



**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/02/32617, 32807

Dated: 13-02-19

To  
CEO  
M/S Ar Razzak Construction Pvt Ltd  
Beacon House Society near Adda Plot Lahore

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

Reference to your letter No. AR/RE/01, dated 13.02.2019 on the subject cited above. Two R.C.C. Pipes 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	Mark
	(mm)	(m)	(m)	(mm)	(mm)	(mm)	(kg)	(kg)	N/m/mm	N/m/mm	
1	609.6 (24")	2.380	2.167	762.00	609.60	76.20	13930	17890	103.45	132.85	Universal Pipes
2	609.6 (24")	2.380	2.160	768.00	606.66	80.67	9970	13930	74.64	104.28	Allah Ho Pipes

Witness by Muddassar Rafique (Admin Office Construction BSS) & Munir Ahmed (Site Officer)

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

Note:

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

To,  
 Sr. Construction Engineer  
 Construction Division-I  
 WASA (LDA), Lahore  
 (Manufacturing of RCC Manhole Covers in Different Sizes (M/s Shezone Pipe Industry)(Package-II)

Reference # CED/TFL **32752** (Dr. Umbreen)  
 Reference of the request letter # CD-I/106

Dated: 04-03-2019  
 Dated: 01-03-2019

**Tension Test Report** (Page – 1/2)

Date of Test 11-03-2019  
 Gauge length 2 inches  
 Description Angle Iron 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)	(mm <sup>2</sup> )	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	Angle Iron	2x2x1/4	20.30x7.20	146.16	5700	10100	382.57	677.89	0.25	12.50	
2	Angle Iron	2x2x1/4	20.30x7.10	144.13	6600	10000	449.22	680.64	0.30	15.00	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile and One Sample for Bend Test</b>											
<b>Bend Test</b>											
Strip Taken from Angle Iron (2"x2"x1/4") Bend Test Through 180° is Satisfactory											

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

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To,  
Sr. Construction Engineer  
Construction Division-I  
WASA (LDA), Lahore  
(Manufacturing of RCC Manhole Covers in Different Sizes (M/s Shezone Pipe Industry)(Package-II)

Reference # CED/TFL **32752** (Dr. Umbreen)  
Reference of the request letter # CD-I/106

Dated: 04-03-2019  
Dated: 01-03-2019

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

Date of Test 11-03-2019  
Gauge length -----  
Description Angle Iron Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	L-1	L-2	Thickness	Remark
	(inch)	(g)	(cm)	(kg/m)	(mm)	(mm)	(mm)	
1	2x2x1/4	3273	61.80	5.30	51.70	51.20	7.15	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
<b>Only One Sample for Test</b>								

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

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To,  
 Sr. Construction Engineer  
 Construction Division-I  
 WASA (LDA), Lahore  
 (Manufacturing of RCC Manhole Covers in Different Sizes (M M/s Eagle RCC Pipe Industry))

Reference # CED/TFL **32759** (Dr. Umbreen)  
 Reference of the request letter # CD-I/77-78

Dated: 05-03-2019  
 Dated: 21-02-2019

**Tension Test Report** (Page – 1/2)

Date of Test 11-03-2019  
 Gauge length 2 inches  
 Description Angle Iron 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)	(mm <sup>2</sup> )	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	Angle Iron	2x2x1/4	20.10x7.20	144.72	5700	8300	386.38	562.62	0.45	22.50	
2	Angle Iron	2x2x1/4	20.30x7.20	146.16	5200	8100	349.01	543.66	0.50	25.00	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
<b>Only Two Samples for Tensile and One Sample for Bend Test</b>											
<b>Bend Test</b>											
Strip Taken from Angle Iron (2"x2"x1/4") Bend Test Through 180° is Satisfactory											

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

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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
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**University of Engineering and Technology Lahore, 54890**  
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To,  
Sr. Construction Engineer  
Construction Division-I  
WASA (LDA), Lahore  
(Manufacturing of RCC Manhole Covers in Different Sizes (M M/s Eagle RCC Pipe Industry))

Reference # CED/TFL **32759** (Dr. Umbreen)  
Reference of the request letter # CD-I/77-78

Dated: 05-03-2019  
Dated: 21-02-2019

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

Date of Test            11-03-2019  
Gauge length            -----  
Description              Angle Iron Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	L-1	L-2	Thickness	Remark
	(inch)	(g)	(cm)	(kg/m)	(mm)	(mm)	(mm)	
1	2x2x1/4	3195	61.10	5.23	51.60	51.90	7.30	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
<b>Only One Sample for Test</b>								

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**UET Lahore, Pakistan.**

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To,  
 Engineer's Representative  
 NESPAK  
 Construction of Pakistan Kidney & Liver Institute and Research Center, Lahore Hospital  
 Package C-1, Phase – I

Reference # CED/TFL **32761** (Dr. Umbreen) Dated: 06-03-2019  
 Reference of the request letter # 3836/13/A/10/C-1-MEP-HVAC-MTR-28 Dated: 06-03-2019

**Tension Test Report** (Page – 1/1)

Date of Test 11-03-2019  
 Gauge length 2 inches  
 Description Carbon Steel Pipe Welded Tensile Test

Sr. No.	Designation		Size of Strip	X Section Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Remarks	Welder Name
	(inch)		(mm)	(mm <sup>2</sup> )	(kg)	(MPa)	(inch)			
1	Pipe	3	23.00x5.30	121.90	6400	515.05	0.40	20.00	Failure at location other than weld	Welder No. 3
2			23.60x5.30	125.08	6700	525.48	0.60	30.00	Failure at location other than weld	
3	Pipe	3	23.70x5.25	124.43	6700	528.25	0.60	30.00	Failure at location other than weld	Welder No. 4
4			24.10x5.40	130.14	7000	527.66	0.60	30.00	Failure at location other than weld	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only four samples for tensile test</b>										
<b>Bend Test</b>										

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

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To,  
Resident Engineer  
RENARDET S.A ((M-4), Package-3A)  
Construction of Faisalabad-Khanewal Motorway (M-4) Project, Package-III A (Nizami)(M/s  
GRC)

Reference # CED/TFL **32772** (Dr. Waseem Abbas)  
Reference of the request letter # RE/M-4/3A/2019/319

Dated: 06-03-2019  
Dated: 06-03-2019

**Tension Test Report** (Page – 1/2)

Date of Test 11-03-2019  
Gauge length -----  
Description Chain Link Fabric Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	3.20	360	3.53	
2	3.20	320	3.14	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
<b>Only Two Samples for Test</b>				

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

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To,  
Resident Engineer  
RENARDET S.A ((M-4), Package-3A)  
Construction of Faisalabad-Khanewal Motorway (M-4) Project, Package-III A (Nizami)(M/s  
GRC)

Reference # CED/TFL **32772** (Dr. Waseem Abbas)  
Reference of the request letter # RE/M-4/3A/2019/318

Dated: 06-03-2019  
Dated: 06-03-2019

**Tension Test Report** (Page – 2/2)

Date of Test 11-03-2019  
Gauge length -----  
Description Tension Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Single Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	3.30	1360	13.34	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
<b>Only One Sample for Test</b>				

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

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**University of Engineering and Technology Lahore, 54890**  
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To,  
Resident Engineer  
Techno Consult International  
CPEC Package-1, D.I. Khan

Reference # CED/TFL 32778 (Dr. Waseem Abbas)  
Reference of the request letter # RE/CPEC/DIK/2019/480

Dated: 06-03-2019  
Dated: 06-03-2019

**Tension Test Report** (Page – 1/3)

Date of Test 11-03-2019  
Gauge length -----  
Description Tension Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	3.20	720	7.06	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
<b>Only One Sample for Test</b>				

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**UET Lahore, Pakistan.**

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To,  
Resident Engineer  
Techno Consult International  
CPEC Package-1, D.I. Khan

Reference # CED/TFL 32778 (Dr. Waseem Abbas)  
Reference of the request letter # RE/CPEC/DIK/2019/478

Dated: 06-03-2019  
Dated: 27-02-2019

**Tension Test Report** (Page – 2/3)

Date of Test 11-03-2019

Gauge length -----

Description Chain Link Fence Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	3.20	400	3.92	
2	3.20	440	4.32	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
<b>Only Two Samples for Test</b>				

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

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

To,  
Resident Engineer  
Techno Consult International  
CPEC Package-1, D.I. Khan

Reference # CED/TFL **32778** (Dr. Waseem Abbas)  
Reference of the request letter # RE/CPEC/DIK/2019/478

Dated: 06-03-2019  
Dated: 27-02-2019

**Size Test Report** (Page – 3/3)  
Date of Test 11-03-2019  
Gauge length -----  
Description Net Size Test

Sr. No.	Designation	Diameter of Wire	Grid	
			Length	Width
			(mm)	(mm)
1	Net	3.20	50.00	51.60
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
<b>Only One Sample 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**

Ref: CED/TFL/03/32779

Dated: 13-02-19

To  
**Resident Engineer**  
**Master Consulting Engineers (Pvt) Ltd**  
**Construction of External Development Works in Connection with Staff Quarters at Lahore**

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

Reference to your letter No. MCE-RE/PR/LHR/77, dated 18.02.2019 on the subject cited above. Three R.C.C. Pipes 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")	2.370	2.218	280.00	222.06	28.97	7800	10600	155.36	211.13
2	304.8 (12")	2.355	2.206	405.00	319.46	42.77	10500	14800	146.16	206.02
3	381 (15")	2.366	2.230	495.00	386.26	54.37	8000	12800	91.11	145.78

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

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

Ref: CED/TFL/03/32781

Dated: 06-03-19

To,  
Design Engineer  
VPL Limited

Subject: - CALIBRATION OF HYDRAULIC PULLOUT TEST KIT JACK TYPE (Hi-Force)(HILTI) (MARK: TFL/03/32781)

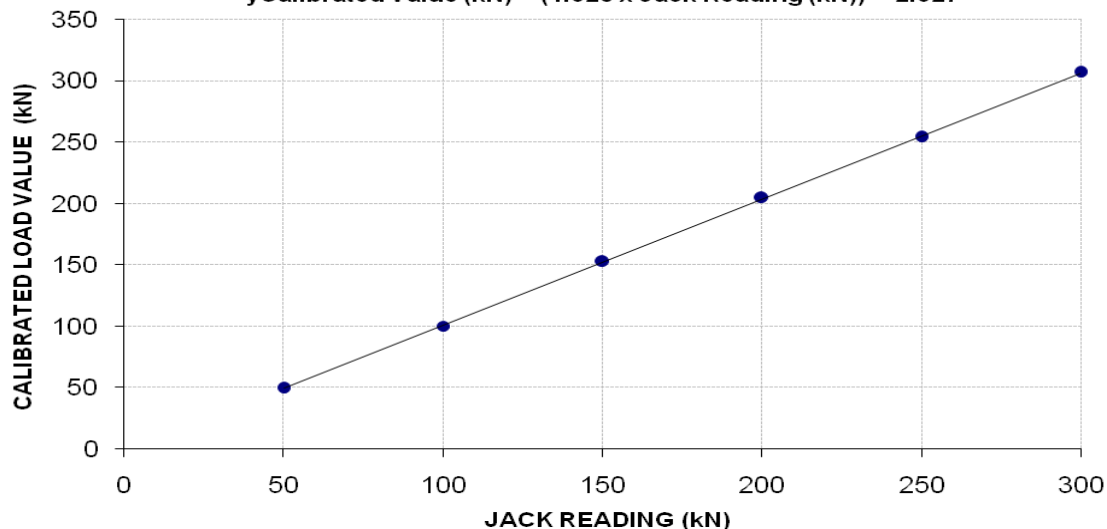
Reference to your Letter No. Nil, dated: 06/03/2019 on the subject cited above. One Hydraulic Pullout Test Kit Jack Type (Hi-Force)(HILTI) as received by us has been calibrated. The results are tabulated as under:

**Total Range : Zero - 320 (kN)**  
**Calibrated Range : Zero - 300 (kN)**

Hydraulic Jack Reading (kN)	50	100	150	200	250	300	
Calibrated Load	(kg)	5050	10200	15550	20850	25900	31250
	(kN)	49.54	100.06	152.55	204.54	254.08	306.56

**CALIBRATION FOR HYDRAULIC PULLOUT TEST KIT JACK TYPE (Hi-Force)**

$$y_{\text{Calibrated Value (kN)}} = (1.028 \times \text{Jack Reading (kN)}) - 2.027$$



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

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

To,  
M/S Techno Consultant International (Pvt) Ltd  
Design Review and Construction Supervision of Yarak on N-55 Rehmani Kheil Package-1  
(55km) Section of Hakla (M-1) Yarak (D.I Khan) Motorway

Reference # CED/TFL **32787** (Dr. Umbreen)  
Reference of the request letter # RE/CPEC/DIK/2019/479

Dated: 07-03-2019  
Dated: 27-02-2019

**Tension Test Report** (Page – 1/1)

Date of Test 11-03-2019  
Gauge length 2 inches  
Description G.I Pipe Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	-----	(mm)	(mm <sup>2</sup> )	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	G.I Pipe	20.10x3.40	68.34	3100	3500	445.00	502.41	0.40	20.00	
2	G.I Pipe	20.10x3.40	68.34	3100	3600	445.00	516.77	0.40	20.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
<b>Only Two 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  
[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,  
 Resident Engineer  
 G3 Engineering Consultants (Pvt) Ltd  
 PSIC House, Davis Road, Lahore

Reference # CED/TFL **32788** (Dr. Waseem Abbas)  
 Reference of the request letter # G3/0161/

Dated: 07-03-2019  
 Dated: 06-03-2019

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

Date of Test 11-03-2019  
 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	0.365	3/8	0.369	0.11	0.107	3200	4600	64200	65790	92200	94600	1.40	17.5	
2	0.364	3/8	0.369	0.11	0.107	3100	4500	62200	63840	90200	92700	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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.**

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,  
 CFO  
 Indigo Developers  
 Gulberg-III, Lahore

Reference # CED/TFL **32789** (Dr. Waseem Abbas)  
 Reference of the request letter # Nil

Dated: 07-03-2019  
 Dated: 06-03-2019

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

Date of Test 11-03-2019  
 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	3400	5300	68200	68670	106200	107100	1.10	13.8	
2	0.372	3	0.373	0.11	0.109	3400	5400	68200	68540	108200	108900	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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,  
 Sub Divisional Officer  
 Highway Sub Division No. II  
 Gujrat  
 (Construction of Bridge over UJC at Village Shakrila District Gujrat)

Reference # CED/TFL **32790** (Dr. Waseem Abbas)  
 Reference of the request letter # 217/GTII

Dated: 07-03-2019  
 Dated: 21-02-2019

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

Date of Test 11-03-2019  
 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	3200	4500	64200	64620	90200	90900	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one sample for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

**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,  
 Cantonment Executive Officer  
 Cantonment Board Gujranwala  
 (Construction of Cantonment Board School at Survey No. 8/1 Chenab Road Gujranwala Cantt)

Reference # CED/TFL 32791 (Dr. Waseem Abbas)  
 Reference of the request letter # PW-1078/1886

Dated: 07-03-2019  
 Dated: 04-03-2019

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

Date of Test 11-03-2019  
 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	0.369	3	0.372	0.11	0.108	3300	4600	66200	67090	92200	93600	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one sample 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,  
 Executive Engineer  
 State Bank of Pakistan  
 Re-Construction of Boundary Wall at SBP BSC (Bank) Faisalabad  
 (FF Steel)

Reference # CED/TFL **32794** (Dr. M Rizwan Azam)  
 Reference of the request letter # Admn.PU./39498/2019

Dated: 08-03-2019  
 Dated: 07-03-2019

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

Date of Test 11-03-2019  
 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	0.381	3	0.378	0.11	0.112	3400	4600	68200	66890	92200	90500	1.30	16.3	
2	0.385	3	0.380	0.11	0.113	3500	4900	70200	68200	98200	95500	1.10	13.8	
3	0.403	3	0.388	0.11	0.118	3600	4900	72200	67020	98200	91300	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only three 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,  
 Resident Engineer  
 Master Consulting Engineers (Pvt) Ltd  
 Pakistan Railway Staff Quarters, Lahore  
 Construction of External Development Works in Connection with Staff Quarters at Lahore

Reference # CED/TFL **32796** (Dr. M Riaz Rizwan)  
 Reference of the request letter # MCE-RE/PR/LHR/76

Dated: 08-03-2019  
 Dated: 16-02-2019

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

Date of Test 11-03-2019  
 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	0.384	3/8	0.379	0.11	0.113	3500	5000	70200	68350	100200	97700	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one sample 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.**

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,  
 Resident Engineer  
 AL-Imam Enterprises Pvt Ltd  
 Construction of Penta Square, Phase-V, D.H.A, Lahore

Reference # CED/TFL 32798 (Dr. M Riaz Rizwan) Dated: 08-03-2019  
 Reference of the request letter # Al-Imam/746/PS-1/DHA/LHE/796 Dated: 02-03-2019

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

Date of Test 11-03-2019  
 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	4.242	32	32.00	1.27	1.247	45200	57400	78500	79900	99700	101500	1.10	13.8	
2	4.206	32	31.87	1.27	1.236	44800	57200	77800	79860	99300	102000	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
32mm Dia 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,  
 Sub Divisional Officer  
 Buildings Sub Division  
 Toba Tek Singh  
 (Up-Gradation of Govt. Boys Primary School Moza Chura Bhojia to Elementary Level in  
 District T. T. Singh)  
 Reference # CED/TFL **32800** (Dr. M Riaz Rizwan)      Dated: 08-03-2019  
 Reference of the request letter # 1551      Dated: 25-01-2019

**Tension Test Report** (Page -1/3)

Date of Test                    11-03-2019  
 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	0.376	3/8	0.375	0.11	0.111	3100	4200	62200	61810	84200	83800	1.30	16.3	
2	0.366	3/8	0.370	0.11	0.108	2800	4100	56200	57360	82200	84000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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.**

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,  
 Sub Divisional Officer  
 Buildings Sub Division  
 Toba Tek Singh  
 (Construction of Office and Store at Govt. Agriculture Seed From Phase-I Gojra)

Reference # CED/TFL **32800** (Dr. M Riaz Rizwan)  
 Reference of the request letter # 1623

Dated: 08-03-2019  
 Dated: 11-02-2019

**Tension Test Report** (Page -2/3)

Date of Test 11-03-2019  
 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	0.404	3/8	0.389	0.11	0.119	3600	4800	72200	66800	96200	89100	1.00	12.5	
2	0.395	3/8	0.384	0.11	0.116	4000	5000	80200	76020	100200	95100	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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.**

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,  
 Sub Divisional Officer  
 Buildings Sub Division  
 Toba Tek Singh  
 (Construction of Circle Special Branch Toba Tek Singh)

Reference # CED/TFL **32800** (Dr. M Riaz Rizwan)  
 Reference of the request letter # 1625

Dated: 08-03-2019  
 Dated: 11-02-2019

**Tension Test Report** (Page -3/3)

Date of Test 11-03-2019  
 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	0.306	3/8	0.338	0.11	0.090	4200	5100	84200	103000	102200	125100	0.80	10.0	
2	0.370	3/8	0.372	0.11	0.109	4000	4900	80200	80980	98200	99200	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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.**

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,  
 Sub Divisional Officer  
 Buildings Sub Division  
 Kamalia

(Re-Construction of 3 No. Class Rooms Size 28'x18' with Veranda at GGES Chak No. 322 GB  
 Tehsil Pirmahal District Toba Tek Singh)

Reference # CED/TFL **32801A** (Dr. M Riaz Rizwan)  
 Reference of the request letter # 1636

Dated: 08-03-2019  
 Dated: 13-02-2019

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

Date of Test 11-03-2019  
 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	0.377	3/8	0.376	0.11	0.111	4100	5100	82200	81560	102200	101500	0.80	10.0	
2	0.372	3/8	0.373	0.11	0.109	4100	5100	82200	82650	102200	102900	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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.**

Note:

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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,  
 Sub Divisional Officer  
 Buildings Sub Division  
 Kamalia  
 (Reconstruction of 4 No. Class Rooms Size 28'x18' at GGES 719 GB Tehsil Pirmahal District  
 Toba Tek Singh)

Reference # CED/TFL **32801A** (Dr. M Riaz Rizwan)  
 Reference of the request letter # 1549

Dated: 08-03-2019  
 Dated: 23-01-2019

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

Date of Test 11-03-2019  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in <sup>2</sup> )		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	0.381	3/8	0.378	0.11	0.112	2400	3500	48100	47180	70200	68900	1.60	20.0	
2	0.377	3/8	0.376	0.11	0.111	2400	3500	48100	47740	70200	69700	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
<b>Bend Test</b>														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

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

Note:

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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,  
 Additional Director Development  
 DHA Phase-XI (Rahbar)  
 Construction of Left Over Work in Block N&P (1 x OHWT & 2 x Tube Wells) of 1268 Kanal  
 Area in Sector-II,(Extension), DHA Phase-XI (Rahbar)

Reference # CED/TFL **32802** (Dr. M Riaz Rizwan) Dated: 08-03-2019  
 Reference of the request letter # Const/OHR/BlockN/1268/Ph-XI/33/CE/617 Dated: 22-02-2019

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

Date of Test 11-03-2019  
 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	0.364	3/8	0.369	0.11	0.107	4000	5000	80200	82300	100200	102900	1.20	15.0	Mughal Supreme
2	0.361	3/8	0.368	0.11	0.106	4000	5000	80200	83020	100200	103800	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
<b>Bend Test</b>														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

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

Note:

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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,  
M/S Defence Housing Authority.  
Lahore Cantt  
(Infra Dev of OHWT with Tube Well Sect-P DHA Ph-I)(M/s Zorair Engrs)

Reference # CED/TFL 32803 (Dr. M Rizwan Riaz)  
Reference of the request letter # 408/241/E/Lab/294/202

Dated: 08-03-2019  
Dated: 08-03-2019

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

Date of Test 11-03-2019  
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	0.372	3	0.373	0.11	0.109	3700	4700	74200	74630	94200	94800	0.90	11.3	Mughal Supreme
2	0.364	3	0.369	0.11	0.107	3500	4600	70200	72160	92200	94900	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:

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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  
 (Heat No. F-45 – Kamran Steel)

Reference # CED/TFL **32804** (Dr. M Rizwan Riaz)

Dated: 08-03-2019

Reference of the request letter # DB-78/DAR/RE/ME/2019/0183

Dated: 07-03-2019

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

Date of Test 11-03-2019

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	0.363	3	0.369	0.11	0.107	3200	4700	64200	66030	94200	97000	1.20	15.0	
2	0.356	3	0.365	0.11	0.105	3000	4500	60200	63170	90200	94800	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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**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  
 Orbit Housing  
 Spring Apartment, Canal Road, Lahore

Reference # CED/TFL **32806** (Dr. Waseem Abbas)  
 Reference of the request letter # Nil

Dated: 11-03-2019  
 Dated: 11-03-2019

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

Date of Test 11-03-2019  
 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	0.363	3	0.369	0.11	0.107	3900	5000	78200	80530	100200	103300	1.10	13.8	
2	0.366	3	0.370	0.11	0.108	3400	4700	68200	69630	94200	96300	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 Laboratoires**  
**UET Lahore, Pakistan.**

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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
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**Pakistan. Ph: 92-42-99029202**

To,  
 Project Manager  
 Depac  
 Construction of Dr. Maqbool Ahmed Block, King Edward Medical University (KRMU), Lahore  
 (FF Steel)

Reference # CED/TFL **32810-811** (Dr. Umbreen)  
 Reference of the request letter # T-13/03/18

Dated: 11-03-2019  
 Dated: 11-03-2019

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

Date of Test 11-03-2019  
 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	4300	6100	86200	85320	122300	121100	0.90	11.3	
2	0.375	3	0.375	0.11	0.110	3900	5800	78200	78040	116300	116100	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.**

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**STRUCTURAL ENGINEERING DIVISION**  
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**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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