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 Vision Engineering (Pvt) Ltd
Lahore

Reference # CED/TFL **5961** (Dr. Ali Ahmed) Dated: 06-11-2024
Reference of the request letter # VECO/2024/1106/1990 Dated: 06-11-2024

Tension Test Report

Date of Test 12-11-2024
Gauge length 600 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)		% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)		
1	9.53 (3/8")	430.0	436.0	10000	98.10	10900	106.93	>3.50	1
2	9.53 (3/8")	430.0	433.0	10200	100.06	10900	106.93	>3.50	2
3	9.53 (3/8")	430.0	434.0	9700	95.16	11000	107.91	>3.50	5
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
Only three samples for 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,

Additional Director (Maintence)
Defence Housing Authority, Gujranwala
"External Electrification System (Under Ground) for Sector C & G DHA Gujranwala."

Reference # CED/TFL **5966** (Dr. Usman Akmal) Dated: 07-11-2024
Reference of the request letter # 318/2/39/Maint/UG Elec Sec C&G Dated: 04-11-2024

Tension Test Report (Page -1/1)

Date of Test 12-12-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (mm)		Area (in^2)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.373	10	9.49	0.12	0.110	3520	5010	64668	70820	92042	100800	1.10	13.8	SJ Steel
2	0.360	10	9.33	0.12	0.106	3430	4860	63015	71420	89286	101200	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180º 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/11/5977 Dated: 11-11-2024

Dated: 12-11-2024

To

M/S CGGC Dasu Hydropower Project Management in Pakistan
Dasu Hydropower Project

Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/11/5977)** (Page -1/4)

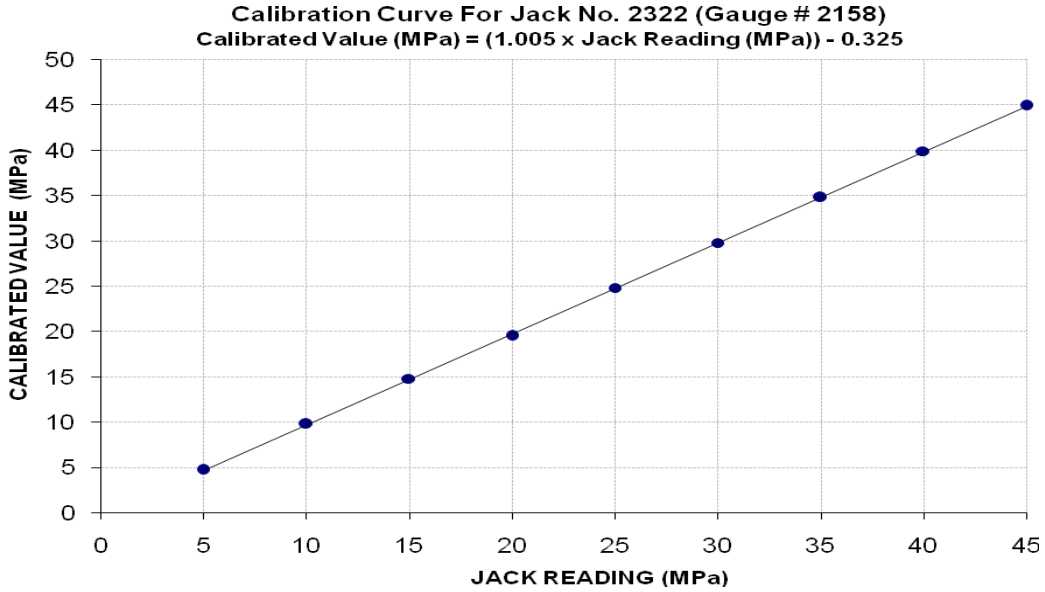
Reference to your Letter No. Nil, dated: 09/11/2024 on the subject cited above. One Hydraulic Jack (Jack No. 2322, Gauge No. 2158) as received by us has been calibrated. The results are tabulated as under:

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	29200	45200	59600	75800	90200	106200	121000	136000
Calibrated Pressure (Mpa)	4.61	9.61	14.88	19.61	24.95	29.68	34.95	39.82	44.76

The Ram Area of Jack = 298 cm^2

(Witness by Fawad Ali (XEN WAPDA), Tariq Javid (DHC) and Khizar (QA/QC Manager CGGC))



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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/11/5977 Dated: 11-11-2024

Dated: 12-11-2024

To

M/S CGGC Dasu Hydropower Project Management in Pakistan
Dasu Hydropower Project

Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/11/5977)** (Page -2/4)

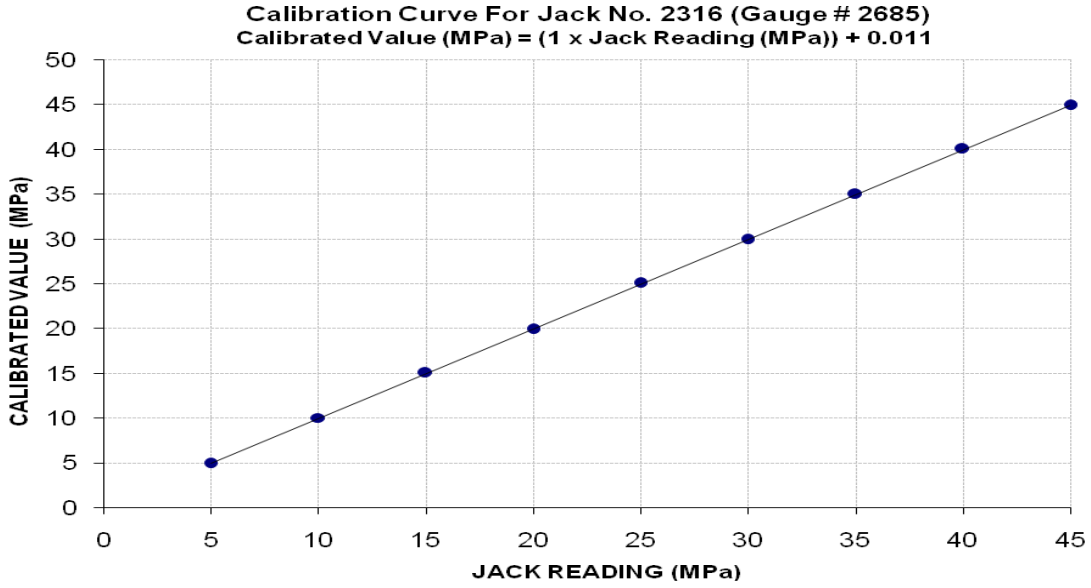
Reference to your Letter No. Nil, dated: 09/11/2024 on the subject cited above. One Hydraulic Jack (Jack No. 2316, Gauge No. 2685) as received by us has been calibrated. The results are tabulated as under:

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	30600	45800	60600	76200	91000	106400	121800	136600
Calibrated Pressure (Mpa)	4.94	10.07	15.07	19.94	25.08	29.95	35.02	40.08	44.95

The Ram Area of Jack = 298 cm^2

(Witness by Fawad Ali (XEN WAPDA), Tariq Javid (DHC) and Khizar (QA/QC Manager CGGC))



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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/11/5977 Dated: 11-11-2024

Dated: 12-11-2024

To

M/S CGGC Dasu Hydropower Project Management in Pakistan
Dasu Hydropower Project

Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/11/5977)** (Page -3/4)

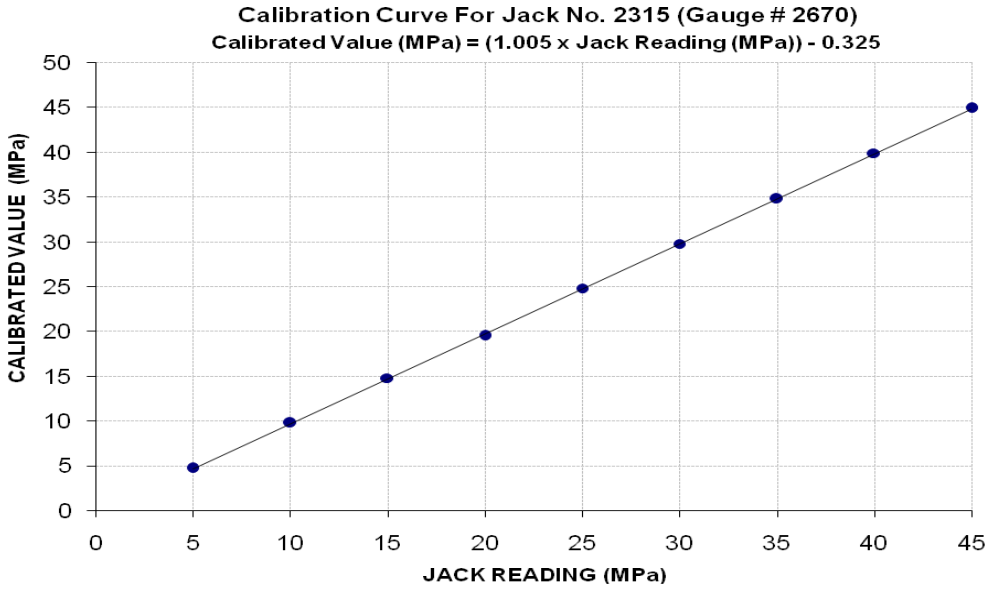
Reference to your Letter No. Nil, dated: 09/11/2024 on the subject cited above. One Hydraulic Jack (Jack No. 2315, Gauge No. 2670) as received by us has been calibrated. The results are tabulated as under:

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)	14400	29800	45000	59400	75400	90600	105800	121400	136600
Calibrated Pressure (Mpa)	4.74	9.81	14.81	19.55	24.81	29.82	34.82	39.95	44.95

The Ram Area of Jack = 298 cm^2

(Witness by Fawad Ali (XEN WAPDA), Tariq Javid (DHC) and Khizar (QA/QC Manager CGGC))



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/11/5977 Dated: 11-11-2024

Dated: 12-11-2024

To

M/S CGGC Dasu Hydropower Project Management in Pakistan
Dasu Hydropower Project

Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/11/5977)** (Page -4/4)

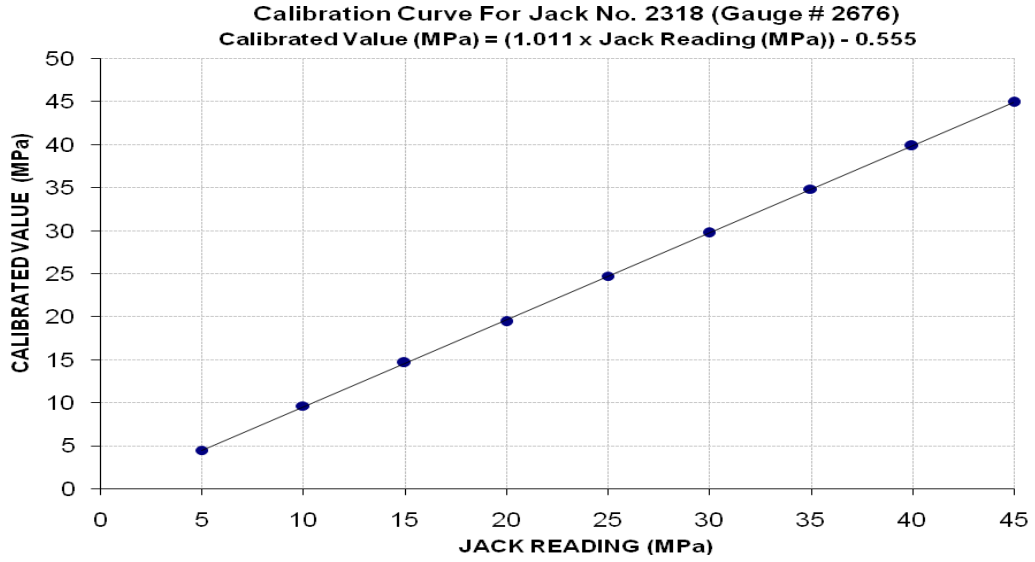
Reference to your Letter No. Nil, dated: 09/11/2024 on the subject cited above. One Hydraulic Jack (Jack No. 2318, Gauge No. 2676) as received by us has been calibrated. The results are tabulated as under:

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)	13600	29400	44600	59000	75200	90400	106000	121200	136600
Calibrated Pressure (Mpa)	4.48	9.68	14.68	19.42	24.75	29.75	34.88	39.89	44.95

The Ram Area of Jack = 298 cm^2

(Witness by Fawad Ali (XEN WAPDA), Tariq Javid (DHC) and Khizar (QA/QC Manager CGGC))



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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,

G.E (Army) - II
Sialkot Cantt
(CA No. CEA-CZ-08/2025, "Upgrd of Kote 14 Sigs Bn, HQ 8 Div at SIK")(M/s Rasid & Co.)

Reference # CED/TFL **5979** (Dr. Usman Akmal) Dated: 11-11-2024
Reference of the request letter # 6673/17/E-6 Dated: 31-10-2024

Tension Test Report (Page -1/1)

Date of Test 12-12-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in^2)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.370	3/8	0.372	0.11	0.109	3210	4640	64400	64990	93000	94000	1.10	13.8	
2	0.367	3/8	0.370	0.11	0.108	3180	4590	63800	65020	92000	93900	1.10	13.8	
3	0.369	3/8	0.372	0.11	0.108	3210	4660	64400	65220	93400	94700	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and three samples for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180º is Satisfactory														
3/8" Dia Bar Bend Test Through 180º is Satisfactory														
3/8" Dia Bar Bend Test Through 180º 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
Al-Imam Enterprises (Pvt) Ltd.
Construction of Zonal Office Building of Bank Al Habib Limited, Main Boulevard Gulberg, Lahore. (Civil & Structure Works Package.)

Reference # CED/TFL **5981** (Dr. Ali Ahmed) Dated: 11-11-2024
Reference of the request letter # ALM/BAHL/1111/1111 Dated: 11-11-2024

Tension Test Report (Page -1/1)

Date of Test 12-11-2024
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	5.245	11	1.401	1.56	1.542	47200	65600	66700	67480	92700	93800	1.80	22.5	Mughal Steel
2	5.278	11	1.406	1.56	1.552	49600	68000	70100	70460	96100	96600	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#11 Bar Bend Test Through 180º is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION

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

To,

Garrison Engineer (Army)-II
Lahore Cantt
(CA No. ENC-A-25/2024, "Const of 1 x 64 Men SM Bk No. 1 (D/S) at Lhr Cantt")

Reference # CED/TFL **5982** (Dr. Usman Akmal) Dated: 11-11-2024
Reference of the request letter # 6003/147/E-6 Dated: 17-05-2024

Tension Test Report (Page -1/1)

Date of Test 12-12-2024
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in^2)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.336	3/8	0.355	0.11	0.099	2900	3840	58200	64640	77000	85600	1.00	12.5	Mughal Steel
2	0.338	3/8	0.355	0.11	0.099	2900	3840	58200	64430	77000	85400	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180º is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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