



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/03/34815

Dated: 10-03-2020

Dated of Test: 12-03-2020

To
Executive Engineer
Buildings
PHE Division Bhimber
(Sewerage and Water Drainage System Bhimber Town Phase II, District Bhimber)

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

Reference to your letter No. 157-58, dated 10-03-2020 on the subject cited above. Three R.C.C. Pipes as received by us have 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)	(foot)	(foot)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	9	5.78	5.26	0.93	0.72	1.21	10200	16200	5904.05	9377.02
2	12	5.80	5.29	1.34	0.99	2.11	11800	15000	4978.83	6329.02
3	18	5.79	5.33	1.93	1.49	2.61	6100	12900	1689.02	3571.85

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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

Reference # CED/TFL **34821** (Dr. M Rizwan Riaz)
Reference of the request letter # 408/241/E/Lab/875/2406

Dated: 11-03-2020
Dated: 10-03-2020

Tension Test Report (Page -1/1)

Date of Test 12-03-2020
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 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	0.363	3	0.369	0.11	0.107	3400	4900	68200	70160	98200	101200	1.00	12.5	Mughal Steel
2	0.362	3	0.368	0.11	0.106	3400	4900	68200	70420	98200	101500	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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UET Lahore, Pakistan.

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To,
 Project Manager
 Unicon Consulting Services
 Construction of House for Mr. Asif Sana at Asad Jaan Road, Lahore Cantt

Reference # CED/TFL **34822** (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 11-03-2020
 Dated: 10-03-2020

Tension Test Report (Page -1/1)

Date of Test 12-03-2020
 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 ²)		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	0.375	3/8	0.375	0.11	0.110	3800	5100	76200	76010	102200	102100	0.80	10.0	
2	0.376	3/8	0.375	0.11	0.111	3800	5200	76200	75770	104200	103700	0.75	9.4	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

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To,
 Manager, QA/QC Department
 Bahria Town Private Limited, Lahore
 School at Bahria Orchard-4

Reference # CED/TFL **34823** (Dr. M Rizwan Riaz)
 Reference of the request letter # QA/QC-Steel-1966

Dated: 11-03-2020
 Dated: 11-03-2020

Tension Test Report (Page -1/1)

Date of Test 12-03-2020
 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 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	0.379	3	0.377	0.11	0.111	3700	4900	74200	73200	98200	97000	1.20	15.0	FF Steel
2	0.381	3	0.378	0.11	0.112	3700	4900	74200	72830	98200	96500	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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UET Lahore, Pakistan.

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To,
 Manager Projects
 Ittefaq Construction Services
 Respected Abdul Samad Sb

Reference # CED/TFL **34824** (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 11-03-2020
 Dated: 11-03-2020

Tension Test Report (Page -1/1)

Date of Test 12-03-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	0.393	3	0.383	0.11	0.115	3900	5400	78200	74460	108200	103100	1.10	13.8	
2	0.391	3	0.383	0.11	0.115	3900	5300	78200	74750	106200	101600	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Manager Projects
 Ittefaq Construction Services
 M/s. Hunbul Tex Pvt Ltd

Reference # CED/TFL **34825** (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 11-03-2020
 Dated: 11-03-2020

Tension Test Report (Page -1/1)

Date of Test 12-03-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	0.366	3	0.370	0.11	0.107	3500	5700	70200	71800	114300	117000	1.10	13.8	
2	0.366	3	0.370	0.11	0.108	3600	5700	72200	73740	114300	116800	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

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To,
 Project Manager
 Dupak Properties (Pvt) Ltd
 Defence view Apartments at Shanghai Road, Lahore

Reference # CED/TFL **34831** (Dr. M Rizwan Riaz)
 Reference of the request letter # Dupak/DVA/044

Dated: 12-03-2020
 Dated: 12-03-2020

Tension Test Report (Page -1/1)

Date of Test 12-03-2020
 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 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	0.376	3	0.375	0.11	0.111	3200	5400	64200	63800	108200	107700	1.30	16.3	
2	0.384	3	0.379	0.11	0.113	3300	5300	66200	64360	106200	103400	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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