



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/10/4026
2023

Dated: 06-10-

Dated of Test: 11-10-2023

To

Resident Engineer
NESPAK

Development of Signal Free Corridor from Main Boulevard Gulberg (Center Point) to Walton Road (Defence Morr), Underpass at Khalid Butt Chowk, Lahore.

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

Reference to your letter No. 3772/103/KBC/SA/04/17, dated 20.09.2023

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)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	24	7.73	7.18	30.04	24.04	3.00	13730	20120	2103	3082

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Asst Dir Infra
 Defence Housing Authority, Gujranwala
 "Boundary Wall (Sector C)"

Reference # CED/TFL **4031** (Dr. M Rizwan Riaz)

Dated: 09-10-2023

Reference of the request letter # 111/15/AD/RS/Lab/BW/Pkg-2A/69

Dated: 06-10-2023

Tension Test Report (Page -1/1)

Date of Test 11-10-2023

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	0.398	3	0.386	0.11	0.117	3600	5000	72200	67830	100200	94300	1.40	17.5	FF Steel
2	0.398	3	0.386	0.11	0.117	3600	4900	72200	67910	98200	92500	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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To,

Project Manager
 National Hydropower Consultants
 National Development Consultants (Pvt) Ltd.
 “16MW Nalter-III Hydropower Project Gilgit-Baltistan”
 Water and Power Department Gilgit-Baltistan

Reference # CED/TFL **4034** (Dr. Ali Ahmed)

Dated: 09-10-2023

Reference of the request letter # NHP/PM/Admn/999

Dated: 05-10-2023

Tension Test Report (Page -1/1)

Date of Test

11-10-2023

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	5.143	11	1.387	1.56	1.512	38600	57200	54600	56280	80900	83400	2.00	25.0	
2	5.162	11	1.390	1.56	1.517	40200	58000	56800	58400	82000	84300	1.80	22.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#11 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratories
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To,
 Resident Engineer
 NESPAK
 Construction of 8-Lane Overhead Bridge at Imamia Colony.

Reference # CED/TFL **4037** (Dr. Ali Ahmed)
 Reference of the request letter # RE/4537/02/MH/123

Dated: 10-10-2023
 Dated: 07-10-2023

Tension Test Report (Page # 1/1)

Date of Test 11-10-2023
 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	4.348	10	1.276	1.27	1.278	40000	57600	69500	68980	100000	99400	1.20	15.0	FF Steel
2	4.357	10	1.277	1.27	1.281	41600	59000	72200	71590	102400	101600	1.50	18.8	
3	4.267	10	1.264	1.27	1.254	40600	58800	70500	71350	102100	103400	1.50	18.8	
4	4.289	10	1.267	1.27	1.261	40200	56800	69800	70280	98600	99400	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
#10 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,

Civil Engineer
 The University of Lahore
 Construction of LBS (Dental Block) Building at UOL

Reference # CED/TFL **4041** (Dr. M Rizwan Riaz)
 Reference of the request letter # 10-LBS-23/Proj

Dated: 10-10-2023
 Dated: 07-10-2023

Tension Test Report (Page -1/1)

Date of Test 11-10-2023
 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	0.359	3	0.367	0.11	0.106	3200	5000	64200	66820	100200	104400	1.20	15.0	
2	0.360	3	0.367	0.11	0.106	3200	5100	64200	66720	102200	106400	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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To,
 Site Engineer
 China Machinery Engineering Corporation

Reference # CED/TFL **4046** (Dr. M Rizwan Azam) Dated: 11-10-2023
 Reference of the request letter # PLC OUTDOOR FOUNDATION Dated: 04-10-2023
 (LDPIII-CNSR-NTDC-0875)

Tension Test Report (Page -1/1)

Date of Test 11-10-2023
 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 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	0.364	10	9.37	0.12	0.107	3400	4800	62464	70110	88184	99000	1.40	17.5	
2	0.364	10	9.38	0.12	0.107	3300	4900	60627	67940	90021	100900	1.20	15.0	
3	0.365	10	9.39	0.12	0.107	3300	4700	60627	67780	86347	96600	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratories
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To,
 Resident Engineer
 NESPAK
 Lahore Ring Road Southern Loop (SL-3) Project

Reference # CED/TFL **4048** (Dr. Ali Ahmed)
 Reference of the request letter # Nespak/LRRA/MNA/SL-3/044

Dated: 11-10-2023
 Dated: 06-10-2023

Tension Test Report (Page -1/1)

Date of Test 11-10-2023
 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	4.144	10	1.245	1.27	1.218	41600	56000	72200	75270	97200	101400	1.50	18.8	Mughal Steel
2	4.170	10	1.249	1.27	1.226	43000	57800	74700	77320	100400	104000	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														

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To,

Resident Engineer
 UMDS JV Consultants
 Punjab Intermediate Cities Improvement Investment Program (PICIIP) NCB-
 Works/PIIIP-04: Road Upgradation, Lot-04: Construction of Flyover in Sialkot

Reference # CED/TFL **4049** (Dr. Ali Ahmed)

Dated: 11-10-2023

Reference of the request letter # RE/UMDS-JV/LOT-4/SKT/102

Dated: 09-10-2023

Tension Test Report (Page -1/1)

Date of Test 11-10-2023

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	4.095	10	1.238	1.27	1.204	40000	49200	69500	73250	85400	90100	1.60	20.0	Union Steel
2	4.074	10	1.235	1.27	1.198	39800	49200	69100	73250	85400	90600	1.80	22.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and one sample for bend test														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														

Witness by Shahid (LT UMDS), Shakeel Ahmed (Sub Engr. PICIIP) and Mudassar (LT KNK)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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