STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,

Superintending Engineer-II (Civil)
GBHP, WAPDA, Barotha-Attock
"Providing and Fixing Galvanized Crash / Guard Rail Barrier along Power Chahhel RD-27+886 to RD-51+420 (Phase-VI)" W-336

Reference # CED/TFL **5307** (Dr. M KAshif) Dated: 04-07-2024
Reference of the request letter # SE-II(C)/GBHP/ATK/W-336/325 Dated: 31-05-2024

Tension Test Report (Page – 1/2)

Date of Test 11-07-2024
Gauge length 2 inches
Description Guard Rail W-Beam Strip Tensile Test as per AASHTO 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^2)	(kg)	(kg)	(kg/cm^2)	(kg/cm^2)	(in)		
1	**(320x85x3)**	**2.690x0.25**	**0.67**	**3400**	**5500**	**5056**	**8178**	**0.30**	**15.00**	
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Only One Sample for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Reference # CED/TFL **5307** (Dr. M KAshif) Dated: 04-07-2024
Reference of the request letter # SE-II(C)/GBHP/ATK/W-336/325 Dated: 31-05-2024

Tension Test Report (Page – 2/2)

Date of Test 11-07-2024
Gauge length 2 inches
Description Steel Post Strip Tensile Test as per ASTM A36

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm^2)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	**120x55x5**	**27.00x6.70**	**180.90**	**6400**	**9000**	**347**	**488**	**0.60**	**30.00**	
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Only One Sample for Tensile Test										
Bend Test										

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

Ref: CED/TFL/07/5321 Dated: 09-07-2024

Dated: 11-07-2024

To

Executive Project Manager
China Civil Engineering Construction Corporation
Pakistan Branch Office
ICB No. DASU KKH-01

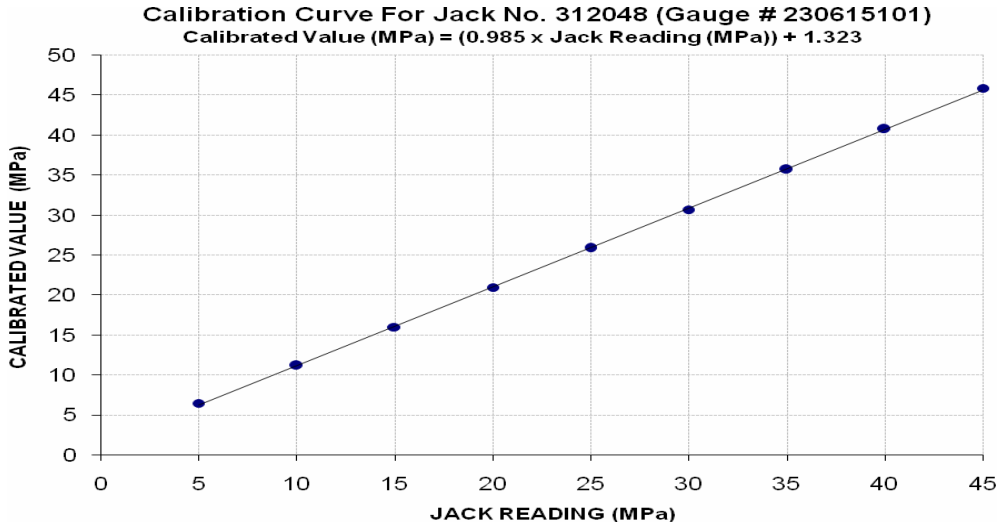
Subject: **- CALIBRATION OF HYDRAULIC JACK (YDC2000/53-200)**
(MARK: TFL/07/5321) (Page -1/2)

Reference to your Letter No. CCECC/PAK/DASUFIELD/KKH-01/24-116, dated: 05/07/2024 on the subject cited above. One Hydraulic Jack (Jack No. 312048, Gauge No. 230615101) 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)	24800	43000	61600	80600	99400	118000	137200	156600	176400
Calibrated Pressure (Mpa)	6.45	11.19	16.03	20.98	25.87	30.71	35.71	40.76	45.91

The Ram Area of Jack = 376.8 cm^2



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/07/5321 Dated: 09-07-2024

Dated: 11-07-2024

To

Executive Project Manager
China Civil Engineering Construction Corporation
Pakistan Branch Office
ICB No. DASU KKH-01

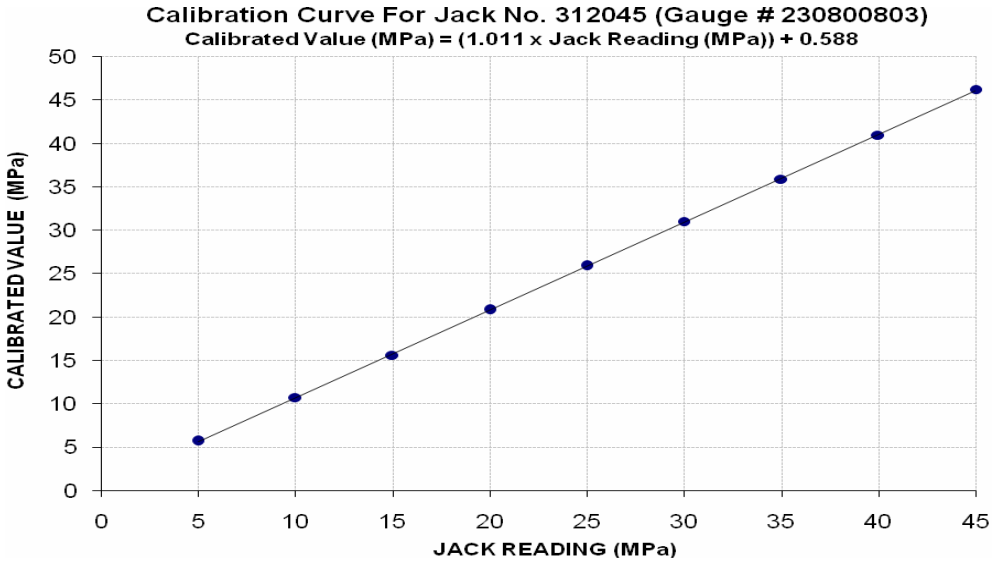
Subject: **- CALIBRATION OF HYDRAULIC JACK (YDC2000/53-200)**
(MARK: TFL/07/5321) (Page -2/2)

Reference to your Letter No. CCECC/PAK/DASUFIELD/KKH-01/24-116, dated: 05/07/2024 on the subject cited above. One Hydraulic Jack (Jack No. 312045, Gauge No. 230800803) 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)	22000	41200	60000	80000	99600	119200	138000	157400	177600
Calibrated Pressure (Mpa)	5.73	10.72	15.62	20.82	25.92	31.02	35.92	40.97	46.22

The Ram Area of Jack = 376.8 cm^2



I/C Testing Laboratoires
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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,

Project Manager,
HIGH-Q
Construction of HIGH-Q Mall at 3-A, Gulberg II, Lahore.

Reference # CED/TFL **5332** (Dr. Rizwan Azam) Dated: 10-07-2024
Reference of the request letter # QC/HQ/CIVIL/222 Dated: 10-07-2024

Tension Test Report (Page -1/1)

Date of Test 11-07-2024
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	0.409	10	9.94	0.12	0.120	4000	5400	73487	73350	99207	99100	1.10	13.8	
2	0.413	10	9.98	0.12	0.121	4000	5400	73487	72690	99207	98200	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm 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,

M/S Mahar & Brothers Construction (Pvt) Ltd.
Karachi

Reference # CED/TFL **5333** (Dr. Rizwan Azam) Dated: 10-07-2024
Reference of the request letter # Nil Dated: 10-07-2024

Tension Test Report (Page -1/1)

Date of Test 11-07-2024
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	0.344	3	0.359	0.11	0.101	3700	4300	74200	80600	86200	93700	0.60	7.5	
2	0.343	3	0.358	0.11	0.101	3700	4300	74200	80810	86200	94000	0.60	7.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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

To,

Muhammad Rafique
SM Civil Master Procon Factory Lahore.

Reference # CED/TFL **5335** (Dr. Ali Ahmed) Dated: 11-07-2024
Reference of the request letter # PEMH05-001 Dated: 11-07-2024

Tension Test Report (Page -1/1)

Date of Test 11-07-2024
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	0.373	3	0.374	0.11	0.110	4100	4600	82200	82320	92200	92400	0.60	7.5	Afco Steel
2	0.371	3	0.373	0.11	0.109	3900	4500	78200	78760	90200	90900	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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Note: only two samples for tensile and one sample for bend test

Bend Test

#3 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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Pakistan. Ph: 92-42-99029202

To,

Material Engineer
New Metro City Housing Scheme
Mandi Bahaudin
BSM Developers

Reference # CED/TFL **5336** (Dr. Nauman Khurram) Dated: 11-07-2024
Reference of the request letter # NMC/MBD/LAB/70 Dated: 11-07-2024

Tension Test Report (Page -1/1)

Date of Test 11-07-2024
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	0.371	3	0.373	0.11	0.109	3670	5020	73600	74140	100600	101500	1.20	15.0	
2	0.374	3	0.374	0.11	0.110	3770	4990	75600	75600	100000	100100	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180º is Satisfactory														

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To,

Unit Head PMO
ABL – UML P-199 & 200
Allied Bank
Construction of ABL Upper Mall Lahore Plot No. 199, 200.

Reference # CED/TFL **5337** (Dr. Ali Ahmed) Dated: 11-07-2024
Reference of the request letter # ABL-UML-AMC-QAQC-84 Dated: 10-07-2024

Tension Test Report (Page -1/1)

Date of Test 11-07-2024
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	0.363	3	0.368	0.11	0.107	3200	4500	64200	66180	90200	93100	1.20	15.0	FF Steel
2	0.380	3	0.377	0.11	0.112	3600	5000	72200	70970	100200	98600	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180º is Satisfactory														

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