To,
Executive Engineer
PHE Engg: Division-I D.G. Khan
Water Supply Scheme of Fort Manro

Reference # CED/TFL **7667** (Dr. Rizwan Riaz) Dated: 20-10-2025
Reference of the request letter # 910 Dated: 20-10-2025

Tension Test Report (Page-1/2)

Date of Test 24-10-2025
Gauge Length 2 inches
Description MS Pipe Strips Tensile Test Report

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)	(inch)		
1	**MS Pipe 1**	**31.10 x 7.10**	**220.81**	**8600**	**10100**	**382.1**	**448.7**	**0.7**	**35.0**	-
2	**MS Pipe 2**	**31.60 x 8.00**	**252.80**	**8300**	**11300**	**322.1**	**438.5**	**0.7**	**35.0**	-
3	**MS Pipe 3**	**31.80 x 8.10**	**257.58**	**10500**	**12200**	**399.9**	**464.6**	**0.6**	**30.0**	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Note: Only 3 Samples for Tensile and 3 Samples for Bend test										

Bend Test
MS Pipe 1 Strip Bend Test Through 180 Degree is Satisfactory
MS Pipe 2 Strip Bend Test Through 180 Degree is Satisfactory
MS Pipe 3 Strip Bend Test Through 180 Degree is Satisfactory

Test Performed and Verified by:

To,
Executive Engineer
PH Engg: Divison-I D.G. Khan
Water Supply Scheme of Fort Manroo

Reference # CED/TFL **7667** (Dr. Rizwan Riaz) Dated: 20-10-2025
Reference of the request letter # 910 Dated: 20-10-2025

Weight &Size Test Report (Page – 2/2)

Date of Test 24-10-2025
Description Unit Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	Dia	Thickness	Remark
	(inch)	(g)	(mm)	(kg/m)	(mm)	(mm)	
1	**MS Pipe 12" (1)**	**5721**	**103.1**	**55.49**	**323.1**	**7.1**	**-**
2	**MS Pipe 12" (2)**	**6307**	**102.1**	**61.77**	**322.2**	**8.0**	**-**
3	**MS Pipe 12" (3)**	**5632**	**102.5**	**54.95**	**322.4**	**8.1**	**-**
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
Only three samples for test							
-	-	-	-	-	-	-	-

Test Performed and Verified by:

To,

Syed Touseen Ahmed
Mount Khalid, Gulberg Greens-Islamabad

Reference # CED/TFL **7676** (Dr. Rizwan Riaz) Dated: 22-10-2025
Reference of the request letter # MKGG/MT/2025/PT-Strand/003 Dated: 20-10-2025

Tension Test Report (Page -1/3)

Date of Test 24-10-2025
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)		Young's Modulus of Elasticity "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/1000m)	(kg/1000m)	(kg)	(kN)	(kg)	(kN)	GPa		
1	**12.70 (1/2")**	**780.0**	**783.0**	**17800**	**174.62**	**19900**	**195.22**	**197**	**>3.50**	**5017**
2	**12.70 (1/2")**	**780.0**	**782.0**	**18400**	**180.50**	**20000**	**196.20**	**199**	**>3.50**	**5019**
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Only two samples 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

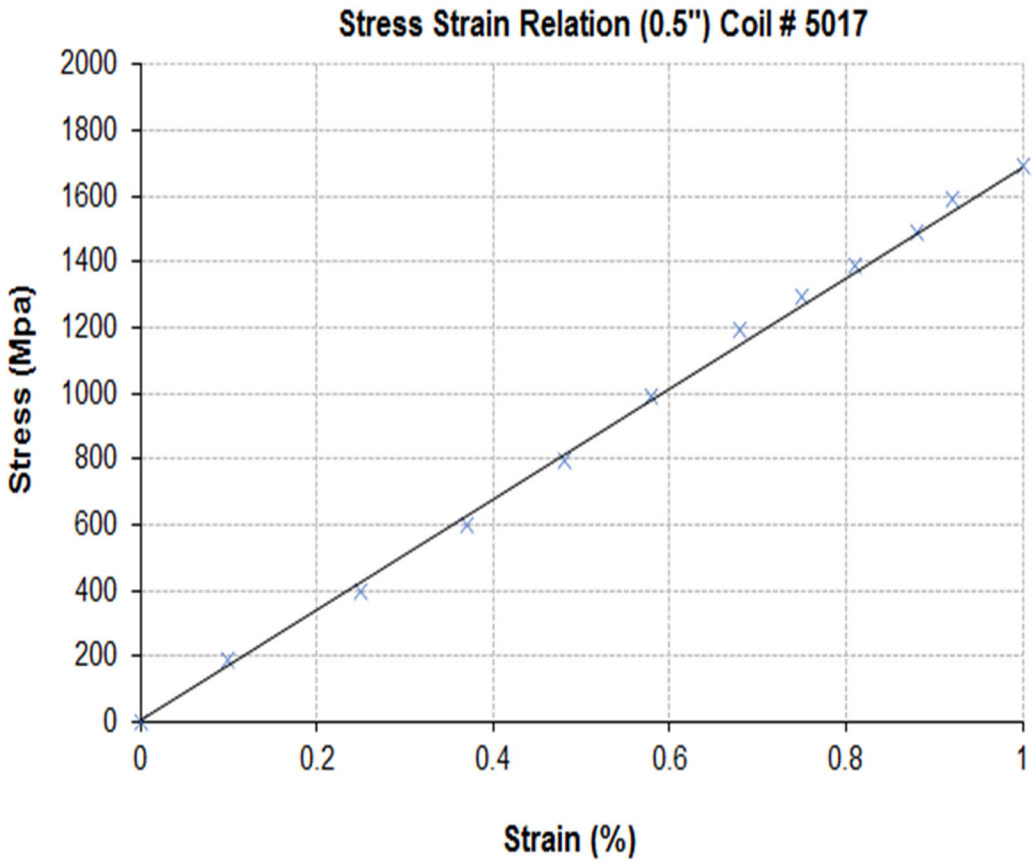
Test Performed and Verified by:

To,

Syed Touseen Ahmed
Mount Khalid, Gulberg Greens-Islamabad

Reference # CED/TFL **7676** (Dr. Rizwan Riaz) Dated: 22-10-2025
Reference of the request letter # MKGG/MT/2025/PT-Strand/003 Dated: 20-10-2025

Graph (Page – 2/3)



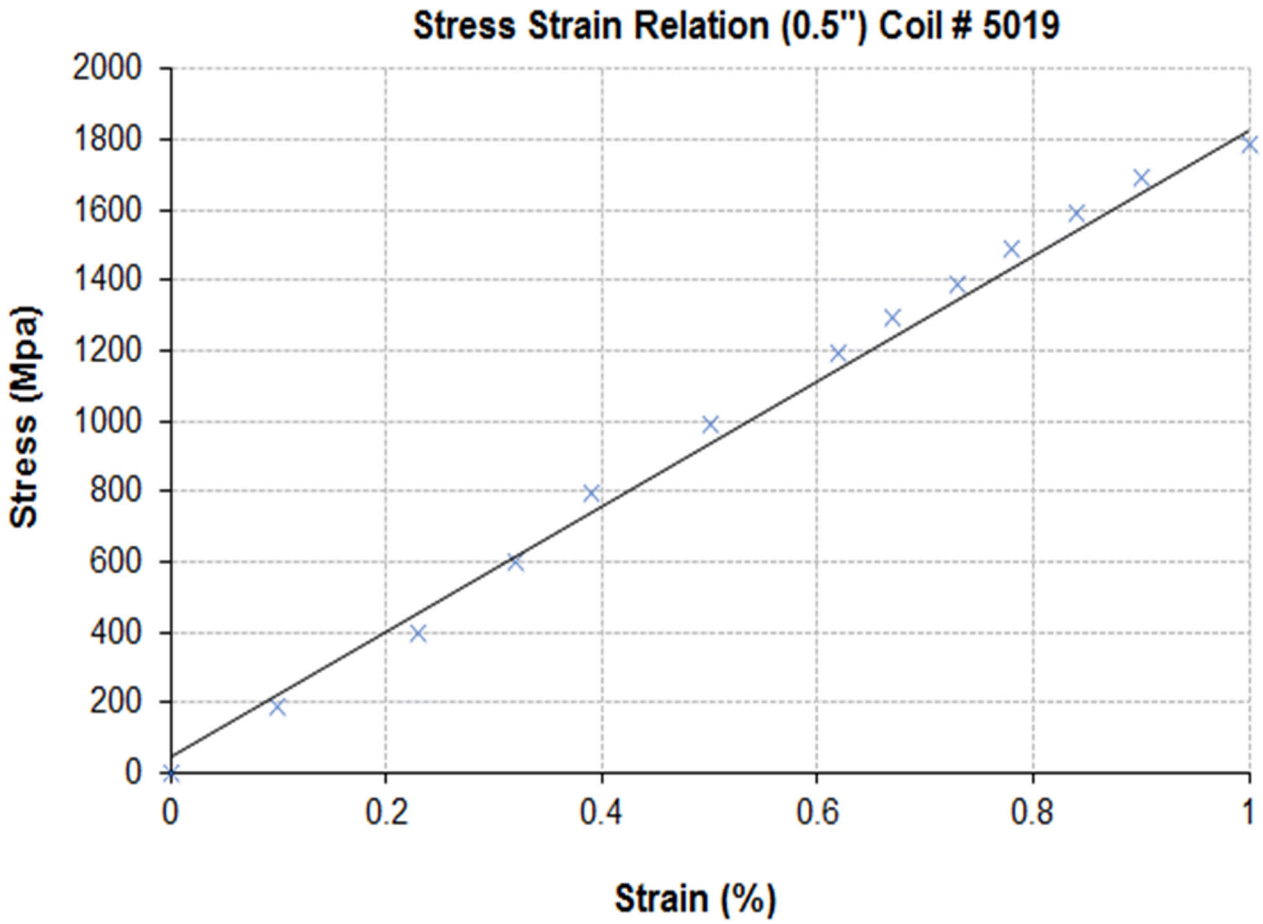
Test Performed and Verified by:

To,

Syed Touseen Ahmed
Mount Khalid, Gulberg Greens-Islamabad

Reference # CED/TFL **7676** (Dr. Rizwan Riaz) Dated: 22-10-2025
Reference of the request letter # MKGG/MT/2025/PT-Strand/003 Dated: 20-10-2025

Graph (Page – 3/3)



Test Performed and Verified by:

To,

Project Manager
Sunshine Health (Pvt.) Ltd.
Sunshine Medical Tower Shahdra

Reference # CED/TFL **7682** (Dr. Rizwan Riaz) Dated: 23-10-2025
Reference of the request letter # Nil Dated: 23-10-2025

Tension Test Report (Page-1/1)

Date of Test 24-10-2025
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	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.375**	**3**	**0.374**	**0.110**	**0.1101**	**3400**	**5000**	**68124**	**68092**	**100182**	**100136**	**1.4**	**17.5**	-
2	**0.366**	**3**	**0.370**	**0.110**	**0.1077**	**3300**	**4900**	**66120**	**67554**	**98178**	**100307**	**1.5**	**18.8**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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. Naveed Muslim (P.M Thaheem Construction Services)
Ibrahim Construction Services
Reliance Feed Mill Jambar

Reference # CED/TFL **7683** (Dr. Rizwan Riaz) Dated: 23-10-2025
Reference of the request letter # TCS/UET/0012 Dated: 23-10-2025

Tension Test Report

Date of Test 24-10-2025
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	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.374**	**3**	**0.374**	**0.110**	**0.11**	**3000**	**4600**	**60109**	**60099**	**92167**	**92151**	**1.7**	**21.3**	-
2	**0.365**	**3**	**0.369**	**0.110**	**0.1072**	**2900**	**4500**	**58105**	**59608**	**90164**	**92496**	**1.5**	**18.8**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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,

Hafiz Saeed Ur Rehman (Resident Engineer)
Nespak (Pvt.) Ltd.
Uplifting of Neela Gumbad Area Along With Provision of Underground Parking Facility, Lahore

Reference # CED/TFL **7684** (Dr. Rizwan Riaz) Dated: 23-10-2025
Reference of the request letter # 4047/13/HSR/09/06 Dated: 15-10-2025

Tension Test Report

Date of Test 24-10-2025
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	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	**0.367**	**3**	**0.371**	**0.110**	**0.108**	**3100**	**5000**	**62113**	**63271**	**100182**	**102050**	**1.3**	**16.3**	-
2	**0.362**	**3**	**0.368**	**0.110**	**0.1062**	**3000**	**4900**	**60109**	**62239**	**98178**	**101657**	**1.3**	**16.3**	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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,

Executive Engineer
Buildings Division Kasur
Construction of Arazi Record Center in Tehsil Kot Radha Kishan District Kasur of Central Zone of Punjab Province

Reference # CED/TFL **7685** (Dr. Rizwan Riaz) Dated: 23-10-2025
Reference of the request letter # 6514/D Dated: 09-10-2025

Tension Test Report

Date of Test 24-10-2025
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	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.360	3	0.367	0.110	0.1059	3500	5300	70127	72827	106193	110280	1.2	15.0	-
2	0.371	3	0.372	0.110	0.109	3700	5500	74135	74844	110200	111254	1.1	13.8	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: Only 2 Samples for Tensile and 0 Samples for Bend test

Bend Test

Test Performed and Verified by:

Ref: CED/TFL/10/7686 Dated: 24-10-2025

Dated of Test: 24-10-2025 (Dr. M. Kashif)

To

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

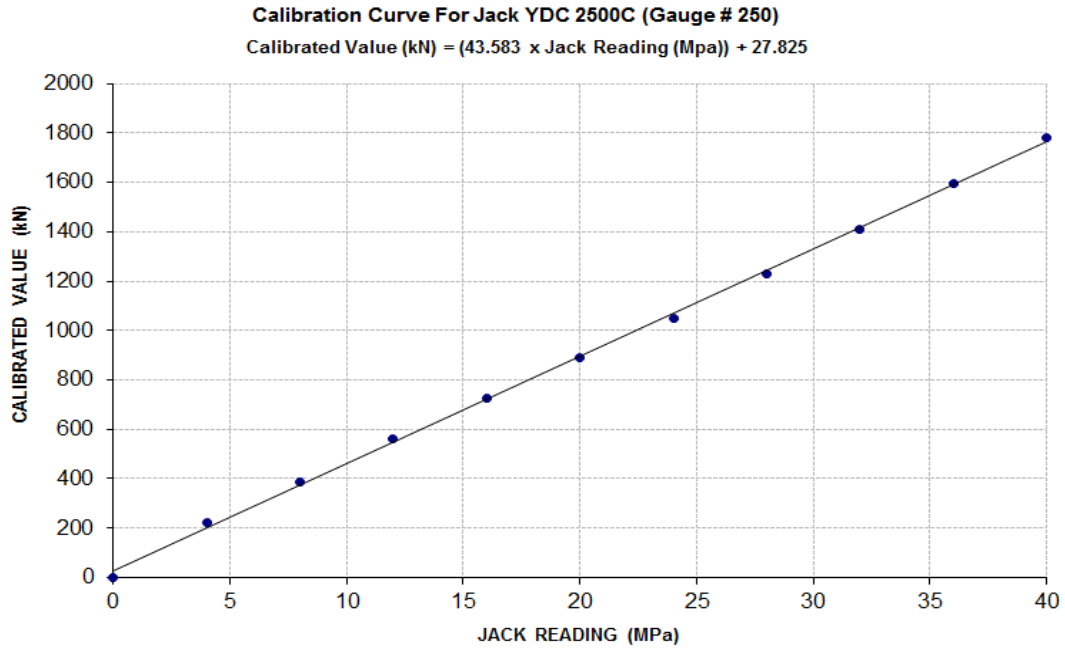
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/10/7686)** (Page -1/2)

Reference to your Letter No. Nil, dated: 24/10/2025 on the subject cited above. One Hydraulic Jack (Jack No. YDC 2500C, Gauge No. 250) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 100 (MPa)
Calibrated Range : Zero - 40 (MPa)

Hydraulic Jack Reading (MPa)		**4**	**8**	**12**	**16**	**20**	**24**	**28**	**32**	**36**	**40**
Calibrated Load	**(kg)**	**22800**	**39400**	**57400**	**73800**	**90600**	**107200**	**125400**	**144000**	**162800**	**181600**
	(kN)	**224**	**387**	**563**	**724**	**889**	**1052**	**1230**	**1413**	**1597**	**1781**
Calibrated Pressure (Mpa)		**4.66**	**8.52**	**11.80**	**15.09**	**18.41**	**21.90**	**25.35**	**29.16**	**32.90**	**36.71**

The Ram Area of Jack = 483.56 cm^2



Test Performed and Verified by:

Ref: CED/TFL/10/7686 Dated: 24-10-2025

Dated of Test: 24-10-2025 (Dr. M. Kashif)

To

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

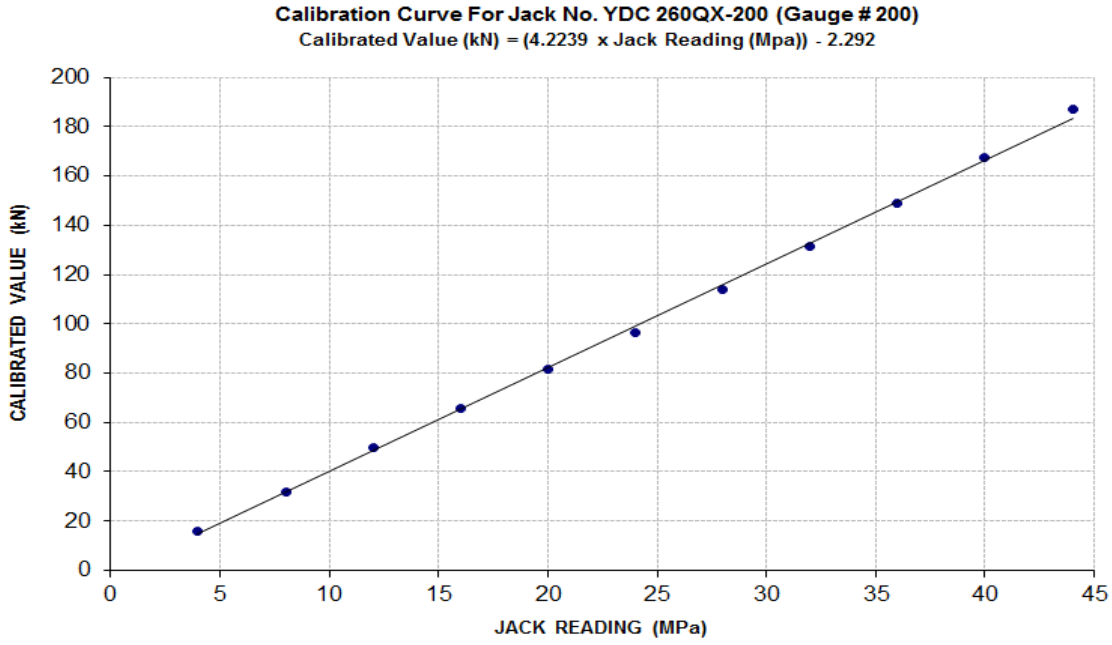
Subject: **- CALIBRATION OF HYDRAULIC JACK (MARK: TFL/10/7686)** (Page -2/2)

Reference to your Letter No. Nil, dated: 24/10/2025 on the subject cited above. One Hydraulic Jack (Jack No. YDC 260QX-200, Gauge No. 200) as received by us has been calibrated. The results are tabulated as under:

Total Range : Zero - 60 (MPa)
Calibrated Range : Zero - 44 (MPa)

Hydraulic Jack Reading (MPa)		**4**	**8**	**12**	**16**	**20**	**24**	**28**	**32**	**36**	**40**	**44**
Calibrated Load	**(kg)**	**1600**	**3200**	**5100**	**6700**	**8300**	**9850**	**11600**	**13400**	**15200**	**17050**	**19050**
	(kN)	**16**	**32**	**50**	**66**	**81**	**97**	**114**	**131**	**149**	**167**	**187**
Calibrated Pressure (Mpa)		**3.3**	**6.7**	**10.5**	**13.8**	**17.1**	**20.2**	**23.8**	**27.5**	**31.2**	**35.0**	**39.2**

The Ram Area of Jack = 47.71 cm^2



Test Performed and Verified by: