



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

To,  
DCRE  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project

Reference # CED/TFL **34473** (Dr. M Rizwan Riaz)  
Reference of the request letter # LSMP/RE-II/St/19/859

Dated: 14-01-2020  
Dated: 13-01-2020

**Tension Test Report** (Page – 1/1)

Date of Test 17-01-2020  
Gauge length -----  
Description Galvanized Chain Link Tension Wire Tensile Test

Sr. No.	Diameter of Single Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	3.30	7.35	
2	3.30	7.35	
3	3.30	7.75	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
<b>Only Three Samples for Test</b>			

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

**Note:**

- 1- You can See your reports On Internet in the following web site  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports)
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- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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To,  
DCRE  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project

Reference # CED/TFL **34485** (Dr. M Rizwan Riaz)  
Reference of the request letter # LSMP/DCRE/2020/1382

Dated: 15-01-2020  
Dated: 14-01-2020

**Tension Test Report** (Page – 1/3)

Date of Test 17-01-2020  
Gauge length -----  
Description Galvanized Chain Link Mesh Wire Tensile Test

Sr. No.	Diameter Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	3.05	3.80	
2	3.05	3.97	
3	3.05	3.97	
4	3.10	3.97	
5	3.10	3.85	
6	3.10	3.97	
7	3.05	3.79	
8	3.05	3.82	
9	3.05	4.22	
10	3.05	3.87	
Only Ten Samples for Test			

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

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Reference # CED/TFL **34485** (Dr. M Rizwan Riaz)  
Reference of the request letter # LSMP/DCRE/2020/1382

Dated: 15-01-2020  
Dated: 14-01-2020

**Tension Test Report** (Page – 2/3)

Date of Test 17-01-2020  
Gauge length -----  
Description Galvanized Chain Link Mesh Wire Tensile Test

Sr. No.	Diameter Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	3.05	3.95	
2	3.05	3.95	
3	3.05	4.02	
4	3.05	3.78	
5	3.05	3.78	
6	3.05	3.78	
7	3.05	3.88	
8	3.05	3.82	
9	3.05	3.87	
10	3.05	3.90	
Only Ten Samples for Test			

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

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To,  
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Lahore Sialkot Motorway Project

Reference # CED/TFL **34485** (Dr. M Rizwan Riaz)  
Reference of the request letter # LSMP/DCRE/2020/1382

Dated: 15-01-2020  
Dated: 14-01-2020

**Tension Test Report** (Page – 3/3)

Date of Test 17-01-2020  
Gauge length -----  
Description Galvanized Tension Wire Tensile Test

Sr. No.	Diameter of Single Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	3.20	7.60	
2	3.15	7.22	
3	3.15	7.95	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
<b>Only Three Samples for Test</b>			

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**UET Lahore, Pakistan.**

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**University of Engineering and Technology Lahore, 54890**  
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Ref: CED/TFL/01/34487

Dated: 15-01-2020

Dated of Test: 17-01-2020

To  
M/S Geo Engineering Associates  
Islamabad

Subject: - CALIBRATION OF HYDRAULIC JACK (MARK: TFL/01/34487)

Reference to your Letter No. D/GEO/BGCM/100/809, Dated: 15/01/2020 on the subject cited above. One Hydraulic Jack (Jack No. J-070, Gauge No. AES-J-070) as received by us has been calibrated. The results are tabulated as under:

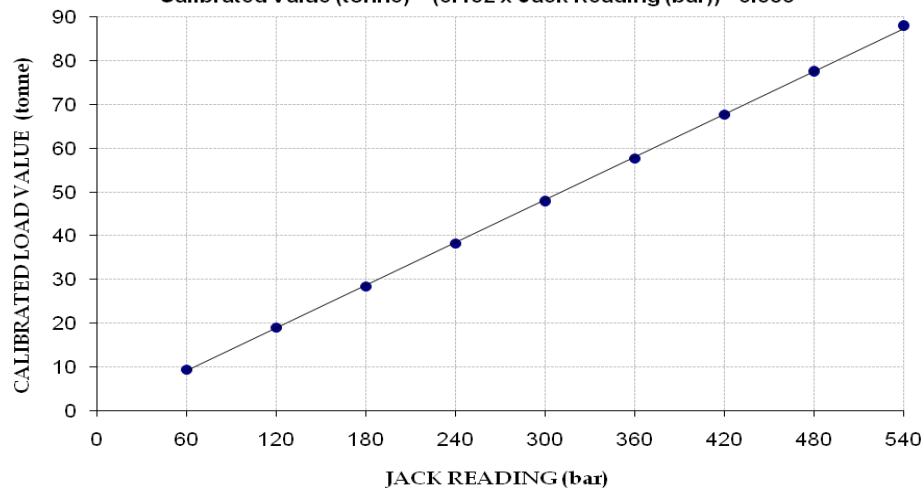
**Total Range : Zero - 600 (bar)**  
**Calibrated Range : Zero - 540 (bar)**

Hydraulic Jack Reading (bar)	60	120	180	240	300	360	420	480	540	
Calibrated Load	(kg)	9500	19000	28500	38300	47800	57700	67700	77400	87900
	(Tonne)	9.50	19.00	28.50	38.30	47.80	57.70	67.70	77.40	87.90
Calibrated Pressure (bar)	56.42	112.84	169.26	227.46	283.88	342.68	402.07	459.68	522.03	

1 Tonne = 1000 Kg, The Ram Area of Jack = 165.13 cm<sup>2</sup>

**Calibration Curve For Jack No. AES-J-070**

Calibrated Value (tonne) = (0.162 x Jack Reading (bar)) - 0.683



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

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**Pakistan. Ph: 92-42-99029202**

To,  
 Resident Engineer  
 Architectural & Civil Engineering Services  
 Ring Road – Rumanza Golf Course, DHA Multan  
 (Project Manager (NLC))  
 (Ali Brothers Steel)  
 Reference # CED/TFL **34488** (Dr. M Rizwan Riaz)  
 Reference of the request letter # ACES-DHAM-RR-015

Dated: 15-01-2020  
 Dated: 13-01-2020

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

Date of Test 17-01-2020  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A496

Sr. No.	Weight (Kg/m)	Diameter/ Size (mm)		Area (mm <sup>2</sup> )		Yield load (kg)	Breaking Load (kg)	Yield Stress (Mpa)		Ultimate Stress (Mpa)		Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual	
1	0.153	5	4.98	19.40	19.47	1120	1360	566	564	688	685	
2	0.152	5	4.97	19.40	19.39	1120	1320	566	567	667	668	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>												
Bend Test												
5mm Dia Bar Bend Test Through 180° is Satisfactory												

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

Note:

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**Pakistan. Ph: 92-42-99029202**

To,  
 ADH (Works) - IV,  
 Lahore  
 Housing Dte Lahore Const Sites (Askari-I)(Ittefaq Stell Grade 40)

Reference # CED/TFL **34489** (Dr. M Rizwan Riaz)  
 Reference of the request letter # 607/Gen/Proj/ADH-IV

Dated: 16-01-2020  
 Dated: 15-01-2020

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

Date of Test 17-01-2020  
 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	0.360	3	0.367	0.11	0.106	2600	4000	52100	54130	80200	83300	1.50	18.8	
2	0.367	3	0.371	0.11	0.108	2600	4000	52100	53140	80200	81800	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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 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,  
 ADH (Works) - IV,  
 Lahore  
 Housing Dte Lahore Const Sites (Block # 34 Sec-F Ask-X)(Ittefaq Stell Grade 60)

Reference # CED/TFL **34489** (Dr. M Rizwan Riaz)  
 Reference of the request letter # 607/Gen/Proj/ADH-IV

Dated: 16-01-2020  
 Dated: 15-01-2020

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

Date of Test 17-01-2020  
 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	0.367	3	0.370	0.11	0.108	3300	5200	66200	67520	104200	106400	0.90	11.3	
2	0.365	3	0.370	0.11	0.107	3100	5100	62200	63610	102200	104700	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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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
Unit Head Admin  
UBL  
2<sup>nd</sup> Floor UBL Building Jinnah Avenue Islamabad

Reference # CED/TFL **34490** (Dr. M Rizwan Riaz)  
Reference of the request letter # UBL/Rope Test/ISB

Dated: 16-01-2020  
Dated: 13-01-2020

**Tension Test Report** (Page – 1/1)

Date of Test 17-01-2020  
Gauge length -----  
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load		Remarks / Coil No.
	(mm)	(kg/km)	(kg)	(kN)	
1	12	496.55	6400	62.78	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
Only one sample for Test					

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

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To,  
 Project Manager  
 Sia Engineers & Contractors  
 e.co B2S Project Site ID: NA-2020-01, FFD360, IKL004, FFD364, LDS002, LLH057,  
 MYZR58, R-Site 327, R 2020 0198, FFD432

Reference # CED/TFL **34491** (Dr. M Rizwan Riaz)  
 Reference of the request letter # SIA/Steel/e.co/B2S/003

Dated: 16-01-2020  
 Dated: 14-01-2020

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

Date of Test 17-01-2020  
 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	0.370	10	9.45	0.12	0.109	3300	5000	60627	66910	91858	101400	1.30	16.3	
2	0.368	10	9.43	0.12	0.108	3200	5000	58789	65140	91858	101800	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

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

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Ref: CED/TFL/01/34492  
2020

Dated: 16-01-

Dated of Test: 17-01-2020

To  
**Chief Engineer (HVDC) NTDC**  
**National Transmission & Despatch Company Ltd**  
**+660 kV HVDC Matiari-Lahore Transmission (Lot-06 Camp near Khairpur Tamiwali)**

**Subject:- CALIBRATION OF COMPRESSION TESTING MACHINE**  
**(MARK: CED/TFL/01/34492) (Page -1/2)**

Reference to your letter No. 8711-14/CE/HVDC/LHR, dated: 07/01/2020 on the subject cited above. One Compression Testing Machine has been calibrated by using standard calibration device. The results are tabulated as under:

Calibrated Range : Zero - 250000 (Lbs)  
Calibrated Range : Zero - 225000 (Lbs)

Machine Reading (Lbs)	Corrected Load Value (Lbs)
3000	0
5000	2468
10000	7356
15000	12205
20000	17044
25000	21855
30000	26808
35000	31984
40000	36474
45000	41762
50000	46312
55000	51069
60000	56624
65000	61074
70000	65826
75000	71317

Machine Reading (Lbs)	Corrected Load Value (Lbs)
80000	76720
85000	80505
90000	85344
95000	90251
100000	95552
105000	100109
110000	104567
115000	109886
120000	116190
125000	120313
130000	124885
135000	129656
140000	134993
145000	140099
150000	144974
155000	150969

Machine Reading (Lbs)	Corrected Load Value (Lbs)
160000	155746
165000	160519
170000	165310
175000	170317
180000	175644
185000	181192
190000	186306
195000	191206
200000	196767
205000	204444
210000	207392
215000	212429
220000	217357
225000	223601
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**I/C Testing Laboratoires**  
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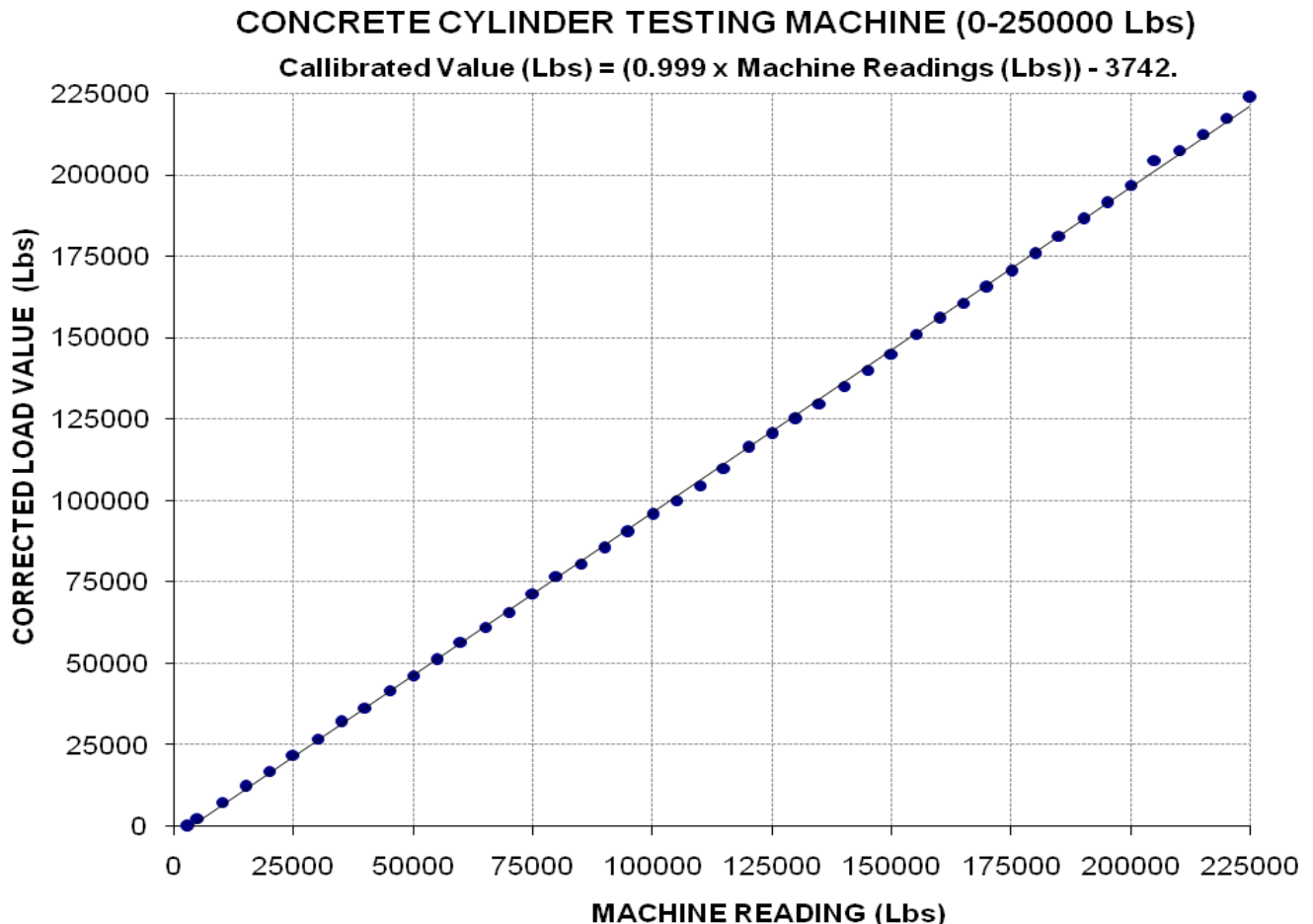
Ref: CED/TFL/01/34492  
2020

Dated: 16-01-

Dated of Test: 17-01-2020

To  
Chief Engineer (HVDC) NTDC  
National Transmission & Despatch Company Ltd  
+660 kV HVDC Matiari-Lahore Transmission (Lot-06 Camp near Khairpur Tamiwali)

Subject:- CALIBRATION OF COMPRESSION TESTING MACHINE  
(MARK: CED/TFL/01/34492) (Page -2/2)



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**UET Lahore, Pakistan.**

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To,  
M/S Defence Housing Authority.  
Lahore Cantt  
(Infra Dev Works, Ph-IX (Prism), (Pkg-III & IV), DHA Phase-IX) (M/s NLC)

Reference # CED/TFL **34493** (Dr. M Rizwan Riaz)  
Reference of the request letter # 408/241/E/Lab/813/1833

Dated: 16-01-2020  
Dated: 01-01-2020

**Tension Test Report** (Page – 1/1)

Date of Test 17-01-2020  
Gauge length 2 inches  
Description MS Pipe Steel Strip Tensile and Bend Test

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)	(mm)									
1	MS Pipe	16	24.70x5.00	123.50	5500	7600	436.88	603.69	0.60	30.00	
2		16	24.60x5.00	123.00	5400	7400	430.68	590.20	0.60	30.00	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile and One Sample for Bend Test</b>											
<b>Bend Test</b>											
Strip Taken from MS Pipe (16") Bend Test Through 180° is Satisfactory											

**I/C Testing Laboratories**  
**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,  
 Project Coordinator  
 Birudo Engineers  
 Dawood Heights, Ch. Aziz-ud-Din Road, Faisalabad

Reference # CED/TFL **34494** (Dr. M Rizwan Riaz)  
 Reference of the request letter # BE/2020/019

Dated: 16-01-2020  
 Dated: 14-01-2020

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

Date of Test 17-01-2020  
 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	3700	5200	74200	73470	104200	103300	1.00	12.5	
2	0.379	3	0.376	0.11	0.111	3500	5100	70200	69300	102200	101000	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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.**

Note:

- 1- You can See your reports On Internet in the following web site  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports)
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



**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  
 Dupak Properaties (Pvt) Ltd  
 Defence view Apartments at Shanghai Road, Lahore

Reference # CED/TFL **34499** (Dr. M Rizwan Riaz)  
 Reference of the request letter # Dupak/DVA/037

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

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

Date of Test 17-01-2020  
 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	4.123	10	1.242	1.27	1.212	34200	55400	59400	62210	96200	100800	1.40	17.5	
2	4.168	10	1.249	1.27	1.225	34400	56000	59700	61890	97200	100800	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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