



**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/07/1708

Dated: 25-07-2022

Dated of Test: 01-08-2022

To

**Team Leader**

**G3 Engineering Consultants (Pvt) Ltd**

**Provision of Clean Drinking Water, Sewerage System, PC and Allied Facilities**

in

**Shimla Pahari and Adjoining Abadies, Lahore**

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

Reference to your letter No. G3/0265/TL-07, dated 26.06.2022 on the subject cited above. One R.C.C. Pipes 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	12	7.73	7.33	16.06	11.83	2.11	11600	16400	3538	5002

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 Project Manager  
 Union Developers  
 Construction of Union Luxury Apartments, Etihad Town, Lahore

Reference # CED/TFL 1733 (Dr. Rizwan Azam)  
 Reference of the request letter # UA/SO/2022/024

Dated: 28-07-2022  
 Dated: 26-07-2022

**Tension Test Report** (Page -1/1)

Date of Test 01-08-2022  
 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 <sup>2</sup> )		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	0.360	3	0.367	0.11	0.106	4200	5000	84200	87600	100200	104300	0.60	7.5	Afco Steel
2	0.362	3	0.368	0.11	0.106	4000	4800	80200	82790	96200	99400	0.60	7.5	
3	0.372	3	0.373	0.11	0.109	4200	4900	84200	84610	98200	98800	0.70	8.8	
4	0.379	3	0.377	0.11	0.111	4000	5100	80200	79080	102200	100900	0.70	8.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only four samples for tensile and two samples for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 P.D (South-3)  
 WASO PEAS  
 (Construction of 120 Rooms Residential Building for Friendship at FFP Site)

Reference # CED/TFL **1738** (Dr. Rizwan Azam)  
 Reference of the request letter # WASO-CMD-LOI-158/C

Dated: 29-07-2022  
 Dated: 05-07-2022

**Tension Test Report** (Page -1/2)

Date of Test 01-08-2022  
 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 <sup>2</sup> )		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	0.361	3	0.367	0.11	0.106	3000	4600	60200	62370	92200	95700	0.90	11.3	SJ Steel
2	0.365	3	0.370	0.11	0.107	3000	4700	60200	61560	94200	96500	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
 P.D (South-3)  
 WASO PEAS  
 (Construction of 120 Rooms Residential Building for Friendship at FFP Site)

Reference # CED/TFL **1738** (Dr. Rizwan Azam)  
 Reference of the request letter # WASO-CMD-LOI-158/C

Dated: 29-07-2022  
 Dated: 05-07-2022

**Tension Test Report** (Page -2/2)

Date of Test 01-08-2022  
 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 <sup>2</sup> )		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	0.378	3	0.376	0.11	0.111	3500	4900	70200	69430	98200	97200	1.50	18.8	Al-Moiz Steel
2	0.390	3	0.382	0.11	0.115	3500	5000	70200	67340	100200	96200	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,  
 HOD/Manager Civil  
 Fatima Memorial Hospital  
 Construction of New Building at Fatima Memorial Hospital Lahore

Reference # CED/TFL 1739 (Dr. Rizwan Azam)  
 Reference of the request letter # FHM/RAF/St/02

Dated: 29-07-2022  
 Dated: 25-07-2022

**Tension Test Report** (Page -1/1)

Date of Test 01-08-2022  
 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 <sup>2</sup> )		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	0.368	0.11	0.107	3700	4800	74200	76510	96200	99300	1.50	18.8	
2	0.367	3	0.371	0.11	0.108	3700	5300	74200	75530	106200	108200	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,  
M/S Hi-Tek Manufacturing (Pvt) Ltd  
Lahore

Reference # CED/TFL **1741** (Dr. Roizwan Azam)  
Reference of the request letter # HT/Req/MT/1025

Dated: 01-08-2022  
Dated: 15-05-2022

**Tension Test Report** (Page – 1/3)

Date of Test 01-08-2022  
Gauge length 2 inches  
Description Welded Steel Sheet Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm <sup>2</sup> )	(kg)	(MPa)	(inch)		
1	6	25.80x6.20	159.96	9600	588.75	0.40	20.00	Failure at the location other than weld
2		25.90x6.20	160.58	9700	592.58	0.40	20.00	Failure at the location other than weld
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
<b>Only two samples for tensile test</b>								
<b>Bend Test</b>								

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
M/S Hi-Tek Manufacturing (Pvt) Ltd  
Lahore

Reference # CED/TFL **1741** (Dr. Roizwan Azam)  
Reference of the request letter # HT/Req/MT/1026

Dated: 01-08-2022

Dated: 15-05-2022

**Tension Test Report** (Page – 2/3)

Date of Test 01-08-2021

Description Welded Steel Sheet Steel Strip Bend Test

<b>Bend Test</b>
Strip taken from Welded Steel Sheet (6mm) Root Bend Test Through 180° is Satisfactory
Strip taken from Welded Steel Sheet (6mm) Root Bend Test Through 180° is Satisfactory
<b>Only two samples for bend test</b>

**I/C Testing Laboratoires**  
**UET Lahore, Pakistan.**

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To,  
M/S Hi-Tek Manufacturing (Pvt) Ltd  
Lahore

Reference # CED/TFL **1741** (Dr. Roizwan Azam)  
Reference of the request letter # HT/Req/MT/1027

Dated: 01-08-2022

Dated: 15-05-2022

**Tension Test Report** (Page – 3/3)

Date of Test 01-08-2021

Description Welded Steel Sheet Steel Strip Bend Test

<b>Bend Test</b>
Strip taken from Welded Steel Sheet (6mm) Face Bend Test Through 180° is Satisfactory
Strip taken from Welded Steel Sheet (6mm) Face Bend Test Through 180° is Satisfactory
<b>Only two samples for bend test</b>

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**UET Lahore, Pakistan.**

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To,  
M/S Heaven's Way Zipline Adventure (Pvt) Ltd  
Islamabad

Reference # CED/TFL **1744 (Dr. Rizwan Azam)**  
Reference of the request letter # Nil

Dated: 01-08-2022

Dated: 01-08-2022

**Tension Test Report** (Page – 1/2)

Date of Test 01-08-2022  
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	
1	14	0.76	11200	
2	12	0.55	8200	
-	-	-	-	
-	-	-	-	
-	-	-	-	
<b>Only two samples for Test</b>				

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**UET Lahore, Pakistan.**

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**Pakistan. Ph: 92-42-99029202**

To,  
M/S Rohtas Zipline Adventure (Pvt) Ltd  
Jhelum

Reference # CED/TFL **1744** (Dr. Rizwan Azam)  
Reference of the request letter # Nil

Dated: 01-08-2022

Dated: 01-08-2022

**Tension Test Report** (Page – 2/2)

Date of Test 01-08-2022  
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	
1	16	0.97	14600	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
<b>Only one sample for Test</b>				

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**UET Lahore, Pakistan.**

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