



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/04/4965

Dated: 23-04-

2024

Dated of Test: 15-05-2024

To

Resident Engineer
NESPAK
Punjab Rural Sustainable Water Supply & Sanitation Project (PRSWSSP)
Engineering Design and Construction Supervision (EDCS)
Cluster South-III, Tehsil Rojhan (ContractPackage-ROJ-01)

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76 - 08a]** (Page # 1/1)

Reference to your letter No. NESPAK(PRSWSSP) ROJ 01-025, dated 14.03.2024 on the subject cited above. Four R.C.C. Pipes as received by us has been tested. The results are tabulated as under.

Sr. No	Nominal Size	Total Length	Loaded Length	External Diameter	Internal Diameter	Wall Thickness	Proof load	Ultimate Load	Proof Stress	Ultimate Stress
	(inch)	(foot)	(foot)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	12	7.77	7.34	15.98	11.95	2.02	10500	15500	3169	4679
2	12	7.76	7.33	16.02	11.99	2.02	10700	15800	3219	4753
3	15	7.76	7.30	19.49	14.90	2.30	9000	13000	2191	3164
4	18	7.81	7.34	23.15	17.81	2.67	12300	17300	2491	3503

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Ref: CED/TFL/05/5082

Dated: 14-05-2024

Dated: 15-05-2024

To

Resident Engineer
Diamer Basha Consultants Group (DBCg)
NESPAK - ACE -MMP - MWH - ROYRY - DOLSAR JV
Diamer Basha Dam Project.

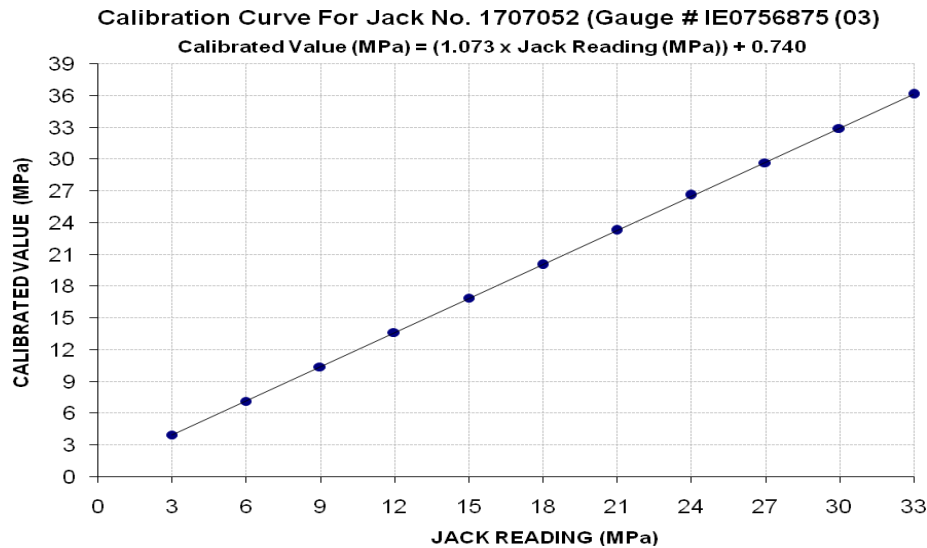
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/5082) (Page -1/6)

Reference to your Letter No. DBCG/Lab/PF JV/2024/017, dated: 12/05/2024 on the subject cited above. One Hydraulic Jack (Jack No. 1707052, Gauge No. IE0756875 (03)) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 33 (MPa)

Hydraulic Jack Reading (MPa)	3	6	9	12	15	18	21	24	27	30	33
Calibrated Load (kg)	18600	33400	48600	63800	79200	93800	109000	124600	139000	154200	169200
Calibrated Pressure (Mpa)	3.97	7.13	10.38	13.63	16.91	20.03	23.28	26.61	29.69	32.93	36.14

The Ram Area of Jack = 459.2 cm²



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UET Lahore, Pakistan.

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To

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Diamer Basha Dam Project.

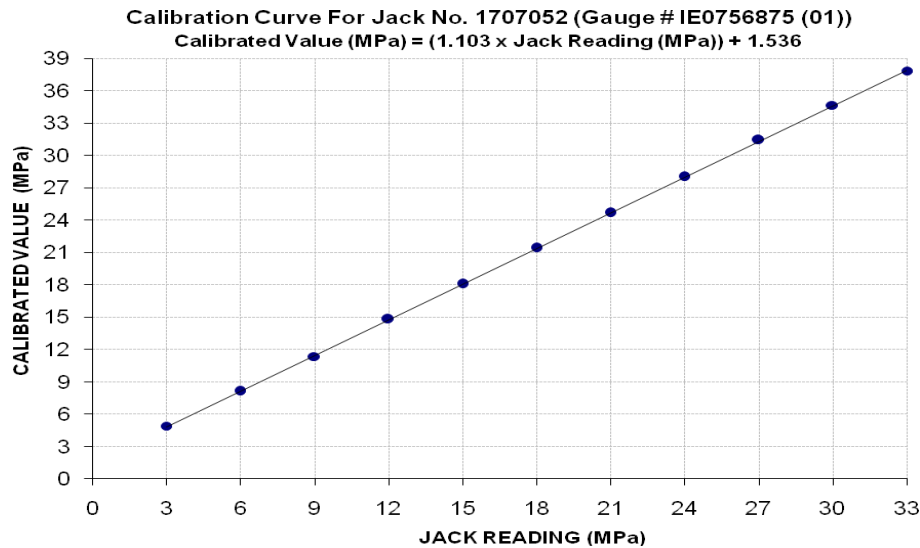
Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/5082) (Page -2/6)

Reference to your Letter No. DBCG/Lab/PF JV/2024/017, dated: 12/05/2024 on the subject cited above. One Hydraulic Jack (Jack No. 1707052, Gauge No. IE0756875 (01)) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 33 (MPa)

Hydraulic Jack Reading (MPa)	3	6	9	12	15	18	21	24	27	30	33
Calibrated Load (kg)	23000	38000	53200	69400	84600	100200	115600	131200	147200	162200	177200
Calibrated Pressure (Mpa)	4.91	8.12	11.36	14.82	18.07	21.40	24.69	28.02	31.44	34.64	37.84

The Ram Area of Jack = 459.2 cm²



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To

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Diamer Basha Consultants Group (DBCg)
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Diamer Basha Dam Project.

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/5082) (Page -3/6)

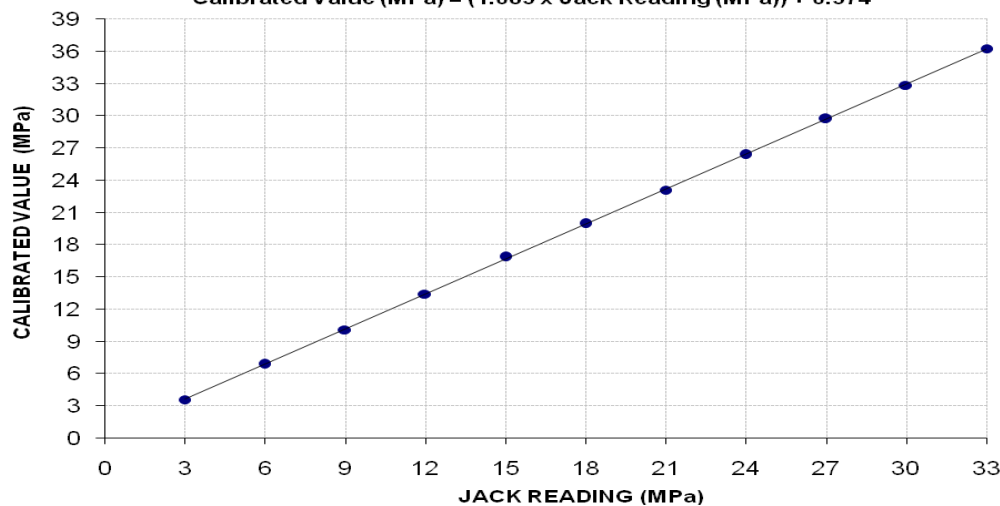
Reference to your Letter No. DBCG/Lab/PF JV/2024/017, dated: 12/05/2024 on the subject cited above. One Hydraulic Jack (Jack No. 1707052, Gauge No. IE0756875 (02)) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 33 (MPa)

Hydraulic Jack Reading (MPa)	3	6	9	12	15	18	21	24	27	30	33
Calibrated Load (kg)	16800	32200	47200	62800	79000	93400	108200	123600	139200	153800	169700
Calibrated Pressure (Mpa)	3.59	6.88	10.08	13.41	16.87	19.95	23.11	26.40	29.73	32.85	36.24

The Ram Area of Jack = 459.2 cm²

Calibration Curve For Jack No. 1707052 (Gauge # IE0756875 (02))
Calibrated Value (MPa) = (1.085 x Jack Reading (MPa)) + 0.374



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Dated: 14-05-2024

Dated: 15-05-2024

To

Resident Engineer
Diamer Basha Consultants Group (DBCg)
NESPAK - ACE -MMP - MWH - ROYRY - DOLSAR JV
Diamer Basha Dam Project.

Subject: - **CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/5082)** (Page -4/6)

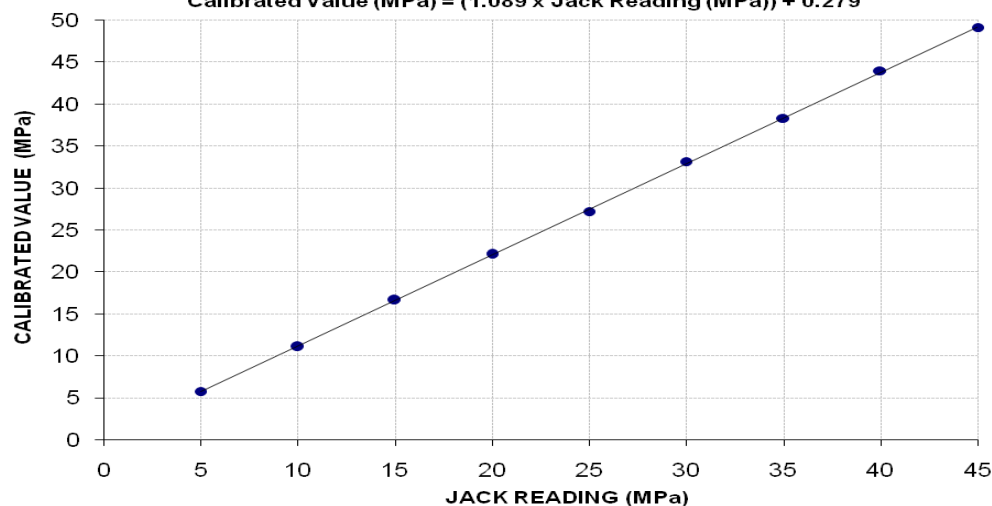
Reference to your Letter No. DBCG/Lab/PF JV/2024/017, dated: 12/05/2024 on the subject cited above. One Hydraulic Jack (Jack No. 1707051, Gauge No. IE0756875 (02)) as received by us has been calibrated. The results are tabulated as under:

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)	2800	5400	8100	10750	13250	16150	18650	21400	23900
Calibrated Pressure (Mpa)	5.76	11.10	16.65	22.10	27.24	33.20	38.34	44.00	49.14

The Ram Area of Jack = 47.70 cm²

Calibration Curve For Jack No. 1707051 (Gauge # IE0756875 (02))
Calibrated Value (MPa) = (1.089 x Jack Reading (MPa)) + 0.279



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Dated: 14-05-2024

Dated: 15-05-2024

To

Resident Engineer
Diamer Basha Consultants Group (DBCg)
NESPAK - ACE -MMP - MWH - ROYRY - DOLSAR JV
Diamer Basha Dam Project.

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/5082) (Page -5/6)

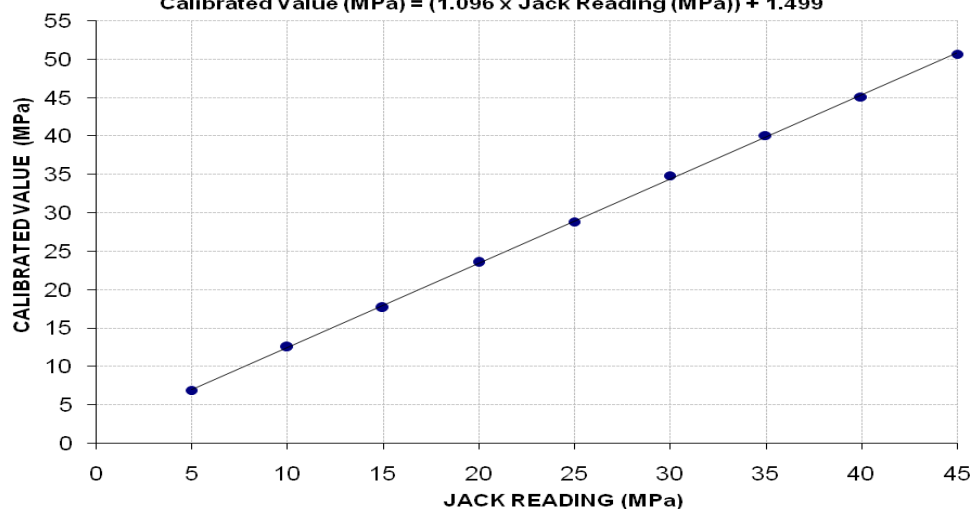
Reference to your Letter No. DBCG/Lab/PF JV/2024/017, dated: 12/05/2024 on the subject cited above. One Hydraulic Jack (Jack No. 1707051, Gauge No. IE0756875 (01)) as received by us has been calibrated. The results are tabulated as under:

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)	3350	6100	8600	11450	14050	16950	19500	21950	24650
Calibrated Pressure (Mpa)	6.89	12.54	17.68	23.54	28.89	34.85	40.09	45.13	50.68

The Ram Area of Jack = 47.70 cm²

Calibration Curve For Jack No. 1707051 (Gauge # IE0756875 (01))
Calibrated Value (MPa) = (1.096 x Jack Reading (MPa)) + 1.499



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Dated: 14-05-2024

Dated: 15-05-2024

To

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Diamer Basha Dam Project.

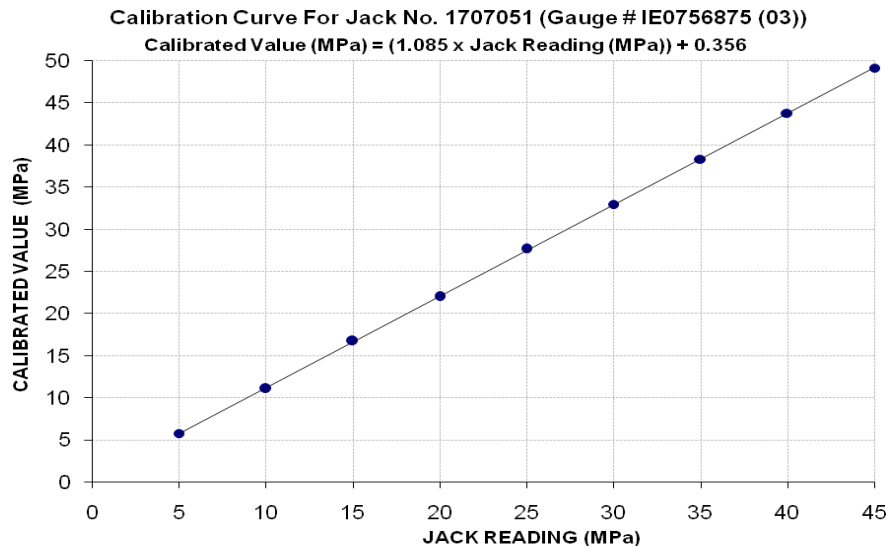
Subject: - **CALIBRATION OF HYDRAULIC JACK (MARK: TFL/05/5082)** (Page -6/6)

Reference to your Letter No. DBCG/Lab/PF JV/2024/017, dated: 12/05/2024 on the subject cited above. One Hydraulic Jack (Jack No. 1707051, Gauge No. IE0756875 (03)) 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)	2800	5400	8150	10700	13450	16050	18650	21300	23900
Calibrated Pressure (Mpa)	5.76	11.10	16.76	22.00	27.65	33.00	38.34	43.79	49.14

The Ram Area of Jack = 47.70 cm²



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To,

Flight Lietenent
 Director Development
 Fazaia Housing Scheme
 (Underground External Electrification System at Fazaia Housing Scheme (Phase I)
 Lahore.)

Reference # CED/TFL **5085** (Dr. Asif Hameed)
 Reference of the request letter # FHSL/5711/1/Org

Dated: 15-05-2024
 Dated: 09-05-2024

Tension Test Report (Page -1/1)

Date of Test 15-05-2024
 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	0.369	3	0.372	0.11	0.108	3600	4600	72200	73180	92200	93500	1.30	16.3	
2	0.366	3	0.370	0.11	0.108	3700	4650	74200	75740	93200	95200	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														

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