



**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/12/34284

Dated: 06-12-18

Dated of Test: 13-12-18

To  
**Secretary GECHS**  
**Govt. Employees Co-Operative Housing Society Ltd**  
**Lahore**

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76] (Page -1/3)**

Reference to your letter No. Nil, dated 06.12.2019 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	304.8 (12")	2.358	2.248	403.00	291.40	55.80	18600	22500	278.55	336.95

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

Note:

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To,  
 Secretary GECHS  
 Govt. Employees Co-Operative Housing Society Ltd  
 Lahore

Reference # CED/TFL **34284** (Dr. Usman Akmal)  
 Reference of the request letter # Nil

Dated: 06-12-2019  
 Dated: 06-12-2019

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

Date of Test 13-12-2019  
 Gauge length 8 inches  
 Description Steel Bar (From RCC Pipe 12") Tensile Test

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	0.070	-----	4.11	-----	0.021	600	760	-----	64470	-----	81700	0.65	8.1	
2	0.074	-----	4.24	-----	0.022	620	840	-----	62550	-----	84800	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile test</b>														
Bend Test														

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

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To  
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Govt. Employees Co-Operative Housing Society Ltd  
Lahore

Reference # CED/TFL **34284** (Dr. Usman Akmal)  
Reference of the request letter # Nil

Dated: 06-12-2019  
Dated: 06-12-2019

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

Date of Test           13-12-2019  
Description           RCC Pipe 12"

No. Steel Bar in Length       =       6

No. Steel Ring               =       27

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

To,  
 Resident Engineer  
 Architectural & Civil Engineering Services  
 Ring Road – Rumanza Golf Course, DHA Multan  
 (Addl. Director (P&D) Rumanza Golf Course, DHA Multan), (Project Manager (NLC))  
 (Amjad Steel)  
 Reference # CED/TFL **34308** (Dr. Usman Almal) Dated: 11-12-2019  
 Reference of the request letter # ACES-DHAM-RR-009 Dated: 10-12-2019

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

Date of Test 13-12-2019  
 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	0.119	5	4.39	19.40	15.15	500	1040	253	324	526	674	
2	0.116	5	4.34	19.40	14.78	480	600	243	319	303	398	
3	0.221	6	5.99	32.30	28.19	1040	1400	316	362	425	487	
4	0.223	6	6.02	32.30	28.45	1080	1400	328	372	425	483	
5	0.408	8	8.13	51.60	51.92	2080	2760	395	393	525	521	
6	0.408	8	8.14	51.60	52.02	2040	2800	388	385	532	528	
<b>Note: only six samples for tensile and three samples for bend test</b>												
Bend Test												
5mm Dia Bar Bend Test Through 180° is Satisfactory												
6mm Dia Bar Bend Test Through 180° is Satisfactory												
8mm Dia Bar Bend Test Through 180° is Satisfactory												

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

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To,  
 Resident Engineer  
 Architectural & Civil Engineering Services  
 Ring Road – Rumanza Golf Course, DHA Multan  
 (Addl. Director (P&D) Rumanza Golf Course, DHA Multan), (Project Manager (NLC))  
 (Mughal Steel)  
 Reference # CED/TFL **34308** (Dr. Usman Almal) Dated: 11-12-2019  
 Reference of the request letter # ACES-DHAM-RR-008 Dated: 10-12-2019

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

Date of Test 13-12-2019  
 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	0.405	10	9.88	0.12	0.119	4200	5700	77161	77840	104719	105700	1.00	12.5	
2	0.401	10	9.84	0.12	0.118	4200	5800	77161	78480	106556	108400	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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 Laboratoires**  
**UET Lahore, Pakistan.**

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

(M/s Super Tech.)(RD 44+000 to 47+000)

Reference # CED/TFL **34314** (Dr. Usman Akmal)  
Reference of the request letter # LSM/DCRE/2019/1277

Dated: 12-12-2019

Dated: 12-12-2019

**Tension Test Report** (Page – 1/1)

Date of Test 13-12-2019

Gauge length -----

Description Mesh Wire & Tension Wire Tensile Test

Sr. No.	Diameter of Single Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	3.10	3.80	Mesh Wire
2	3.10	3.83	
3	3.20	7.78	Tension Wire
4	3.20	7.68	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
<b>Only Four Samples for Test</b>			

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To,  
 Resident Engineer  
 ACE, Danish School  
 Mankera Residency

Reference # CED/TFL **34315** (Dr. Usman Almal)  
 Reference of the request letter # ACE/RE-PDS/MNK/BHK/19/284

Dated: 12-12-2019  
 Dated: 28-11-2019

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

Date of Test 13-12-2019  
 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	0.371	3/8	0.373	0.11	0.109	3400	4600	68200	68660	92200	92900	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														

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