



**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/11/34223

Dated: 27-11-19

Dated of Test: 29-11-19

To  
Sub Divisional Officer  
Public Health Engg: Sub Division  
Gujrat  
(Re-Habilitation of Ratti Disposal Station an Flood Effectted 36" I/D Trunck Sewer  
Gujrat City)

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

Reference to your letter No. 696/GT, dated 07.10.2019 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	914.4 (36")	2.458	2.355	1130.00	932.00	99.00	29750	39640	132.97	177.17

**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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To,  
 Senior Resident Engineer  
 ProMag Pvt Ltrd  
 Central Square Drain Works Sector-D  
 (Zia Steel)

Reference # CED/TFL **34225** (Dr. Qasim Khan)  
 Reference of the request letter # CRE/Sec-D/384

Dated: 28-11-2019  
 Dated: 27-11-2019

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

Date of Test 29-11-2019  
 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	0.380	10	9.58	0.12	0.112	3700	5200	67975	73070	95533	102700	1.20	15.0	
2	0.376	10	9.53	0.12	0.110	3600	5100	66138	71840	93696	101800	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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,  
M/S Ghani Engineering System  
Lahore

Reference # CED/TFL **34227** (Dr. Qasim Khan)  
Reference of the request letter # Nil

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

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

Date of Test 29-11-2019  
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	3650	4800	73200	72350	96200	95200	1.20	15.0	
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<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.**

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To,  
 Chief Resident Engineer, Package-1  
 NESPAK  
 Construction/ Improvement & Rehabilitation of at Grade Works along Lahore Orange Line  
 Metro Train Corridor Package-1 (Section-I) Daroghwal Chowk to Pakistan Mint (Right Side)

Reference # CED/TFL **34229** (Dr. Qasim Khan) Dated: 28-11-2019  
 Reference of the request letter # 4042/13/FAM/steel-143 Dated: 30-10-2019

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

Date of Test 29-11-2019  
 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	0.366	3	0.370	0.11	0.108	3550	5300	71200	72710	106200	108600	1.00	12.5	F.F. Steel
2	0.365	3	0.370	0.11	0.107	3500	5300	70200	71900	106200	108900	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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To,  
 Sub Divisional Officer  
 Public Health Engg: Sub Division  
 Sargodha  
 (Construction of G.S.T. 300000 Gallons Capacity for Reh: Water Supply New Stellite Town  
 Sargodha City)  
 Reference # CED/TFL **34230** (Dr. Qasim Khan) Dated: 29-11-2019  
 Reference of the request letter # 129 Dated: 22-11-2019

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

Date of Test 29-11-2019  
 Gauge length 8 inches  
 Description Deformed Steel Bar Tensile 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	0.362	3	0.368	0.11	0.106	3300	5200	66200	68350	104200	107700	0.80	10.0	
2	0.366	3	0.370	0.11	0.108	3400	5300	68200	69560	106200	108500	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile test</b>														
Bend Test														

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To,  
 Resident Engineer  
 Orbit Housing  
 The Spring Apartment Homes

Reference # CED/TFL **34234** (Dr. Qasim Khan)  
 Reference of the request letter # Nil

Dated: 29-11-2019  
 Dated: 29-11-2019

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

Date of Test 29-11-2019  
 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	0.415	3	0.394	0.11	0.122	4600	5600	92200	83200	112300	101300	1.10	13.8	
2	0.409	3	0.391	0.11	0.120	4300	5400	86200	78900	108200	99100	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														

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