



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/12/35788, 36062
2020

Dated: 18-12-

Dated of Test: 10-02-2020

To
Manager Monitoring & Coordination
Shajar Roads Limited
Dualization of Sheikhpura- Gujranwala Road

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

Reference to your letter No. MMC/SHJR/SGRP/15A, dated 18.12.2020 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	36	7.97	7.64	3.65	3.01	3.84	34060	45710	3268	4386

Witness by Manohar Lal (Chief Engineer, NESPAK), Shamim Zafar (Chief Material Specialist (Advisor) NESPAK) & Abdul Rashid Abbasi (Material Engr. SHAJAR)

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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To,
 Chief Engineer
 Zaitoon
 New Lahore City
 Construction of O.H.W.T No. 01 (Cap. 100,000 Gallons) NLC Phase IV

Reference # CED/TFL **36055** (Dr. Ali Ahmed)
 Reference of the request letter # NLC/CE/Infra/045

Dated: 09-02-2021
 Dated: 09-02-2021

Tension Test Report (Page -1/1)

Date of Test 10-02-2021
 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	0.374	3	0.374	0.11	0.110	3500	4800	70200	70240	96200	96400	0.90	11.3	Afco Steel
2	0.382	3	0.378	0.11	0.112	3900	5000	78200	76530	100200	98200	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														

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UET Lahore, Pakistan.

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To,
 Assistant Resident Engineer
 Abdullah Khan Architects
 Civil Infrastructure Work for Sector – F, DHA Bahawalpur

Reference # CED/TFL **36056** (Dr. Ali Ahmed)
 Reference of the request letter # ARE/AKA/TTC-F/SITE/75

Dated: 09-02-2021
 Dated: 02-02-2021

Tension Test Report (Page -1/1)

Date of Test 10-02-2021
 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	0.409	3	0.391	0.11	0.120	4200	5600	84200	77000	112300	102700	0.90	11.3	Mughal Steel
2	0.404	3	0.389	0.11	0.119	4200	5600	84200	78010	112300	104100	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,
 Resident Engineer
 ESS-I-AAR Consultant
 Rehabilitation/Improvement of Sewerage System Jhang Phase-I

Reference # CED/TFL **36058** (Dr. Ali Ahmed)
 Reference of the request letter # 684

Dated: 09-02-2021
 Dated: 08-02-2021

Tension Test Report (Page -1/1)

Date of Test 10-02-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (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	0.382	3/8	0.378	0.11	0.112	4000	5200	80200	78420	104200	102000	1.10	13.8	
2	0.382	3/8	0.378	0.11	0.112	3900	5200	78200	76620	104200	102200	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Sub Divisional Officer
 Buildings Sub Division No.1
 Gujranwala

Reference # CED/TFL **36059** (Dr. Ali Ahmed)
 Reference of the request letter # 367/G-19

Dated: 09-02-2021
 Dated: 18-01-2021

Tension Test Report (Page -1/1)

Date of Test 10-02-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	0.406	3/8	0.390	0.11	0.119	4100	5500	82200	75670	110200	101600	1.00	12.5	
2	0.408	3/8	0.391	0.11	0.120	4200	5500	84200	77280	110200	101200	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,
 Sub Divisional Officer
 Highway Sub Division
 Sialkot
 (Construction of Flyover at Shahbpur Chowk Defence Road Sialkot)

Reference # CED/TFL **36060** (Dr. Ali Ahmed)
 Reference of the request letter # 453/S

Dated: 09-02-2021
 Dated: 05-01-2021

Tension Test Report (Page -1/1)

Date of Test 10-02-2021
 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	0.408	3	0.391	0.11	0.120	4000	5200	80200	73480	104200	95600	0.80	10.0	
2	0.408	3	0.391	0.11	0.120	4400	5400	88200	80770	108200	99200	0.85	10.6	
3	4.334	10	1.274	1.27	1.274	36000	56400	62500	62290	97900	97600	1.80	22.5	
4	4.358	10	1.277	1.27	1.281	36000	56600	62500	61950	98300	97400	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
Sr. Project Manager
Izhar Construction (Pvt) Ltd
Construction of Structural Works of Dolmen Shopping Mall DHA Lahore

Reference # CED/TFL **36061** (Dr. Waseem Abbas) Dated: 09-02-2021
Reference of the request letter # ICPL/CONST-DML/21/37 Dated: 09-02-2021

Tension Test Report (Page -1/1)

Date of Test 10-02-2021
Description Plain Steel Bar Tensile Test

Sr. No.	Weight (kg/m)	Diameter/ size		Area (mm ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (MPa) Actual	Ultimate Stress (MPa) Actual	Elongation (inch)	% Elongation	Remarks
		Nominal (mm)	Actual (mm)	Nominal	Actual							
1	9.030	38	38.27	-----	1150.3	72600	110000	619	938	-----	-----	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test												
Bend Test												

To,

I/C Testing Laboratoires
UET Lahore, Pakistan.

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M/S Shahid Engineers
 Faisalabad
 (Rana Riasat Ali, Apex Mall, Location Sitiana Road Faisalabad)

Reference # CED/TFL **36063** (Dr. Ali Ahmed)
 Reference of the request letter # FX-83/21

Dated: 09-02-2021
 Dated: 08-02-2021

Tension Test Report (Page -1/1)

Date of Test 10-02-2021
 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	0.405	3	0.390	0.11	0.119	4100	5400	82200	75840	108200	99900	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

To,

I/C Testing Laboratoires
UET Lahore, Pakistan.

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M/S MG Construction and Services (Pvt) Ltd.
 Islamabad

Reference # CED/TFL **36064** (Dr. Ali Ahmed)
 Reference of the request letter # Nil

Dated: 10-02-2021
 Dated: 10-02-2021

Tension Test Report (Page -1/1)

Date of Test 10-02-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM A 615

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	3100	4600	62200	64030	92200	95000	1.20	15.0	
2	0.371	3	0.373	0.11	0.109	3300	5200	66200	66640	104200	105000	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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