



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
Zeeruk Intl: (Pvt) Ltd
Karak-Kohat Project – N-55 NHA
(Wire Manufactured of Lahore)

Reference # CED/TFL **35629** (Dr. Waseem Abbas)
Reference of the request letter # ZI/P-2/RE/2020/285

Dated: 16-11-2020
Dated: 08-11-2020

Tension Test Report (Page – 1/4)

Date of Test 17-11-2020
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	777.0	17300	169.71	19400	190.31	199	>3.50	21761
2	12.70 (1/2")	775.0	783.0	18700	183.45	20500	201.11	198	>3.50	21763
3	12.70 (1/2")	775.0	787.0	18400	180.50	19900	195.22	199	>3.50	21793
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only three 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.

Note:

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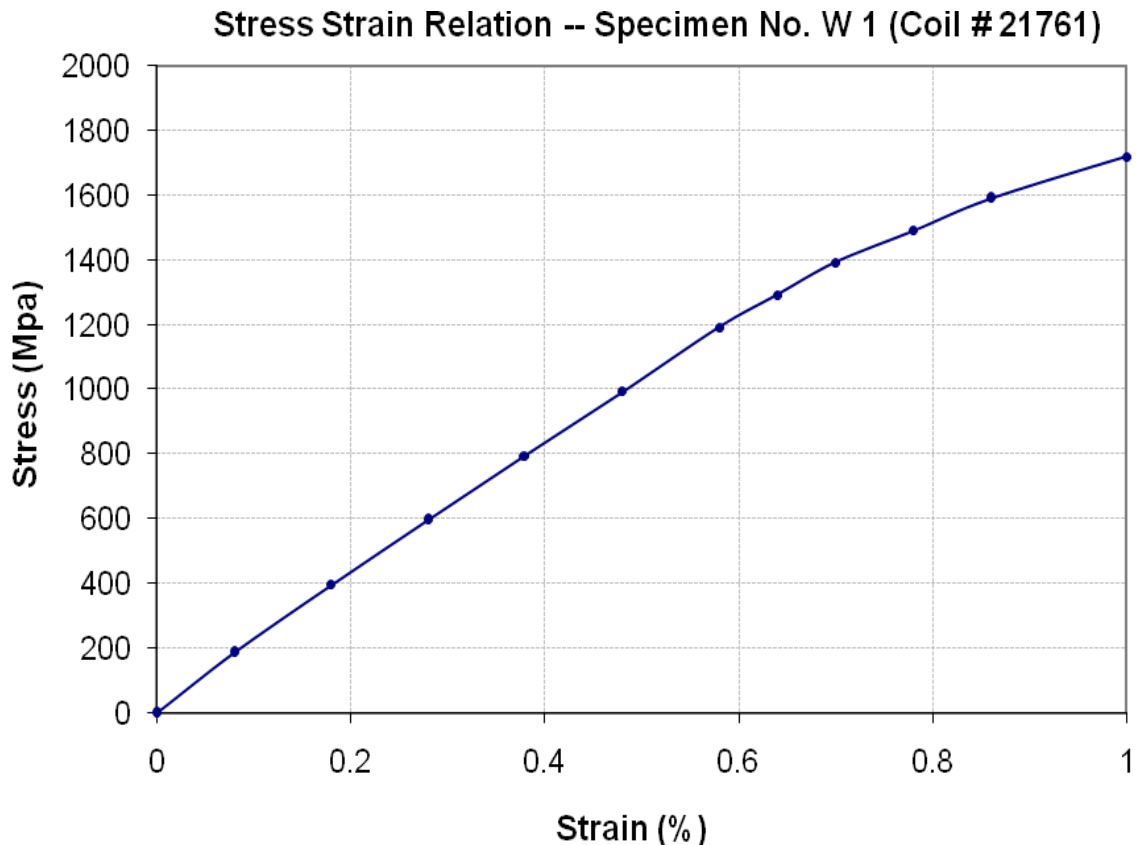
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Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
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Dated: 16-11-2020
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Graph (Page – 2/4)



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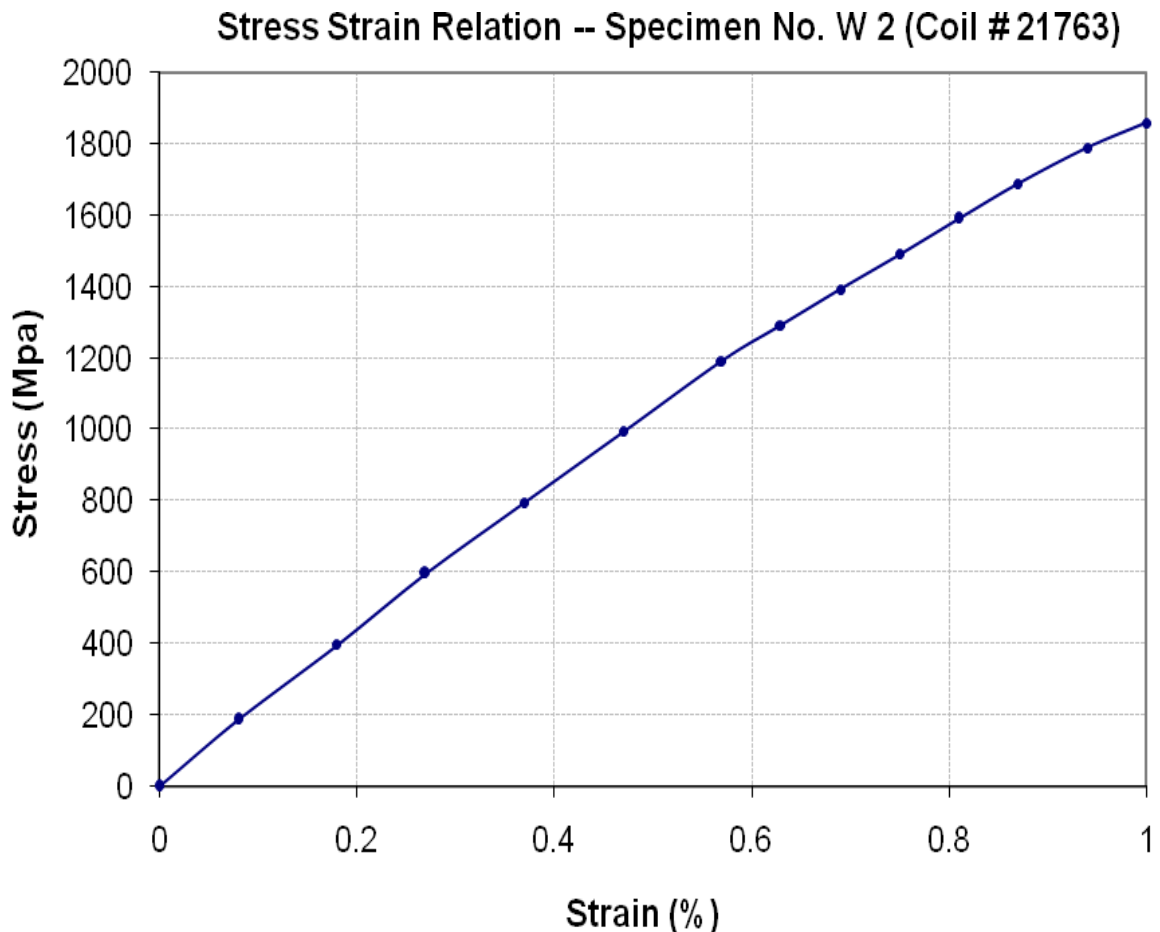
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Dated: 16-11-2020
Dated: 08-11-2020

Graph (Page – 3/4)



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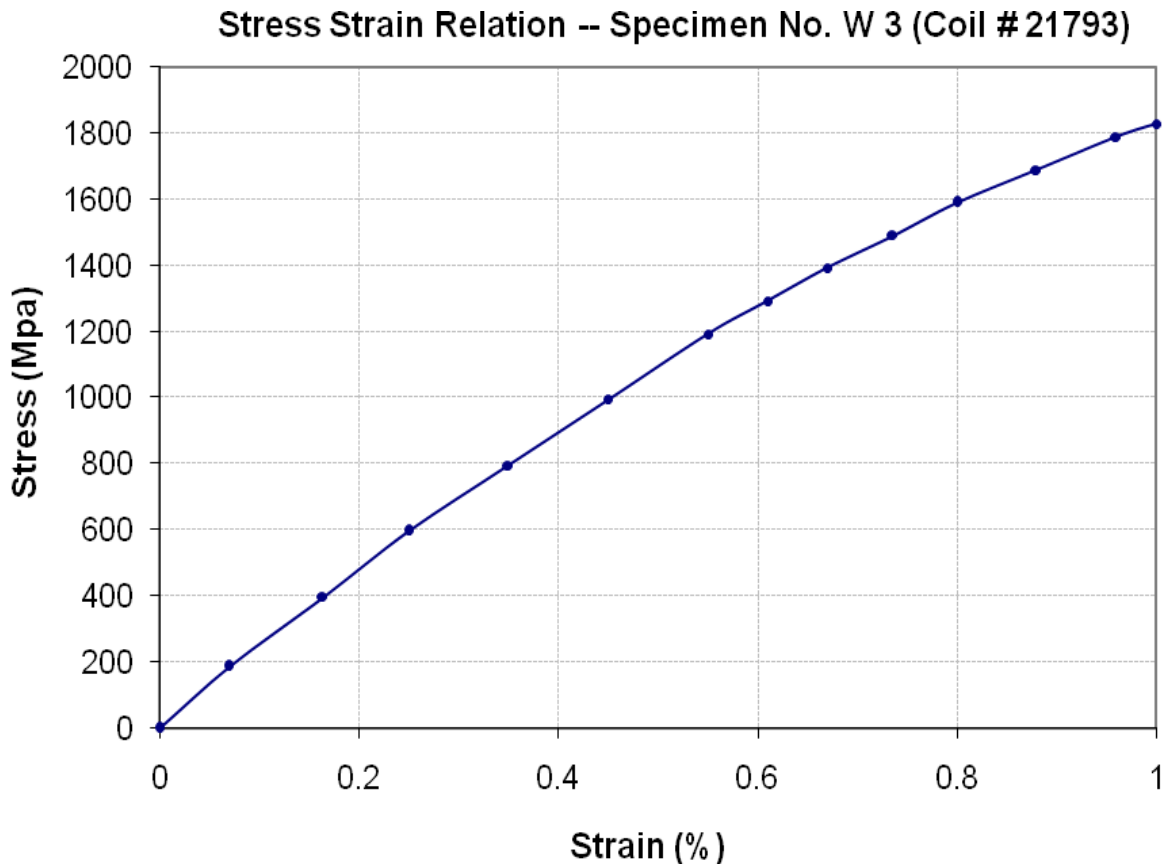
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Dated: 16-11-2020
Dated: 08-11-2020

Graph (Page – 4/4)



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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,
 Deputy Municipal Officer (I&S)
 Municipal Committee Vehari
 Rehabilitation of Municipal Services Infrastructure in Vehari City, (Group-A Rehabilitation Work)

Reference # CED/TFL **35630** (Dr. Waseem Abbass)
 Reference of the request letter # DMO/(1)/MC(VR)/# 80

Dated: 16-11-2020
 Dated: 31-10-2020

Tension Test Report (Page -1/1)

Date of Test 17-11-2020
 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	0.374	3/8	0.374	0.11	0.110	3500	4500	70200	70260	90200	90400	1.00	12.5	
2	0.376	3/8	0.375	0.11	0.110	3600	4600	72200	71810	92200	91800	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,
M/S Cast Packaging Films (Pvt) Limited
Raiwind District Lahore

Reference # CED/TFL **35632** (Dr. Waseem Abbass)
Reference of the request letter # Nil

Dated: 16-11-2020
Dated: 16-11-2020

Tension Test Report (Page -1/1)

Date of Test 17-11-2020
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	3200	4900	64200	64570	98200	98900	1.30	16.3	
2	0.372	3	0.373	0.11	0.109	3200	4900	64200	64470	98200	98800	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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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,
 Director Projects
 Innovative Construction Company
 Construction of Imtiaz Super Market, Gujrat

Reference # CED/TFL **35633** (Dr. Waseem Abbass)
 Reference of the request letter # ICL/ISM/GJT/05/01

Dated: 16-11-2020
 Dated: 16-11-2020

Tension Test Report (Page -1/1)

Date of Test 17-11-2020
 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	0.380	3/8	0.377	0.11	0.112	3600	5100	72200	71000	102200	100600	1.20	15.0	
2	0.392	3/8	0.383	0.11	0.115	3800	5400	76200	72700	108200	103400	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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Test Floor Laboratory
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To,
 Assistant Resident Engineer
 Enviro Consultant Limited
 Muridke
 Execution of Rehabilitation Works Municipal Corporation Muridke (Group-A)

Reference # CED/TFL **35634** (Dr. Waseem Abbass)
 Reference of the request letter # 2

Dated: 16-11-2020
 Dated: 02-11-2020

Tension Test Report (Page -1/1)

Date of Test 17-11-2020
 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	2700	3800	54100	53490	76200	75300	1.90	23.8	Afco Steel
2	0.377	3	0.375	0.11	0.111	2600	3800	52100	51760	76200	75700	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
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To,
 Assistant Resident Engineer
 NESPAK
 Storm Water Drainage System from Haji Camp to River Ravi via Lakshmi Chowk, Mcleod Road, Nabha Road, Chuburji and Sham Nagar, Lahore
 Storm Water Drainage System from sham Nagar to River Ravi (Package-II)
 Reference # CED/TFL **35635** (Dr. Waseem Abbass) Dated: 16-11-2020
 Reference of the request letter # 3882/11/MZA/01/226 Dated: 13-11-2020

Tension Test Report (Page -1/1)

Date of Test 17-11-2020
 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	66800	98200	99200	1.10	13.8	SJ Steel
2	0.383	3	0.378	0.11	0.113	3500	5100	70200	68560	102200	99900	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														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Test Floor Laboratory
Department of Civil Engineering
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To,
 Design Manager
 Stallion Engineering
 SRA Gate House DHA Multan

Reference # CED/TFL **35636** (Dr. Waseem Abbass)
 Reference of the request letter # DHA/MG/223/MT/01

Dated: 16-11-2020
 Dated: 16-11-2020

Tension Test Report (Page -1/1)

Date of Test 17-11-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	0.365	3	0.370	0.11	0.107	4100	5100	82200	84170	102200	104700	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend Test														

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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,
 Site Engineer
 Steelman International Engineers
 Assad Ghouri Residence, House # 763-E, DHA Ph-6, Lahore

Reference # CED/TFL **35638** (Dr. Waseem Abbass)
 Reference of the request letter # Nil

Dated: 17-11-2020
 Dated: 17-11-2020

Tension Test Report (Page -1/1)

Date of Test 17-11-2020
 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	0.369	3	0.372	0.11	0.109	4000	4900	80200	81260	98200	99600	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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Test Floor Laboratory
Department of Civil Engineering
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To,
 Resident Engineer
 QA/QC Department
 Bahria Town Private Limited, Lahore
 Water Course at Touheed Block Bahria Town Multan Road Lahore

Reference # CED/TFL **35640** (Dr. Waseem Abbass)
 Reference of the request letter # QA/QC-Steel-2169

Dated: 17-11-2020
 Dated: 16-11-2020

Tension Test Report (Page -1/1)

Date of Test 17-11-2020
 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	0.394	3	0.384	0.11	0.116	3400	4600	68200	64700	92200	87600	1.10	13.8	FF Steel
2	0.394	3	0.384	0.11	0.116	3600	4700	72200	68550	94200	89500	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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Test Floor Laboratory
Department of Civil Engineering
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To,
 Construction Manager
 Zameen Aurum
 Construction of Zameen Aurum at Plot No. 15 BlockL, Gulberg-III, Main Ferozepur Road,
 Lahore

Reference # CED/TFL **35641** (Dr. Waseem Abbass)
 Reference of the request letter # ZD/ZA/PILING/001

Dated: 17-11-2020
 Dated: 16-11-2020

Tension Test Report (Page -1/1)

Date of Test 17-11-2020
 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	0.368	3	0.371	0.11	0.108	3000	4700	60200	61150	94200	95800	1.20	15.0	
2	0.373	3	0.374	0.11	0.110	3100	4800	62200	62270	96200	96500	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 Laboratories
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