



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

To,  
 MEP Manager  
 Buch International Hospital  
 Multan

Reference # CED/TFL **34535** (Dr. Usman Akmal)  
 2020

Dated: 23-01-

Reference of the request letter # BIH/BV/22/01/20/20  
 2020

Dated: 22-01-

**Tension Test Report** (Page – 1/1)

Date of Test 30-01-2020  
 Gauge length 2 inches  
 Description Sheet & Pipe Steel Strip Tensile Test

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	Sheet	10mm	27.40x9.90	271.26	7300	12100	264.00	437.59	0.80	40.00	
2		10mm	27.40x9.90	271.26	7200	12000	260.38	433.97	0.80	40.00	
3	Pipe	10"	27.40x11.60	317.84	14400	17000	444.45	524.70	0.70	35.00	
4		10"	27.40x11.60	317.84	15800	17400	487.66	537.04	0.60	30.00	
-	-		-	-	-	-	-	-	-	-	
-	-		-	-	-	-	-	-	-	-	
<b>Only Four Samples for Tensile Test</b>											
<b>Bend Test</b>											

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

Note:

- 1- You can See your reports On Internet in the following web site  
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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/01/34536

Dated: 23-01-2020

Dated of Test: 30-01-2020

To  
Deputy Manager (Civil)  
Civil Works Division  
Lahore Electric Supply Company,  
132 kV Grid Sttion PWR Garhi Shahu Lahore

Subject: - CALIBRATION OF DYNAMOMETER (MARK: TFL/01/34536) (Page -1/1)

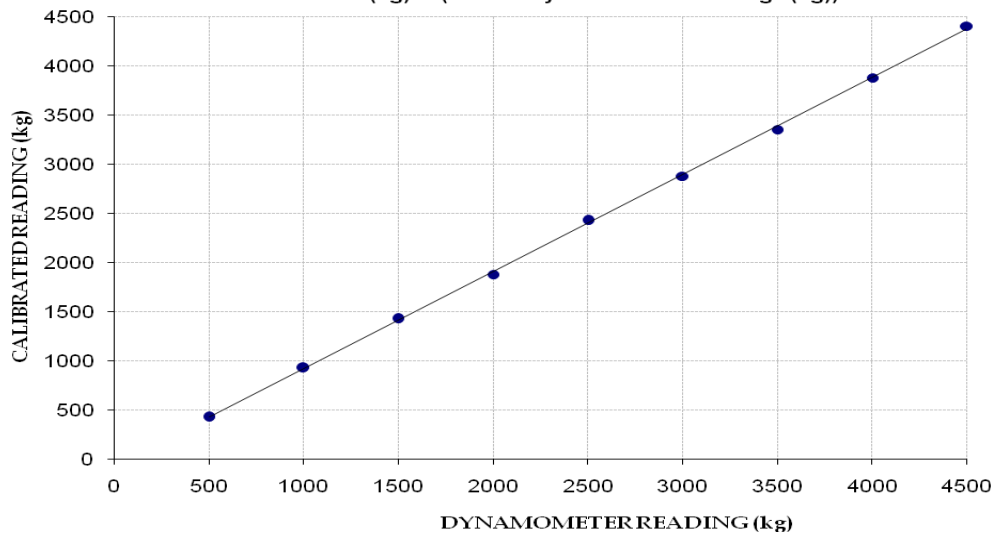
Ref: Your letter No. 127/XEN/C-W/LESCO, dated: 22/01/2020 on the subject cited above. One Dynamometer (Sr. No. D46288) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 5000 (kg)**  
**Calibrated Range : Zero - 4500 (kg)**

Dynamometer Readings (kg)	500	1000	1500	2000	2500	3000	3500	4000	4500
Calibrated Readings (kg)	425	925	1425	1875	2425	2875	3350	3875	4400

**Calibration Curve for Dynamometer**

**Calibrated Value (kg) = (0.986 × Dynamometer Readings (kg)) - 69.44**



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**STRUCTURAL ENGINEERING DIVISION**  
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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 Dar Engineering  
 Punjab Agriculture Food and Durg Authority's Science Enclave, Lahore Pakistan

Reference # CED/TFL **34538** (Dr. Waseem Abbas) Dated: 23-01-2020  
 Reference of the request letter # DB-78/DAR/RE/ME/2020/0212 Dated: 23-01-2020

**Tension Test Report** (Page – 1/2)

Date of Test 30-01-2020  
 Gauge length 2 inches  
 Description MS Sheet Steel Strip Tensile Test (ASTM-A36)

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)									
1	MS Sheet	---	27.50x0.57	15.68	480	680	300.40	425.57	0.70	35.00	
2	MS Sheet	----	27.50x0.57	15.68	480	720	300.40	450.60	0.80	40.00	
-	-		-	-	-	-	-	-	-	-	
-	-		-	-	-	-	-	-	-	-	
-	-		-	-	-	-	-	-	-	-	
-	-		-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile Test</b>											
<b>Bend Test</b>											

**I/C Testing Laboratories**  
**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  
Dar Engineering  
Punjab Agriculture Food and Durg Authority's Science Enclave, Lahore Pakistan

Reference # CED/TFL **34538** (Dr. Waseem Abbas) Dated: 23-01-2020  
Reference of the request letter # DB-78/DAR/RE/ME/2020/0212 Dated: 23-01-2020

**Weight & Size Test Report** (Page – 2/2)

Date of Test 30-01-2020  
Gauge length -----  
Description M.S. Sheet Thickness Test

Sr. No.	Designation	Thickness	Remark
1	MS Sheet	0.57	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
<b>Only One Sample for Test</b>			

**I/C Testing Laboratories**  
**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,  
Chief Resident Engineer  
Osmani & Company (Pvt) Ltd  
Swat Motorway Project

Reference # CED/TFL **34553** (Dr. Usman Akmal) Dated: 27-01-2020  
Reference of the request letter # 358/CRE/QAT/SMP/2020 Dated: 28-01-2020

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

Date of Test 30-01-2020  
Gauge length -----  
Description Gabion Wire Tensile Test

Sr. No.	Weight	Diameter/ size		Area (mm <sup>2</sup> )		Yield load	Breaking Load	Ultimate Stress (MPa)	Remarks
	(kg/m)	Nominal (Swg)	Actual (mm)	Nominal	Actual	(kN)	(kN)	Actual	
1	0.028	9	2.15	-----	3.6	-----	1.30	359	
2	0.029	9	2.16	-----	3.7	-----	1.67	457	
3	0.054	11	2.96	-----	6.9	-----	2.80	407	
4	0.054	11	2.95	-----	6.8	-----	2.97	435	
5	0.067	13	3.29	-----	8.5	-----	3.67	431	
6	0.067	13	3.30	-----	8.6	-----	3.90	455	
<b>Note: only six samples for tensile test</b>									
Bend Test									

**I/C Testing Laboratories**  
**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,  
Chief Resident Engineer  
Osmani & Company (Pvt) Ltd  
Swat Motorway Project

Reference # CED/TFL **34553** (Dr. Usman Akmal)

Dated: 27-01-2020

Reference of the request letter # 358/CRE/QAT/SMP/2020 Dated: 28-01-2020

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

Date of Test 30-01-2020

Gauge length -----

Description Gabion Wire Size Test

Sr. No.	Diameter/ size		Remarks
	Nominal (Swg)	Measured (mm)	
1	9	2.30	
2	9	2.30	
3	11	2.90	
4	11	2.90	
5	13	3.60	
6	13	3.60	
<b>Note: only six samples for test</b>			

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

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

To,  
 RE, VO-2 (M-2)  
 ACC-PRIME Jv  
 Construction of Additional Lanes on Motorway (M-2 between Ravi Toll Plaza and Fauzpur Interchange

Reference # CED/TFL **34555** (Dr. Usman Akmal)  
 Reference of the request letter # Nil

Dated: 27-01-2020  
 Dated: 27-01-2020

**Tension Test Report** (Page – 1/1)

Date of Test 30-01-2020  
 Gauge length 2 inches  
 Description W- 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	W - Section	2.72x0.28	0.76	5800	5920	7616	7773	0.20	10.00	
2		2.72x0.28	0.76	5200	5900	6828	7747	0.25	12.50	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile Test</b>										
<b>Bend Test</b>										

**I/C Testing Laboratories**  
**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/01/34558

Dated: 28-01-2020

Dated of Test: 30-01-2020

To  
Assistant Project Director  
PMU-SBP Sahiwal  
(Construction of Tehsil Sports Complex at Public Sports Stadium, Depalpur Okara)

Subject: TESTING OF R.C.C. PIPE [ASTM-C76]

Reference to your letter No. APD/PMU/SBP/SWL/19/129, dated 23.12.2019 on the subject cited above. One R.C.C. Pipe 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
	(mm)	(m)	(m)	(mm)	(mm)	(mm)	(kg)	(kg)	N/m/mm	N/m/mm
1	228.6 (9")	2.390	2.218	280.00	229.40	25.30	6300	14000	121.47	269.92

**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,  
M/S Al-Karam Paper Mills (Pvt) Ltd  
Lahore

Reference # CED/TFL **34566** (Dr. Usman Akmal)  
Reference of the request letter # Nil

Dated: 29-01-2020  
Dated: 28-01-2020

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

Date of Test 30-01-2020  
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	0.378	3	0.376	0.11	0.111	3400	4800	68200	67390	96200	95200	1.30	16.3	
2	0.376	3	0.375	0.11	0.111	3400	4700	68200	67800	94200	93800	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 Laboratories**  
**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,  
 Manager C, R & M  
 Allied Bank Limited  
 Engineering Cell, South – II, Multan  
 Allied Bank Limited MDC Building, Khanewal Road, Multan

Reference # CED/TFL **34567** (Dr. Usman Akmal)  
 Reference of the request letter # Nil

Dated: 29-01-2020  
 Dated: 22-01-2020

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

Date of Test 30-01-2020  
 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	Marks
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.405	3	0.389	0.11	0.119	4500	5500	90200	83310	110200	101900	0.80	10.0	A
2	0.403	3	0.388	0.11	0.119	4500	5650	90200	83680	113300	105100	0.90	11.3	A
3	0.361	3	0.368	0.11	0.106	3400	4500	68200	70540	90200	93400	0.90	11.3	B
4	0.369	3	0.372	0.11	0.108	3500	4700	70200	71120	94200	95600	1.00	12.5	B
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only four sample for tensile and two samples for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

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

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**STRUCTURAL ENGINEERING DIVISION**  
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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 NESPAK  
 PICIIP Sahiwal  
 Up Gradation of 3 Existing Parks in Sahiwal City Under PICIIP

Reference # CED/TFL **34568** (Dr. Usman Akmal)  
 Reference of the request letter # 3976/23

Dated: 29-01-2020  
 Dated: 17-01-2020

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

Date of Test 30-01-2020  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend 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	0.361	3/8	0.368	0.11	0.106	3800	4700	76200	78870	94200	97600	0.90	11.3	
2	0.362	3/8	0.368	0.11	0.107	3700	4800	74200	76540	96200	99300	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
3/8" Dia Bar Bend Test Through 180° 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,  
M/S Joint Developert  
Lahore  
(Construction of Processing and Storage at Ever Fresh Farm Bhera)

Reference # CED/TFL **34569** (Dr. Usman Akmal)  
Reference of the request letter # Nil

Dated: 29-01-2020  
Dated: 29-01-2020

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

Date of Test 30-01-2020  
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	3700	4800	74200	75910	96200	98500	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one sample for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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**STRUCTURAL ENGINEERING DIVISION**  
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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
M/S Core Construction Services  
Sambarial

Reference # CED/TFL **34570** (Dr. Usman Akmal)  
Reference of the request letter # CCS/SIAL/2020/931

Dated: 29-01-2020  
Dated: 27-01-2020

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

Date of Test 30-01-2020  
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	0.445	3	0.408	0.11	0.131	5000	6400	100200	84280	128300	107900	1.00	12.5	
2	0.450	3	0.410	0.11	0.132	4900	6500	98200	81710	130300	108400	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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 Laboratories**  
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- 2- The above results pertain to sample /samples supplied to this laboratory.
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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,  
 Material Engineer  
 Minz ACE Consultants  
 Killi Khudai Nazar to Mughal Kot (N-5) Lot # 2  
 (Faizan Steel)

Reference # CED/TFL **34571** (Dr. Usman Akmal)  
 Reference of the request letter # Nil

Dated: 29-01-2020  
 Dated: 29-01-2020

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

Date of Test 30-01-2020  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		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	0.410	10	9.95	0.12	0.121	4100	5300	75324	74980	97370	97000	1.00	12.5	
2	0.412	10	9.97	0.12	0.121	4100	5350	75324	74640	98288	97400	1.00	12.5	
3	4.279	32	32.14	1.25	1.258	35800	53000	63140	62740	93475	92900	1.50	18.8	
4	4.274	32	32.12	1.25	1.256	35800	52800	63140	62820	93122	92700	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only four sample for tensile and two samples for bend test</b>														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
32mm Dia Bar Bend Test Through 180° 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  
 G3 Engineering Consultants (Pvt) Ltd  
 Consultancy Services Establishment of Sub Campus of University of Agriculture Faisalabad at  
 Depalpur District Okara

Reference # CED/TFL **34573** (Dr. Usman Akmal)  
 Reference of the request letter # RE/UAF/DEP/05

Dated: 29-01-2020  
 Dated: 28-01-2020

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

Date of Test 30-01-2020  
 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	0.371	3	0.373	0.11	0.109	3500	4900	70200	70720	98200	99100	1.20	15.0	
2	0.377	3	0.375	0.11	0.111	3500	5000	70200	69700	100200	99600	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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.**

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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/01/34574

Dated: 29-01-2020

Date of Test: 30-01-2020

To,  
**Acting Project Director**  
**China Civil Engineering Construction Corporation**  
**Pakistan Branch Office**

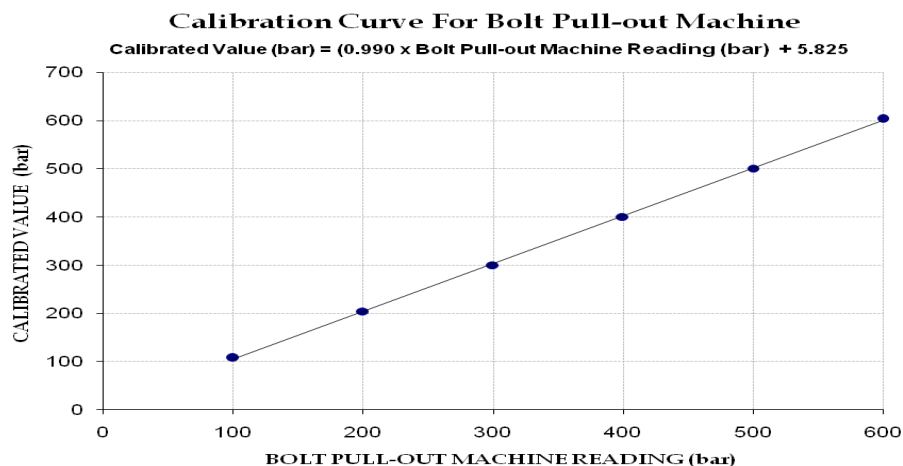
**Subject: - CALIBRATION OF ROCK BOLT PULL-OUT MACHINE**  
**(MARK: TFL/01/34574)**

Reference to your Letter No. CCECC/PAK/DASUFIELD/KKH-01/20-018, Dated: 27/01/2020 (ICB No. DASU-KKH-01) on the subject cited above. One Rock Bolt Pull-out Machine (30 Ton S/A Holl-o-Cylinder RC # 302, C 3118K, 066200530275 8) with Pressure Gauge (G2535L, Sr # 4132354015, Model-213.53.63, Art No. 7524111, Pump No. P-392) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 700 (bar)**  
**Calibrated Range : Zero - 600 (bar)**

<b>Hydraulic Jack Reading (bar)</b>	100	200	300	400	500	600
<b>Calibrated Load (k g)</b>	5100	9700	14250	19000	23750	28650
<b>Calibrated Pressure (bar)</b>	107	204	300	400	500	603

The Ram Area of Jack = 46.58 cm<sup>2</sup>



**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**  
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To,  
 M/S Project Manager  
 Kallurkot Bridge Project  
 (Construction of 4 Lane Bridge Over River Indus Connecting Kallur Kot With D.I.Khan)

Reference # CED/TFL **34579** (Dr. Usman)  
 Reference of the request letter #GRC/KKBP/0125

Dated: 30-01-2020  
 Dated: 30-01-2020

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

Date of Test 30-01-2020  
 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 (mm)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	4.075	32	1.235	1.27	1.198	45000	62800	78100	82820	109000	115600	1.20	15.0	
2	4.187	32	1.252	1.27	1.231	39000	58000	67700	69850	100700	103900	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only Two samples for tensile and Two samples for bend test</b>														
Bend Test														
32mm Dia Bar Bend Test Through 180° is Satisfactory														
32mm Dia Bar Bend Test Through 180° is Satisfactory														

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

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