



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

To,
M/S Imperium Hospitality (Pvt) Limited
Gulberg II, Lahore

Reference # CED/TFL **1719** (Dr. Usman Akmal)
Reference of the request letter # IHPL/Steel/0201

Dated: 26-07-2022
Dated: 23-07-2022

Tension Test Report (Page -1/1)

Date of Test 11-08-2022
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 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	0.372	3	0.373	0.11	0.109	3790	5370	76000	76370	107600	108300	1.10	13.8	PCS
2	0.370	3	0.372	0.11	0.109	3740	5350	75000	75700	107200	108300	1.00	12.5	
3	0.370	3	0.372	0.11	0.109	3920	5470	78600	79530	109600	111000	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

Witness by Engr. Ali Husain Khan (K.B)

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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

Ref: CED/TFL/08/1745

Dated: 02-08-2022

Dated of Test: 11-08-2022

To

GM Development
Vision Developers Pvt. Ltd.
Park View City Lahore

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

Reference to your letter No. Nil, dated 30.07.2022 on the subject cited above. Two 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)	(inch)	(inch)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	9	7.76	7.27	12.60	9.21	1.69	14500	17000	5729	6716
2	9	7.78	7.29	12.48	8.77	1.86	14600	18600	6042	7697

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Lead Civil
 StarchPack (private) Limited
 StrachPack Greenfield Project at Kasur.

Reference # CED/TFL 1752 (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 04-08-2022
 Dated: 04-08-2022

Tension Test Report (Page -1/1)

Date of Test 11-08-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (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	5.246	36	35.59	1.58	1.542	47200	64200	65859	67460	89579	91800	1.80	22.5	
2	5.264	36	35.65	1.58	1.547	----	48000	----	----	66975	68400	1.80	22.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
36mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Project Manager
 Izhar Construction (Pvt) Ltd
 OMBRe' Holdings Pvt Ltd Raiwind, Lahore

Reference # CED/TFL **1753** (Dr. Usman Akmal)
 Reference of the request letter # OMBRe'/Mughal/Steel/008

Dated: 04-08-2022
 Dated: 04-08-2022

Tension Test Report (Page -1/1)

Date of Test 11-08-06-2022
 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	0.410	10	9.95	0.12	0.121	4660	5710	85612	85220	104902	104500	0.80	10.0	Mughal Steel
2	0.413	10	9.99	0.12	0.121	4560	5580	83775	82750	102514	101300	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia 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
Pakistan. Ph: 92-42-99029202

To,
 Manager (Civil)
 Lucky Cement Limited, Pezu
 800 TPD Line-2 at Lucky Cement Limited, PEZU

Reference # CED/TFL **1754** (Dr. Usman Akmal)
 Reference of the request letter # LCL/Civil/Line-2/2022/04/517

Dated: 05-08-2022
 Dated: 03-08-2022

Tension Test Report (Page -1/1)

Date of Test 11-08-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (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	0.416	10	10.02	0.12	0.122	5100	5930	93696	92000	108944	107000	1.00	12.5	TLJ- 936
2	0.416	10	10.02	0.12	0.122	5020	5860	92226	90480	107658	105700	0.90	11.3	
3	0.417	10	10.04	0.12	0.123	5000	5860	91858	89830	107658	105300	1.00	12.5	JUU- 7150
4	0.415	10	10.01	0.12	0.122	5000	5900	91858	90310	108393	106600	1.00	12.5	
5	4.211	32	31.89	1.25	1.238	25400	34600	44797	45230	61023	61700	1.70	21.3	TMB- 593
6	4.248	32	32.03	1.25	1.249	24600	32400	43387	43420	57143	57200	1.70	21.3	
Note: only six samples for tensile and three samples for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
32mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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To,
M/S AR-RAFAY Builders
Sialkot

Reference # CED/TFL **1755** (Dr. Usman Akmal)

Dated: 05-08-2022

Reference of the request letter # Ar-Rafay Builders Lawyer Chambers
at Agriculture Office / 2022/02

Dated: 04-04-2022

Tension Test Report (Page -1/1)

Date of Test 11-08-2022

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 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	0.401	3	0.387	0.11	0.118	3980	5150	79800	74400	103200	96300	1.10	13.8	Afco Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample 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,
M/S Imperium Hospitality (Pvt) Limited
Gulberg II, Lahore

Reference # CED/TFL **1756** (Dr. Usman Akmal)
Reference of the request letter # IHPL/Steel/0206

Dated: 05-08-2022
Dated: 04-08-2022

Tension Test Report (Page -1/1)

Date of Test 11-08-2022
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 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	0.360	3	0.367	0.11	0.106	3410	4540	68400	70990	91000	94600	1.10	13.8	PCS
2	0.369	3	0.372	0.11	0.108	3620	4540	72600	73600	91000	92400	1.00	12.5	
3	0.370	3	0.372	0.11	0.109	3380	4610	67800	68530	92400	93500	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

Witness by Engr. Ali Husain Khan (K.B)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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

To,
 Muddasir Ali
 Lahore

Reference # CED/TFL **1758** (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 05-08-2022
 Dated: 05-08-2022

Tension Test Report (Page -1/1)

Date of Test 11-08-2022
 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 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	0.364	3	0.369	0.11	0.107	3420	5350	68600	70470	107200	110300	1.00	12.5	
2	4.386	10	1.281	1.27	1.289	21800	33000	37900	37270	57300	56500	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two sample 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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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer (Labs)
Diamer Basha Consultants Group (DBGC)
Diamer Basha Dam Project (Dam Part (Civil Works)_ and Tangir Hydro Power Works)
(M/s Power China - FWO)(MWI)

Reference # CED/TFL 1759 (Dr. Usman Akmal)
Reference of the request letter # DBCG/Lab/PF-JV/2022/031

Dated: 05-08-2022
Dated: 18-07-2022

Tension Test Report (Page – 1/3)

Date of Test 11-08-2022
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	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa		
1	15.24 (0.6")	1102.0	1113.0	24500	240.35	27400	268.79	199	>3.50	WS-S4-2022-02
2	15.24 (0.6")	1102.0	1112.0	25000	245.25	27300	267.81	199	>3.50	WS-S4-2022-02A
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	

Only Two Samples 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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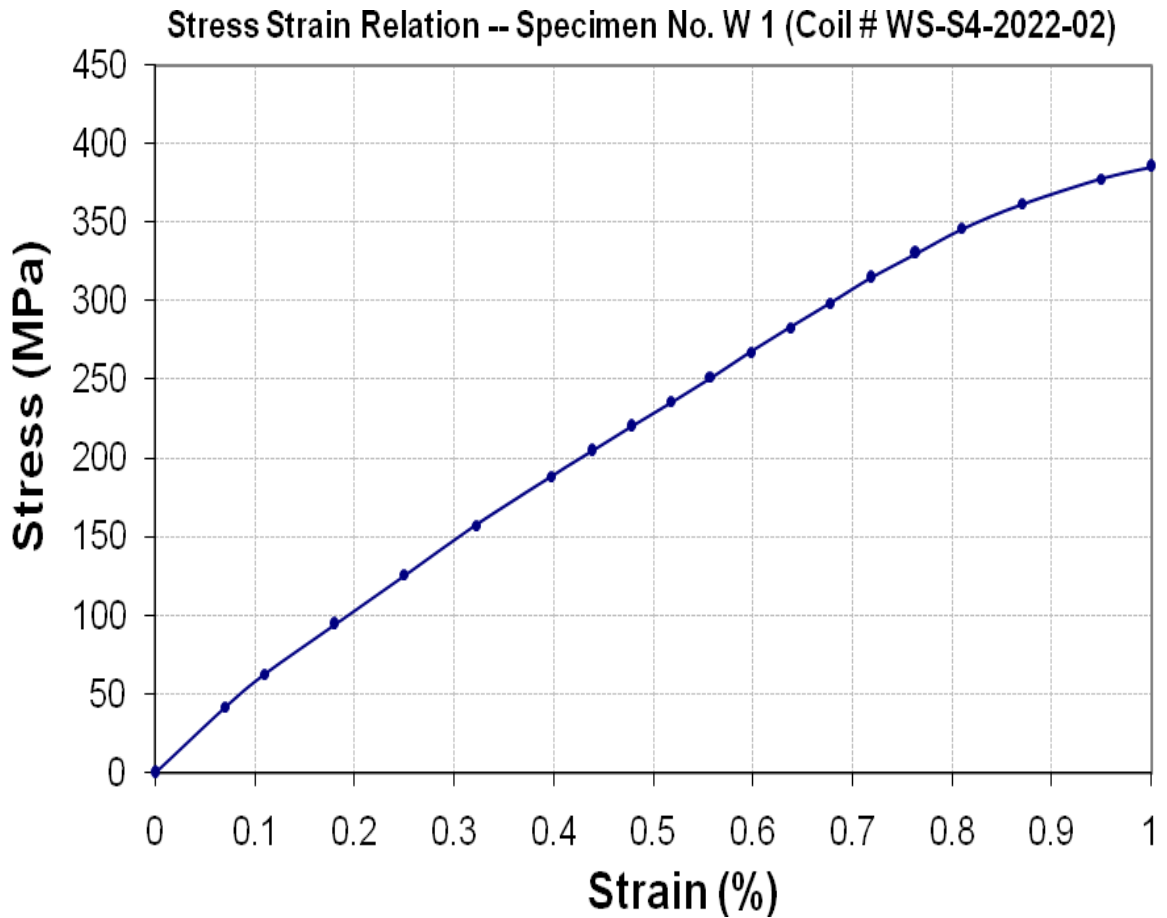
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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer (Labs)
Diamer Basha Consultants Group (DBGC)
Diamer Basha Dam Project (Dam Part (Civil Works)_ and Tangir Hydro Power Works)
(M/s Power China - FWO)(MWI)

Reference # CED/TFL 1759 (Dr. Usman Akmal)
Reference of the request letter # DBCG/Lab/PF-JV/2022/031

Dated: 05-08-2022
Dated: 18-07-2022

Graph (Page – 2/3)



I/C Testing Laboratories
UET Lahore, Pakistan.

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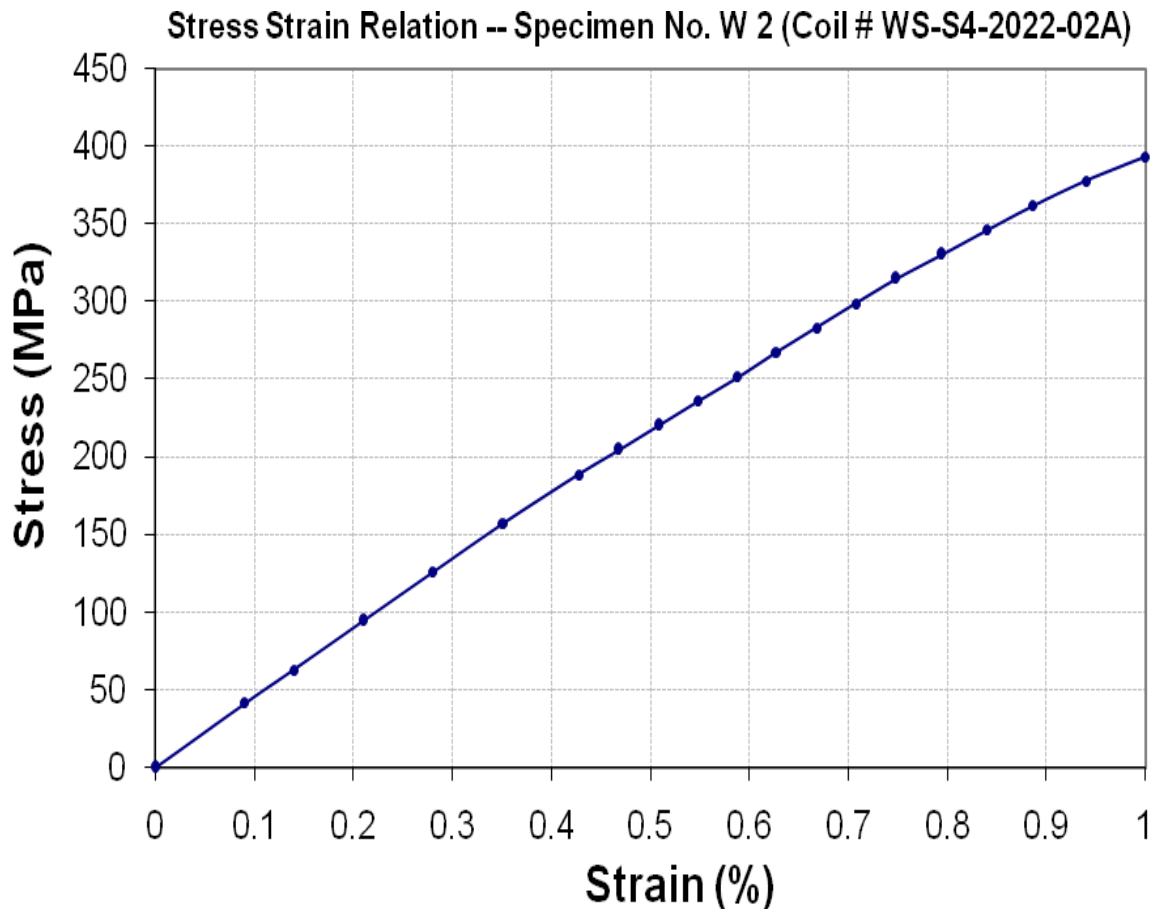
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer (Labs)
Diamer Basha Consultants Group (DBGC)
Diamer Basha Dam Project (Dam Part (Civil Works)_ and Tangir Hydro Power Works)
(M/s Power China - FWO)(MWI)

Reference # CED/TFL **1759** (Dr. Usman Akmal)
Reference of the request letter # DBCG/Lab/PF-JV/2022/031

Dated: 05-08-2022
Dated: 18-07-2022

Graph (Page – 3/3)



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

Reference # CED/TFL **1761** (Dr. Nauman Khurram)
 Reference of the request letter # UA/SO/2022/024-R-1

Dated: 10-08-2022
 Dated: 10-08-2022

Tension Test Report (Page -1/1)

Date of Test 11-08-2022
 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 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	3180	5010	63800	64450	100400	101600	1.30	16.3	Afco Steel
2	0.372	3	0.373	0.11	0.109	3380	4710	67800	68160	94400	95000	1.10	13.8	
3	0.364	3	0.369	0.11	0.107	3360	5020	67400	69200	100600	103400	1.20	15.0	
4	0.363	3	0.369	0.11	0.107	3130	5000	62800	64590	100200	103200	1.10	13.8	
5	0.383	3	0.379	0.11	0.113	4510	5500	90400	88320	110200	107800	0.70	8.8	
6	0.364	3	0.369	0.11	0.107	3110	5000	62400	64000	100200	102900	1.30	16.3	
Note: only six samples for tensile and three samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#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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