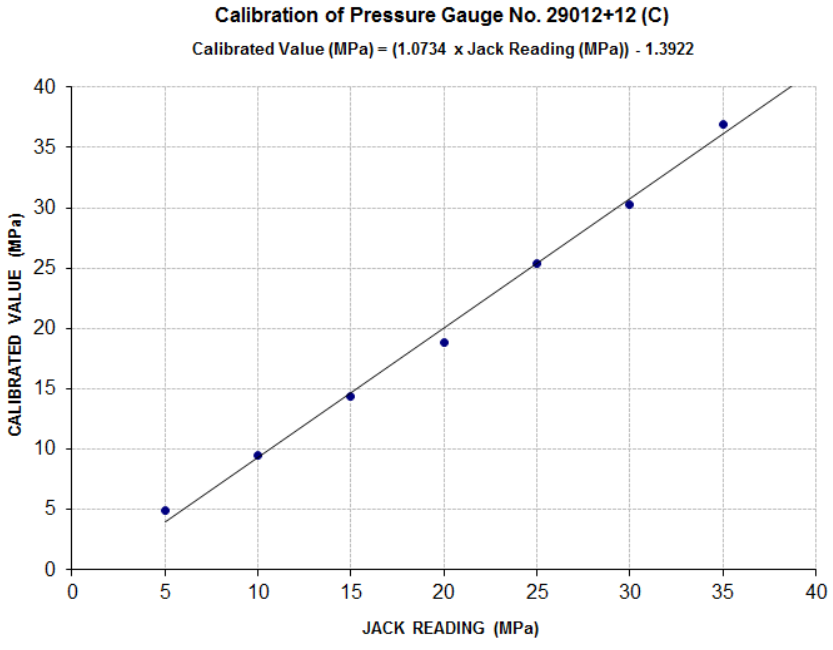
Subject: **- CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/7191)** (Page -3/8)

Reference to your Letter No. Nil, dated: 04/07/2025 on the subject cited above. One Pressure Gauge (Gauge No. 29012+12 C) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 40 (MPa)

Hydraulic Jack Reading (MPa)	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Calibrated Load (kg)	**9800**	**19200**	**28900**	**38100**	**51300**	**61200**	**74500**	**84600**
Calibrated Pressure (MPa)	**4.85**	**9.51**	**14.31**	**18.87**	**25.41**	**30.31**	**36.90**	**41.90**

The Ram Area of Jack = 198 cm^2



Test Performed and Verified by:

Ref: CED/TFL/07/7191 Dated: 04-07-2025

Dated of Test: 07-07-2025 (Dr. Rizwan Riaz)

To

Laboratory Manager
China Gezhouba Group Company Limited
300 MW Balakot Hydro Power Project.

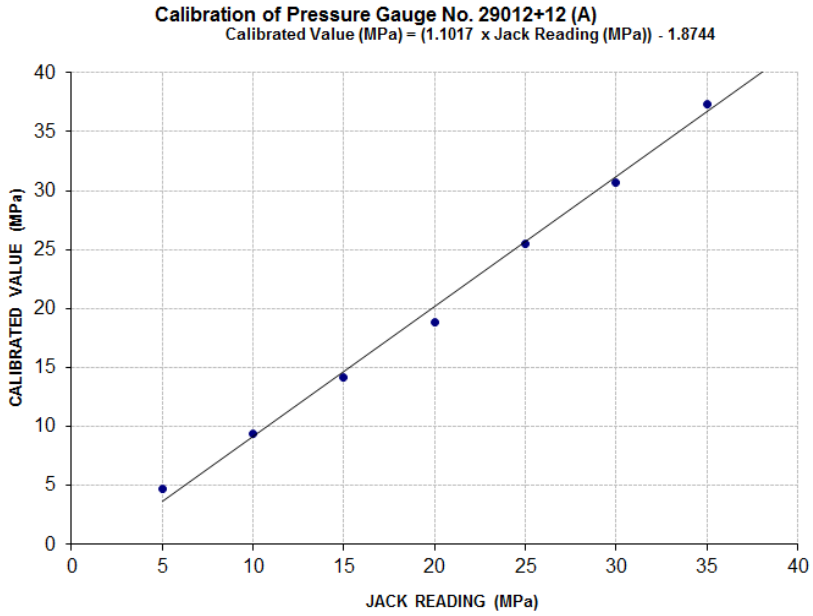
Subject: **- CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/7191)** (Page -4/8)

Reference to your Letter No. Nil, dated: 04/07/2025 on the subject cited above. One Pressure Gauge (Gauge No. 29012+12 A) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 40 (MPa)

Hydraulic Jack Reading (MPa)	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Calibrated Load (kg)	**9300**	**18400**	**27900**	**37100**	**50300**	**60500**	**73700**	**84300**
Calibrated Pressure (MPa)	**4.72**	**9.33**	**14.15**	**18.81**	**25.51**	**30.68**	**37.37**	**42.75**

The Ram Area of Jack = 198 cm^2



Test Performed and Verified by:

Ref: CED/TFL/07/7191 Dated: 04-07-2025

Dated of Test: 07-07-2025 (Dr. Rizwan Riaz)

To

Laboratory Manager
China Gezhouba Group Company Limited
300 MW Balakot Hydro Power Project.

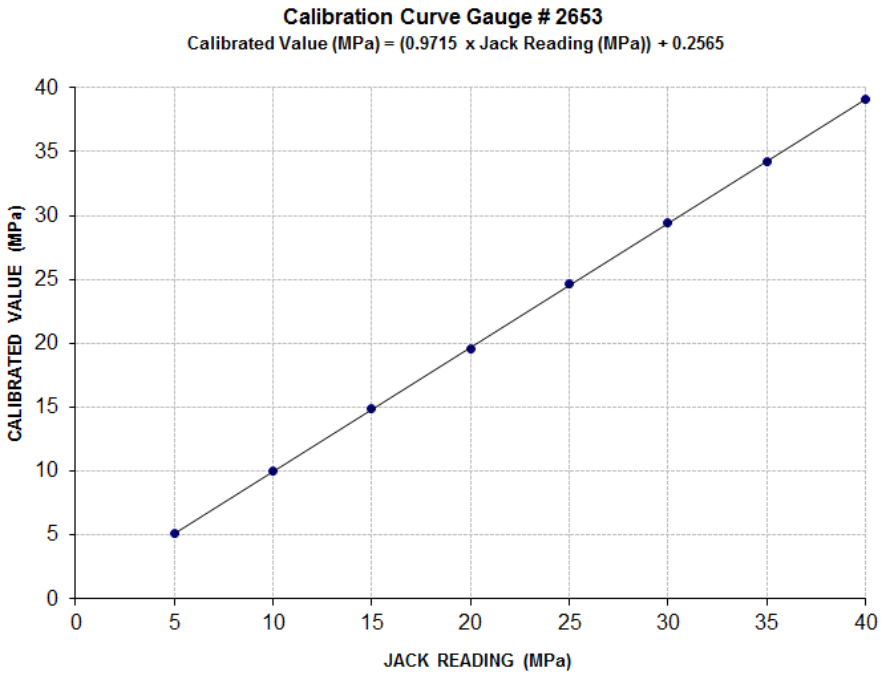
Subject: **- CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/7191)** (Page -5/8)

Reference to your Letter No. Nil, dated: 04/07/2025 on the subject cited above. One Pressure Gauge (Gauge No. 2653) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 40 (MPa)

Hydraulic Jack Reading (MPa)	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Calibrated Load (kg)	**10300**	**20200**	**30000**	**39500**	**49700**	**56400**	**69100**	**79000**
Calibrated Pressure (MPa)	**5.10**	**10.01**	**14.86**	**19.56**	**24.62**	**29.42**	**34.23**	**39.13**

The Ram Area of Jack = 198 cm^2



Test Performed and Verified by:

Ref: CED/TFL/07/7191 Dated: 04-07-2025

Dated of Test: 07-07-2025 (Dr. Rizwan Riaz)

To

Laboratory Manager
China Gezhouba Group Company Limited
300 MW Balakot Hydro Power Project.

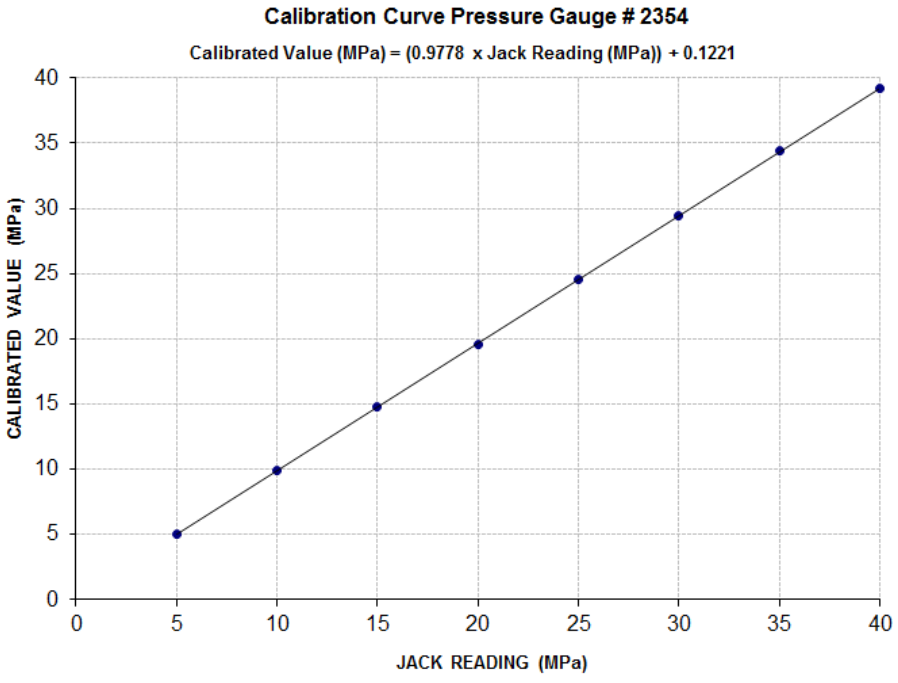
Subject: **- CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/7191)** (Page -6/8)

Reference to your Letter No. Nil, dated: 04/07/2025 on the subject cited above. One Pressure Gauge (Gauge No. 2354) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 40 (MPa)

Hydraulic Jack Reading (MPa)	5	10	15	20	25	30	35	40
Calibrated Load (kg)	10200	20000	29900	39500	49600	59400	69600	79400
Calibrated Pressure (MPa)	5.05	9.91	14.81	19.56	24.57	29.42	34.42	39.23

The Ram Area of Jack = 198 cm^2



Test Performed and Verified by:

Ref: CED/TFL/07/7191 Dated: 04-07-2025

Dated of Test: 07-07-2025 (Dr. Rizwan Riaz)

To

Laboratory Manager
China Gezhouba Group Company Limited
300 MW Balakot Hydro Power Project.

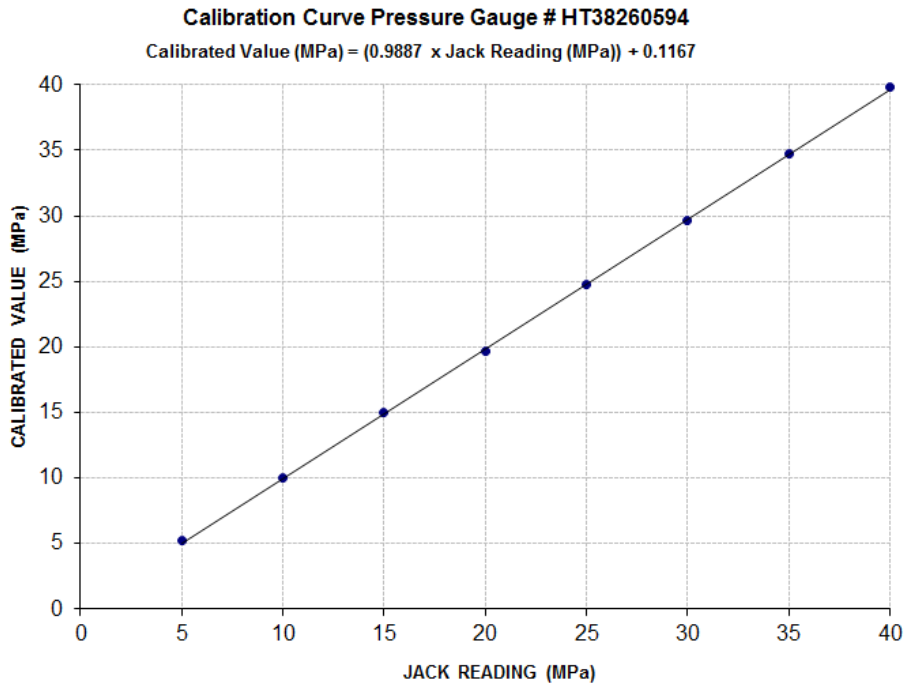
Subject: **- CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/7191)** (Page -7/8)

Reference to your Letter No. Nil, dated: 04/07/2025 on the subject cited above. One Pressure Gauge (Gauge No. HT38260594) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 40 (MPa)

Hydraulic Jack Reading (MPa)	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Calibrated Load (kg)	**10600**	**20200**	**30200**	**39700**	**50000**	**59800**	**70200**	**80500**
Calibrated Pressure (MPa)	**5.25**	**10.01**	**14.96**	**19.66**	**24.77**	**29.62**	**34.77**	**39.87**

The Ram Area of Jack = 198 cm^2



Test Performed and Verified by:

Ref: CED/TFL/07/7191 Dated: 04-07-2025

Dated of Test: 14-07-2025 (Dr. Rizwan Riaz)

To

Laboratory Manager
China Gezhouba Group Company Limited
300 MW Balakot Hydro Power Project.

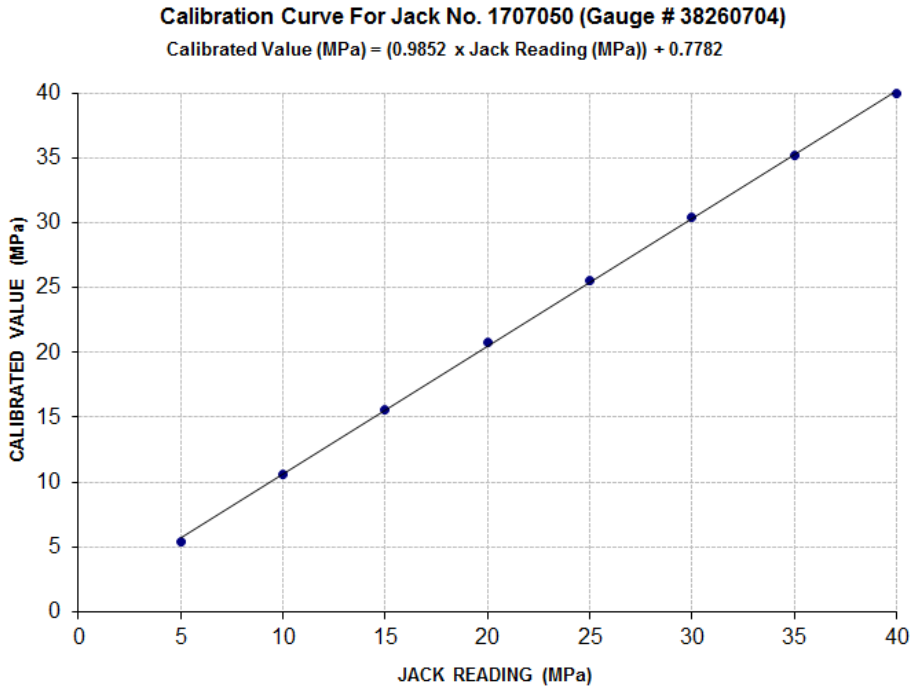
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/07/7191)** (Page -8/8)

Reference to your Letter No. Nil, dated: 04/07/2025 on the subject cited above. One Hydraulic Jack (Jack No. 1707050, Gauge No. 38260704) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 40 (MPa)

Hydraulic Jack Reading (MPa)	**5**	**10**	**15**	**20**	**25**	**30**	**35**	**40**
Calibrated Load (kg)	**2650**	**5150**	**7600**	**10100**	**12450**	**14800**	**17100**	**19450**
Calibrated Pressure (MPa)	**5.45**	**10.59**	**15. 62**	**20.76**	**25.59**	**30.42**	**35.15**	**39.98**

The Ram Area of Jack = 47.71 cm^2



Test Performed and Verified by: