



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/01/4488
2024

Dated: 12-01-

Dated of Test: 12-01-2024

To

Resident Engineer
Shahzad Ayub Associates
New Metro City, Kharian-Sarai Alamgir.

Subject: **TESTING OF R.C.C. PIPE [ASTM-C76 - 08a]**

Reference to your letter No. Nil, dated 10.01.2024 on the subject cited above. Four 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
	(inch)	(foot)	(foot)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	9	7.78	7.25	10.94	8.65	1.15	9600	11500	4046	4847
2	9	7.75	7.26	11.02	8.93	1.05	9500	12500	3874	5097
3	12	7.78	7.29	15.98	12.29	1.85	5800	7300	1712	2155
4	12	7.78	7.31	16.14	12.40	1.87	6700	7900	1955	2305

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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To,
M/S PK Steel
Lahore

Reference # CED/TFL **4491** (Dr. Ali Ahmed)
Reference of the request letter # Nil

Dated: 12-01-2024
Dated: 12-01-2024

Tension Test Report (Page -1/1)

Date of Test 12-01-2024
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 ²)		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	3430	4810	68800	67480	96400	94700	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend Test														

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To,
Dy Dir Infra
Defence Housing Authority, Gujranwala
"Sec L"

Reference # CED/TFL **4492** (Dr. Ali Ahmed)
Reference of the request letter # 111/15/DD/RS/Lab/Sec L/676

Dated: 12-01-2024
Dated: 12-01-2024

Tension Test Report (Page -1/1)

Date of Test 12-01-2024
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 ²)		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	0.377	3	0.376	0.11	0.111	4180	5580	83800	83090	111900	111000	1.10	13.8	FF Steel
2	0.374	3	0.374	0.11	0.110	4030	5500	80800	80860	110200	110400	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratories
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To,

Resident Engineer (QA/QC Department)
Bahria Town Private Limited
Recycling & Underground Water Tank Muhammad Ali Jinnah Masjid Block "D" Bahria
Orched.

Reference # CED/TFL **4493** (Dr. Ali Ahmed)
Reference of the request letter # QA/QC-Steel-3515

Dated: 12-01-2024
Dated: 12-01-2024

Tension Test Report (Page -1/1)

Date of Test 12-01-2024
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 ²)		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	0.392	3	0.383	0.11	0.115	3540	4960	71000	67710	99400	94900	1.30	16.3	
2	0.392	3	0.383	0.11	0.115	3520	4960	70600	67270	99400	94800	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
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