



**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/08/36880

Dated: 12-08-2021

Dated of Test: 02-09-2021

To  
**Assistant Director (QCD)**  
**WASA, LDA, Lahore**  
**(M/s Universal RCC Pipes Factory)**

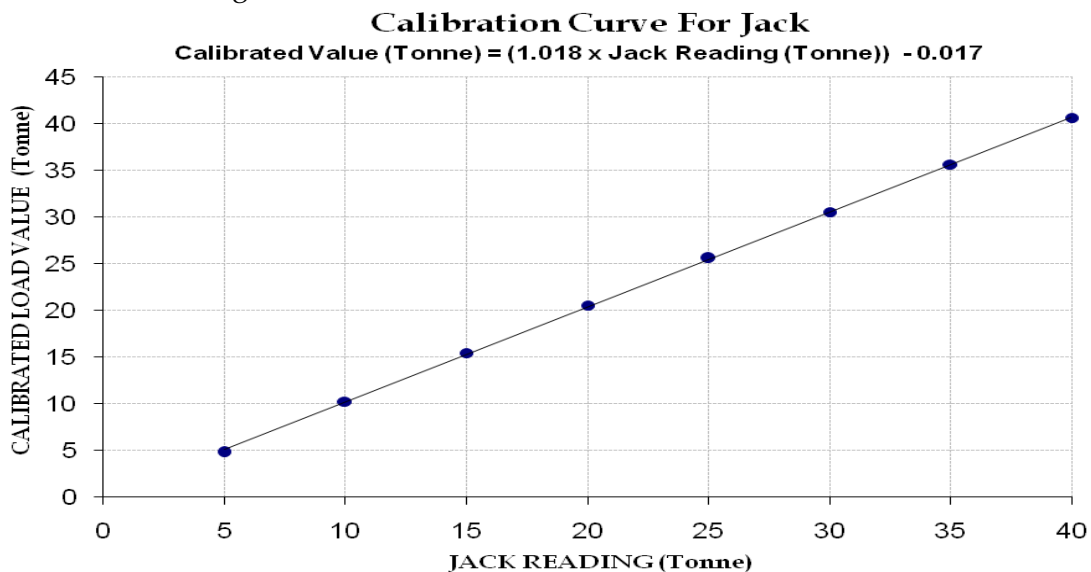
Subject: - **CALIBRATION OF HYDRAULIC JACK WITH GAUGE**  
**(MARK: TFL/08/36880)**

Reference to your Letter No. QCD/1057-58, Dated: 05/08/2021 on the subject cited above. One Hydraulic Jack with Gauge as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 50 (Tonne)**  
**Calibrated Range : Zero - 40 (Tonne)**

Hydraulic Jack Reading (Tonne)	5	10	15	20	25	30	35	40	
Calibrated Load	kg	4800	10200	15450	20500	25550	30500	35600	40600
	Tonne	4.80	10.20	15.45	20.50	25.55	30.50	35.60	40.60

1 Tonne = 1000 kg



**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,  
 Resident Engineer  
 ACES  
 Ring Road, - Rumanza Golf Course, DHA Multan  
 (RGC)(NLC)

Reference # CED/TFL **36955** (Dr. Qasim Khan)  
 Reference of the request letter # ACES-DHAM-GCRR-391

Dated: 27-08-2021  
 Dated: 23-08-2021

**Tension Test Report** (Page – 1/3)

Date of Test 02-09-2021  
 Gauge length 2 inches  
 Description Metal Beam Guard Rail Strip Tensile Test as per AASHTOO M-180

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(cm)	(cm <sup>2</sup> )	(kg)	(kg)	(kg/cm <sup>2</sup> )	(kg/cm <sup>2</sup> )	(in)		
1	Metal Beam Guard Rail	2.670x0.30	0.80	2670	5680	3333	7091	0.30	15.00	
2		2.665x0.30	0.80	2700	5500	3377	6879	0.20	10.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile Test</b>										
<b>Bend Test</b>										

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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 (RGC)(NLC)

Reference # CED/TFL **36955** (Dr. Qasim Khan)  
 Reference of the request letter # ACES-DHAM-GCRR-391

Dated: 27-08-2021  
 Dated: 23-08-2021

**Tension Test Report** (Page – 2/3)

Date of Test 02-09-2021  
 Gauge length 2 inches  
 Description Guard Rail Post Strip Tensile Test as per ASTM A183

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm <sup>2</sup> )	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	Guard Rail Post	26.80x7.00	187.60	6500	9000	340	471	0.60	30.00	
2		26.70x7.00	186.90	6700	8900	352	467	0.60	30.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile Test</b>										
<b>Bend Test</b>										

**I/C Testing Laboratories**  
**UET Lahore, Pakistan.**

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To,  
Resident Engineer  
ACES  
Ring Road, - Rumanza Golf Course, DHA Multan  
(RGC)(NLC)

Reference # CED/TFL **36955** (Dr. Qasim Khan)  
Reference of the request letter # ACES-DHAM-GCRR-391

Dated: 27-08-2021

Dated: 23-08-2021

**Size Test Report** (Page – 3/3)

Date of Test 02-09-2021

Description Metal Beam Guard Rail & Guard Rail Post thickness Test

Sr. No.	Designation	Thickness	Remark
	(mm)	(mm)	
1	Metal Beam Guard Rail	3.00	
2	Guard Rail Post	7.00	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
<b>Only Two Samples for Test</b>			

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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

To,  
SLT / OIC Labs  
DBH JVMC,  
DHA Valley Projects  
DHA Homes, Islamabad

Reference # CED/TFL **36965** (Dr. Qasim Khan)

Dated: 30-08-2021

Reference of the request letter # DBH-JVMC/QA/QC/2021/03/UET LHR Dated: 30-08-2021

**Tension Test Report** (Page – 1/1)

Date of Test 02-09-2021

Gauge length 2 inches

Description Aluminum Section Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	Aluminum Section	21.85x1.10	24.04	6.42	6.70	267	279	0.10	5.00	
2		21.80x1.10	23.98	6.59	6.80	275	284	0.15	7.50	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile Test</b>										
<b>Bend Test</b>										

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
SLT / OIC Labs  
DBH JVMC,  
DHA Valley Projects  
DHA Homes, Islamabad

Reference # CED/TFL **36965** (Dr. Qasim Khan)

Dated: 30-08-2021

Reference of the request letter # DBH-JVMC/QA/QC/2021/03/UET LHR Dated: 30-08-2021

**Size Test Report** (Page – 2/2)

Date of Test 02-09-2021

Description Aluminum Section thickness Test

Sr. No.	Designation	Thickness	Remark
	(mm)	(mm)	
1	Aluminum Section	1.10	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
<b>Only Two Samples for Test</b>			

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 M/S Defence Housing Authority.  
 Lahore Cantt  
 (Cons of Infra Dev Works at Sector-KK, DHA Phase-IV)(NBPOCH) – (M/s Reliable)

Reference # CED/TFL **36980** (Dr. Usman Akmal)  
 Reference of the request letter # 408/241/E/Lab/125/O.H-13

Dated: 01-09-2021  
 Dated: 23-08-2021

**Tension Test Report** (Page -1/1)

Date of Test 02-09-2021  
 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 <sup>2</sup> )		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	0.365	3	0.370	0.11	0.107	3080	4740	61800	63200	95000	97300	1.50	18.8	SJ Steel
2	0.369	3	0.372	0.11	0.109	3110	4790	62400	63140	96000	97300	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

Note:

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To,  
M/S Sui Northern Gas Pipelines Limited  
Lahore  
(Construction of Domestic Meter Inspection Shop at Faisalabad)

Reference # CED/TFL **36981** (Dr. Usman Akmal)  
Reference of the request letter # CC/DMIS/FSD

Dated: 01-09-2021  
Dated: 01-09-2021

**Tension Test Report** (Page -1/1)

Date of Test 02-09-2021  
Gauge length 8 inches  
Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.382	3/8	0.378	0.11	0.112	3410	4640	68400	66890	93000	91100	1.40	17.5	
2	0.376	3/8	0.375	0.11	0.111	3520	4640	70600	70180	93000	92500	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile test</b>														
Bend Test														

**I/C Testing Laboratoires**  
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To,  
 Chief Resident Engineer  
 JIP Consultants Jalalpur Sharif  
 Project Implementation Consultants (PICs) – Jalapur Irrigation Project (JIP)  
 Construction of Jalalpur Irrigation Canal and Its System (RD 225+500 to 379+750) Package-3

Reference # CED/TFL **36985** (Dr. Qasim Khan)  
 Reference of the request letter # JIPIC/TECH/P-3/CRE/03

Dated: 02-09-2021  
 Dated: 01-09-2021

**Tension Test Report** (Page -1/2)

Date of Test 02-09-2021  
 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 <sup>2</sup> )		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	0.384	3	0.379	0.11	0.113	3280	4740	65800	64010	95000	92500	1.50	18.8	Ittefaq Steel
2	0.374	3	0.374	0.11	0.110	3310	4810	66400	66360	96400	96500	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 Chief Resident Engineer  
 JIP Consultants Jalalpur Sharif  
 Project Implementation Consultants (PICs) – Jalapur Irrigation Project (JIP)  
 Construction of Jalalpur Irrigation Canal and Its System (RD 225+500 to 379+750) Package-3

Reference # CED/TFL **36985** (Dr. Qasim Khan)  
 Reference of the request letter # JIPIC/TECH/P-3/CRE/02

Dated: 02-09-2021  
 Dated: 01-09-2021

**Tension Test Report** (Page -2/2)

Date of Test 02-09-2021  
 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 <sup>2</sup> )		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	4.263	10	1.263	1.27	1.253	44200	57600	76800	77740	100000	101400	1.40	17.5	Mughal Steel
2	4.237	10	1.259	1.27	1.245	47200	58200	82000	83540	101100	103100	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
M/S M Aslam & Sons  
Rawalpindi

Reference # CED/TFL **36989** (Dr. Qasim Khan)  
Reference of the request letter # Nil

Dated: 02-09-2021

Dated: 02-09-2021

**Tension Test Report** (Page – 1/1)

Date of Test 02-09-2021  
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	
1	52	9.808	110400	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
<b>Only one sample for Test</b>				

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 Project Manager  
 China Energy Engineering Group  
 Northeast No. 2 Electric Power Construction Co., Ltd  
 Procurement of Plant – Design, Manufacture, Supply, Installation, Testing & Commissioning of  
 500kV DoubleCircuit Quad Bundle Transmission Line from Suki Kinari Hydro Power Station to  
 Interconnection Point of Existing Neelum Jhelum 500kV Double Circuit Quad Bundle  
 Transmission Line (approx. 75km)  
 Reference # CED/TFL **36991**(Dr. Asad Ali) Dated: 02-09-2021  
 Reference of the request letter # DD-401A-FA-538 Dated: 02-09-2021

**Tension Test Report** (Page -1/1)

Date of Test 02-09-2021  
 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 <sup>2</sup> )		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	0.375	3	0.374	0.11	0.110	3260	4840	65400	65240	97000	96900	1.10	13.8	SJ Steel
2	0.384	3	0.379	0.11	0.113	4760	5680	95400	92950	113900	111000	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Note: only two samples for tensile and one sample for bend test**

Bend Test

#3 Bar Bend Test Through 180° is Satisfactory

Witness by Sohaib Ali (Sub Engineer NESPAK)

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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