



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

Duplicate

Ref: CED/TFL/12/35770, 36052
2020

Dated: 16-12-

Dated of Test: 18-12-2020

To
Sub Divisional Officer
Link Sub Division
Farooqabad
(Construction of New Q.B Link Office Complex, Residences and Boundary Wall at Farooqabad)

Subject: TESTING OF R.C.C. PIPE [ASTM-C76 - 08a] (Page -1/2)

Reference to your letter No. 7421/Camp, dated 26.11.2020 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
	(inch)	(foot)	(foot)	(foot)	(foot)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	15	7.81	7.01	1.63	1.25	2.28	5200	9500	1304	2382

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
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Dated: 16-12-2020

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To
Sub Divisional Officer
Link Sub Division
Farooqabad
(Construction of New Q.B Link Office Complex, Residences and Boundary Wall at Farooqabad)

Subject: TESTING OF R.C.C. PIPE [ASTM-C76 - 08a] (Page -2/2)

Reference to your letter No. 7421/Camp, dated 26.11.2020 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
	(inch)	(foot)	(foot)	(foot)	(foot)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	12	7.79	7.29	1.35	1.00	2.06	7200	10300	2172	3107

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
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To,
M/S Defence Housing Authority.
Lahore Cantt
(External Elec Work, (U/G), Pkg-E-2/ E-4 Prism Ph-IX) (M/s NLC)

Reference # CED/TFL **36037** (Dr. Qasim Khan)
Reference of the request letter # 408/241/E/Lab/02/217

Dated: 04-02-2021
Dated: 04-01-2021

Tension Test Report (Page -1/1)

Date of Test 08-02-2021
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	0.377	0.11	0.112	3700	5400	74200	72890	108200	106400	0.90	11.3	FF Steel
2	0.373	3	0.373	0.11	0.110	3700	5300	74200	74470	106200	106700	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 Laboratoires
UET Lahore, Pakistan.

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Test Floor Laboratory
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Pakistan. Ph: 92-42-99029202

To,
M/S Defence Housing Authority.
Lahore Cantt
(External Electrification Works (U/G) of Pkg-E-2 & E-4 Prism DHA Ph-IX) (M/s NLC)

Reference # CED/TFL **36038** (Dr. Qasim Khan) Dated: 04-02-2021
Reference of the request letter # 408/241/E/Estb/Lab/07/236 Dated: 07-01-2021

Tension Test Report (Page -1/1)

Date of Test 08-02-2021
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	0.382	3	0.378	0.11	0.112	4200	5200	84200	82520	104200	102200	0.80	10.0	Mughal Steel
2	0.380	3	0.377	0.11	0.112	4300	5200	86200	84900	104200	102700	0.75	9.4	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 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,
Material Engineer
ACE (Pvt) Ltd.
HBRP – Haripur

Reference # CED/TFL **36042** (Dr. Qasim Khan)
Reference of the request letter # RE/ACE/HBRP/81

Dated: 04-02-2021
Dated: 19-11-2020

Tension Test Report (Page -1/2)

Date of Test 08-02-2021
Gauge length 640 mm
Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	783.0	17900	175.60	19900	195.22	198	>3.50	xx
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only one sample for Test										

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

I/C Testing Laboratoires
UET Lahore, Pakistan.

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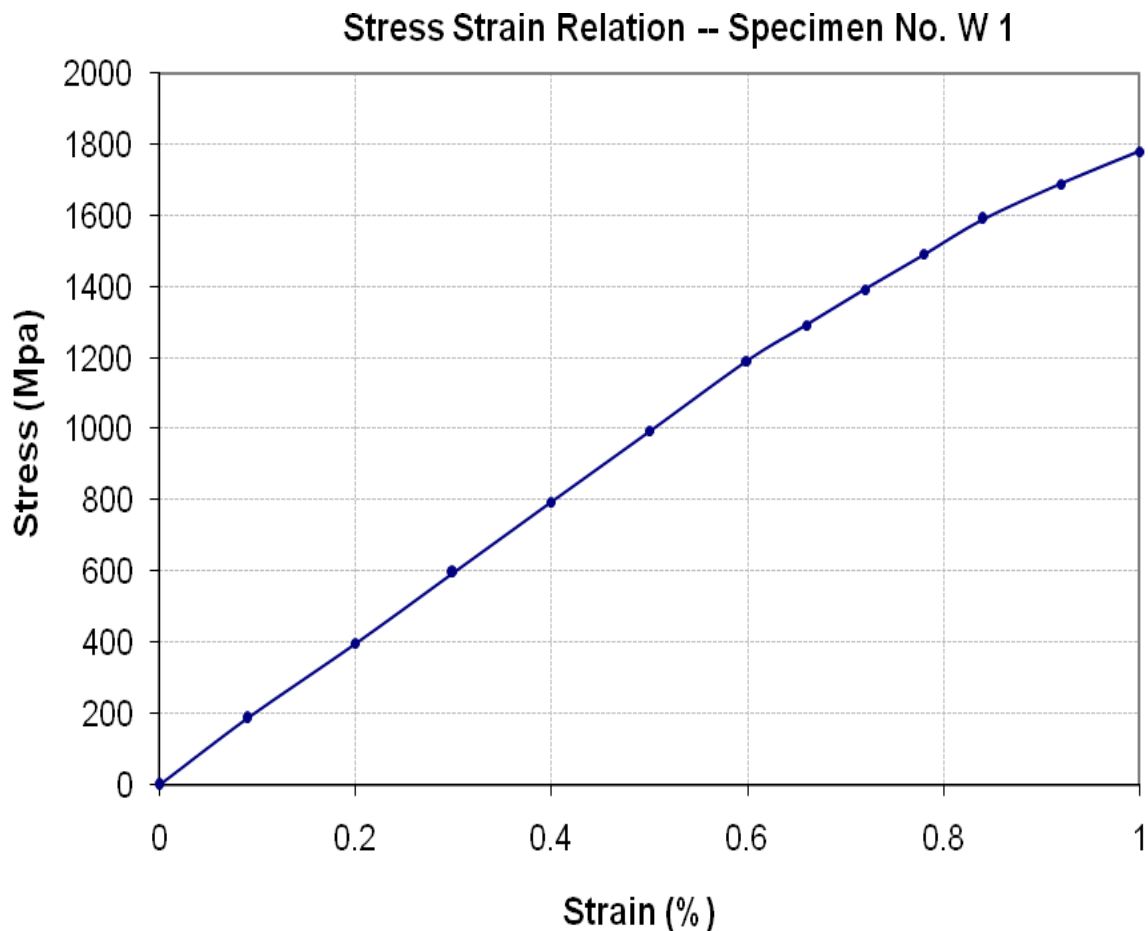
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Material Engineer
ACE (Pvt) Ltd.
HBRP – Haripur

Reference # CED/TFL **36042** (Dr. Qasim Khan)
Reference of the request letter # RE/ACE/HBRP/81

Dated: 04-02-2021
Dated: 19-11-2020

Graph (Page – 2/2)



I/C Testing Laboratories
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,
 Resident Engineer
 NESPAK
 Punjab Intermediate Cities Improvement Investment Program (PICIIP),
 Consultancy Services for Engineering, Procurement and Construction Management
 Rehabilitation / Improvement of Water Supply System Sahiwal - LOT 1

Reference # CED/TFL **36044** (Dr. Qasim Khan)
 Reference of the request letter # 3976/11/MT/Lot-1/24

Dated: 04-02-2021
 Dated: 02-02-2021

Tension Test Report (Page -1/1)

Date of Test 08-02-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM A615

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	4.288	10	1.267	1.27	1.260	43800	52400	76100	76590	91000	91700	1.50	18.8	Mughal Steel
2	4.233	10	1.259	1.27	1.244	44000	52600	76400	77950	91300	93200	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratories
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,
 Project Manager
 Liberty Builders
 Construction of Zee Avenue-Ramada Hotel & Suites 17-A Cooper Road, Lahore

Reference # CED/TFL **36046** (Dr. Qasim Khan)
 Reference of the request letter # ST/UET/20210208-A

Dated: 08-02-2021
 Dated: 08-02-2021

Tension Test Report (Page -1/1)

Date of Test 08-02-2021
 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	0.370	3	0.372	0.11	0.109	3300	4900	66200	66940	98200	99400	1.10	13.8	Bataka Premium
2	0.370	3	0.372	0.11	0.109	3100	4800	62200	62790	96200	97300	1.10	13.8	
3	0.363	3	0.368	0.11	0.107	3100	4700	62200	64080	94200	97200	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Resident Engineer
 Orbit Housing
 The Springs, Apartment Lahore

Reference # CED/TFL **36047** (Dr. Qasim Khan)
 Reference of the request letter # Nil

Dated: 08-02-2021
 Dated: 08-02-2021

Tension Test Report (Page -1/1)

Date of Test 08-02-2021
 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	0.376	0.11	0.111	4200	5300	84200	83190	106200	105000	0.90	11.3	
2	0.378	3	0.376	0.11	0.111	4200	5300	84200	83350	106200	105200	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 Laboratoires
UET Lahore, Pakistan.

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University of Engineering and Technology Lahore, 54890
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To,
 Project Director
 Peach Club
 Faisalabad

Reference # CED/TFL **36048** (Dr. Qasim Khan)
 Reference of the request letter # Nil

Dated: 08-02-2021
 Dated: 08-02-2021

Tension Test Report (Page -1/1)

Date of Test 08-02-2021
 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	3100	4800	62200	61780	96200	95700	1.20	15.0	
2	0.371	3	0.373	0.11	0.109	3000	4700	60200	60620	94200	95000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 Laboratoires
UET Lahore, Pakistan.

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Department of Civil Engineering
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To,
 Construction Manager
 Deever Developers (Pvt)Ltd.
 (Construction of Zameen Opal, Plot no.16, Sector-A, Land Breeze Housing Society, Raiwind Road Lahore.

Reference # CED/TFL **36049** (Dr. Qasim Khan)
 Reference of the request letter # ZD/ZO/L/022

Dated: 08-02-2021
 Dated: 08-02-2021

Tension Test Report (Page -1/1)

Date of Test 08-02-2021
 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	0.375	0.11	0.111	3300	5200	66200	65710	104200	103600	1.20	15.0	
2	0.366	3	0.370	0.11	0.108	3300	5000	66200	67570	100200	102400	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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