



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
NESPAK
Dualization & Improvement of Old Banu Road / Domail to Khurram Road Project (P – 01)
(WMI)

Reference # CED/TFL **37887** (Dr. Ali Ahmed)
Reference of the request letter # OBR/KKP-02/RE/AHJ/1089

Dated: 15-02-2022
Dated: 14-02-2022

Tension Test Report (Page -1/3)

Date of Test 21-02-2022
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 "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	783.0	17600	172.66	19500	191.30	199	>3.50	23370
2	12.70 (1/2")	775.0	785.0	17500	171.68	19600	192.28	198	>3.50	23379
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
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.

Note:

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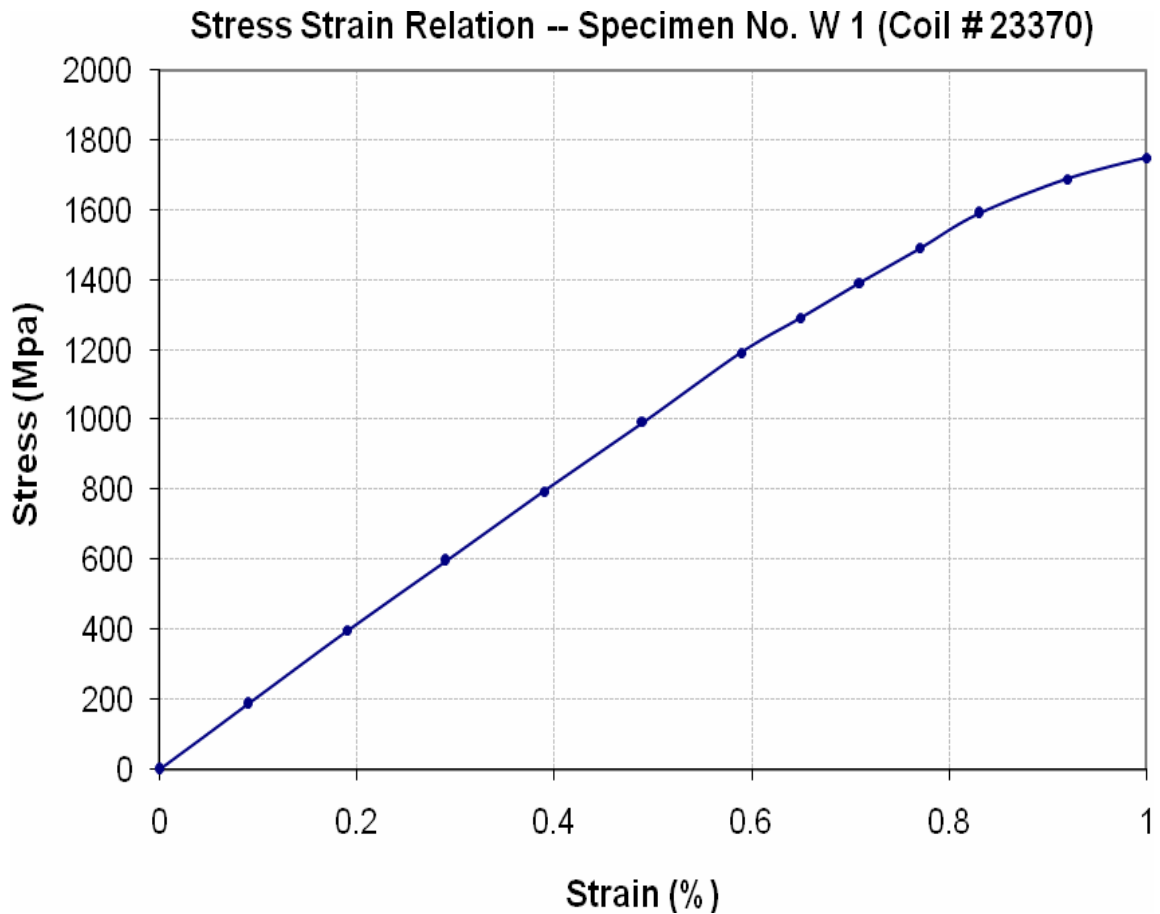
To,
Resident Engineer
NESPAK
Dualization & Improvement of Old Banu Road / Domail to Khurram Road Project (P – 01)
(WMI)

Reference # CED/TFL **37887** (Dr. Ali Ahmed)
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Dated: 15-02-2022

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Graph (Page – 2/3)



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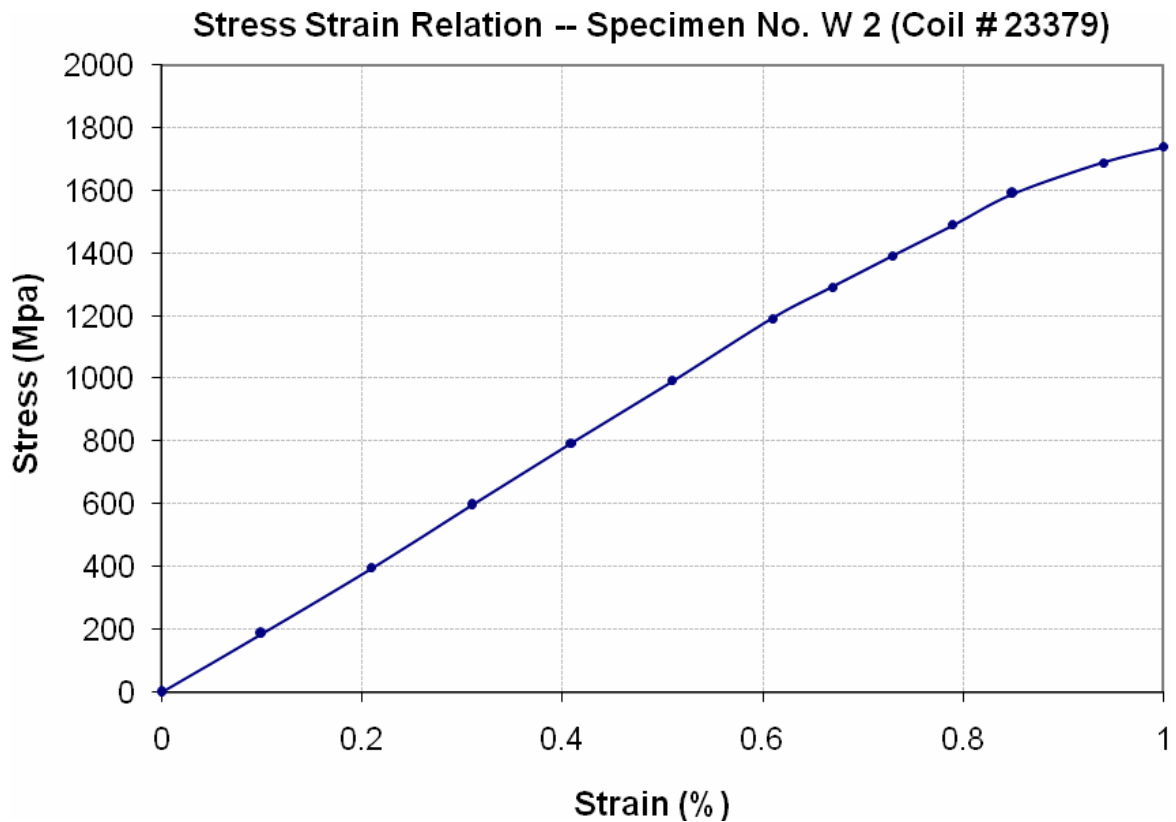
To,
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Reference # CED/TFL **37887** (Dr. Ali Ahmed)
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Dated: 15-02-2022

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Graph (Page – 3/3)



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To,
Resident Engineer
AZ Engineering Associates
Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length
= 31 kms in District Gujrat
(WMI)

Reference # CED/TFL **37900** (Dr. Rizwan Azam)
Reference of the request letter # RE AZEA/GT-310

Dated: 17-02-2022
Dated: 07-02-2022

Tension Test Report (Page -1/4)

Date of Test 21-02-2022
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 "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	782.0	17400	170.69	19600	192.28	199	>3.50	xx
2	12.70 (1/2")	775.0	784.0	18200	178.54	19500	191.30	199	>3.50	xx
3	12.70 (1/2")	775.0	783.0	17800	174.62	19600	192.28	198	>3.50	xx
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

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.

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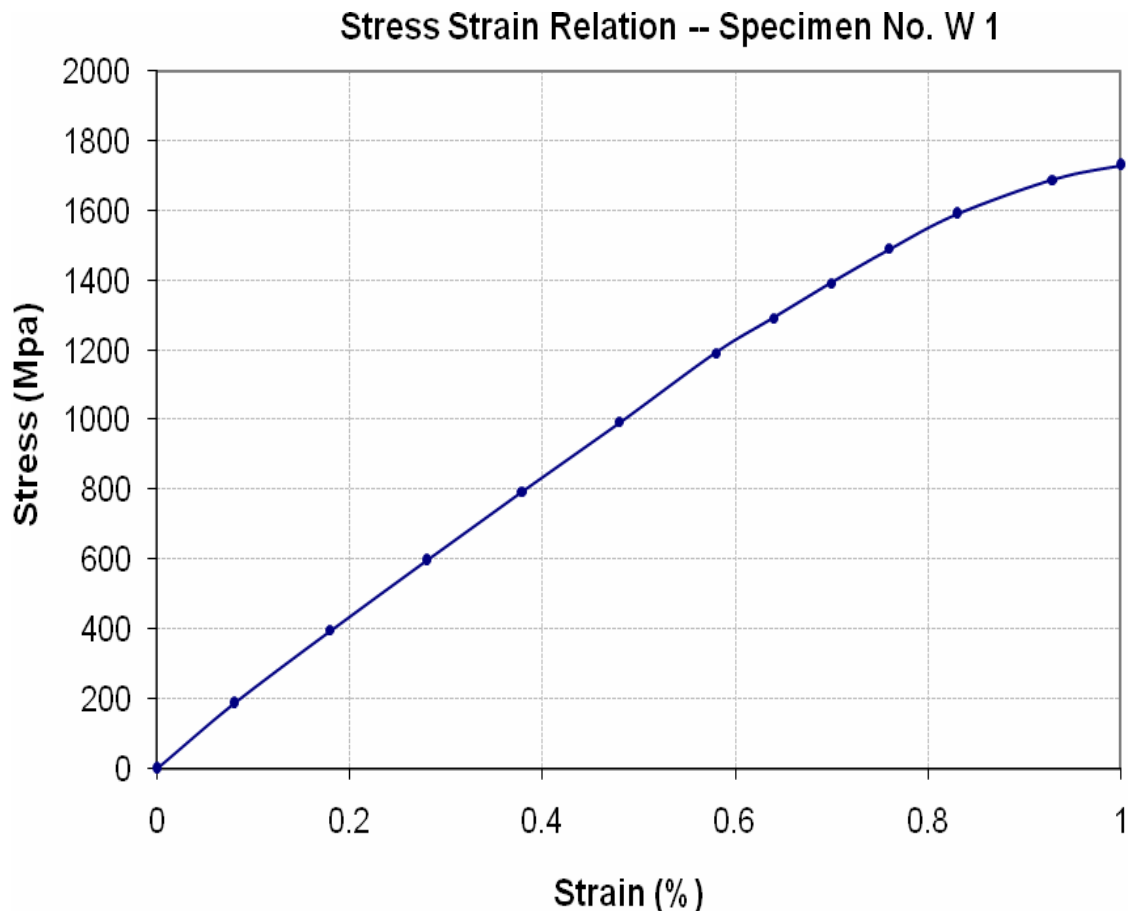
To,
Resident Engineer
AZ Engineering Associates
Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length
= 31 kms in District Gujrat
(WMI)

Reference # CED/TFL **37900** (Dr. Rizwan Azam)
Reference of the request letter # RE AZEA/GT-310

Dated: 17-02-2022

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Graph (Page – 2/4)



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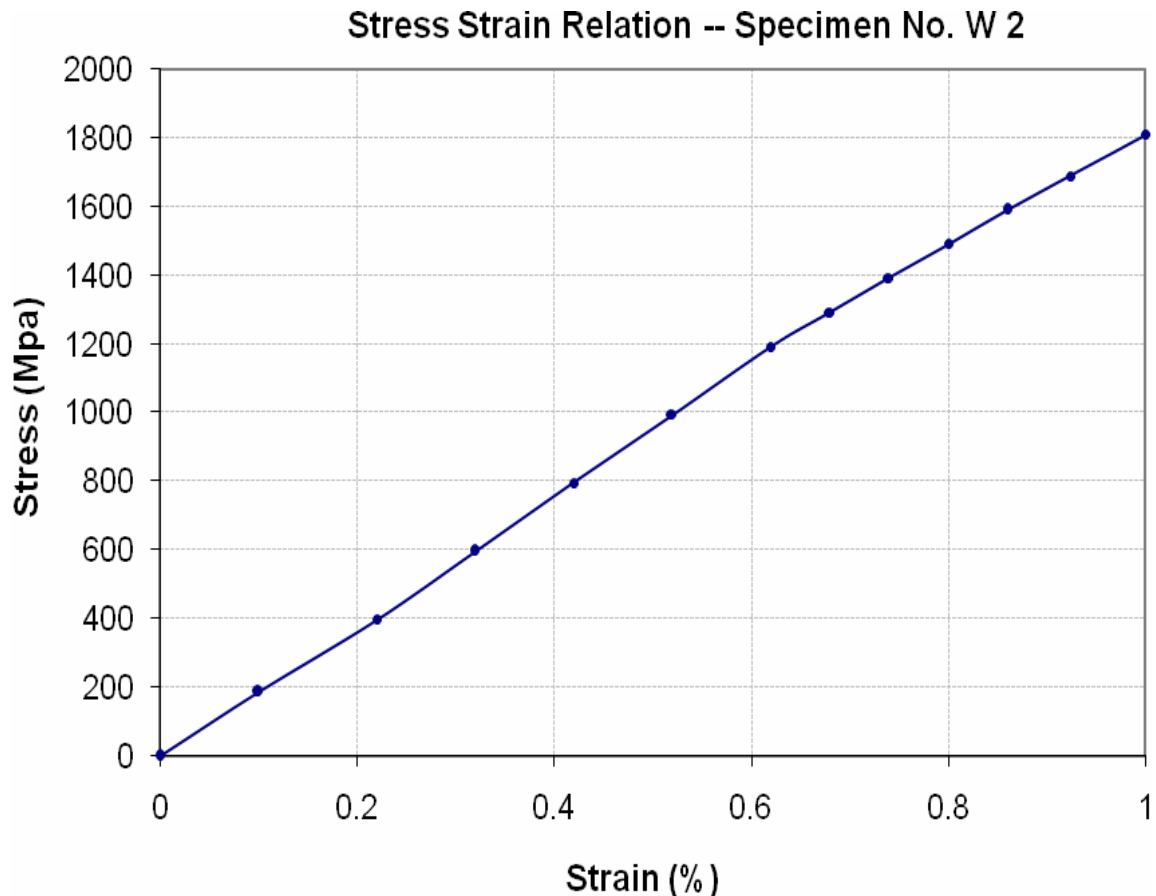
To,
Resident Engineer
AZ Engineering Associates
Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length
= 31 kms in District Gujrat
(WMI)

Reference # CED/TFL **37900** (Dr. Rizwan Azam)
Reference of the request letter # RE AZEA/GT-310

Dated: 17-02-2022

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Graph (Page – 2/4)



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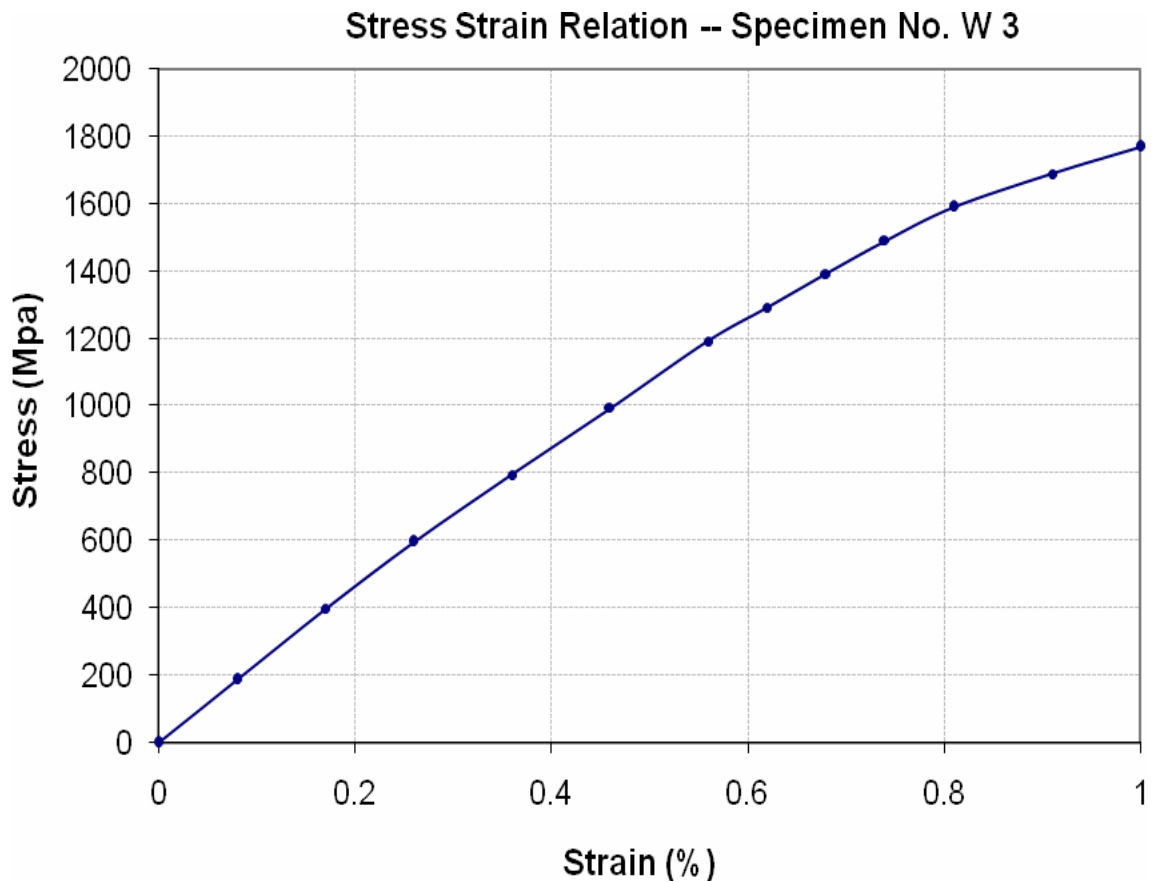
To,
Resident Engineer
AZ Engineering Associates
Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length
= 31 kms in District Gujrat
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Dated: 17-02-2022

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Graph (Page – 4/4)



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

To,
Resident Engineer
NESPAK – ACE – MMP – MWH – POYRY – DOLSAR Jv
Diamer Basha Consultants Group (DBCGL)
Diamer Basha Dam Project
(WMI)(WS-S4-2022-01)
Reference # CED/TFL **904** (Dr. Ali Ahmed)
Reference of the request letter # DBCGL/Lab/PF-JV/2022/008

Dated: 17-02-2022

Dated: 16-02-2022

Tension Test Report (Page – 1/2)

Date of Test 21-02-2022
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	1111.0	26200	257.02	28700	281.55	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only one sample 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 Laboratories
UET Lahore, Pakistan.

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To,
Resident Engineer
NESPAK – ACE – MMP – MWH – POYRY – DOLSAR Jv
Diamer Basha Consultants Group (DBCGL)
Diamer Basha Dam Project
(WMI)(WS-S4-2022-01)

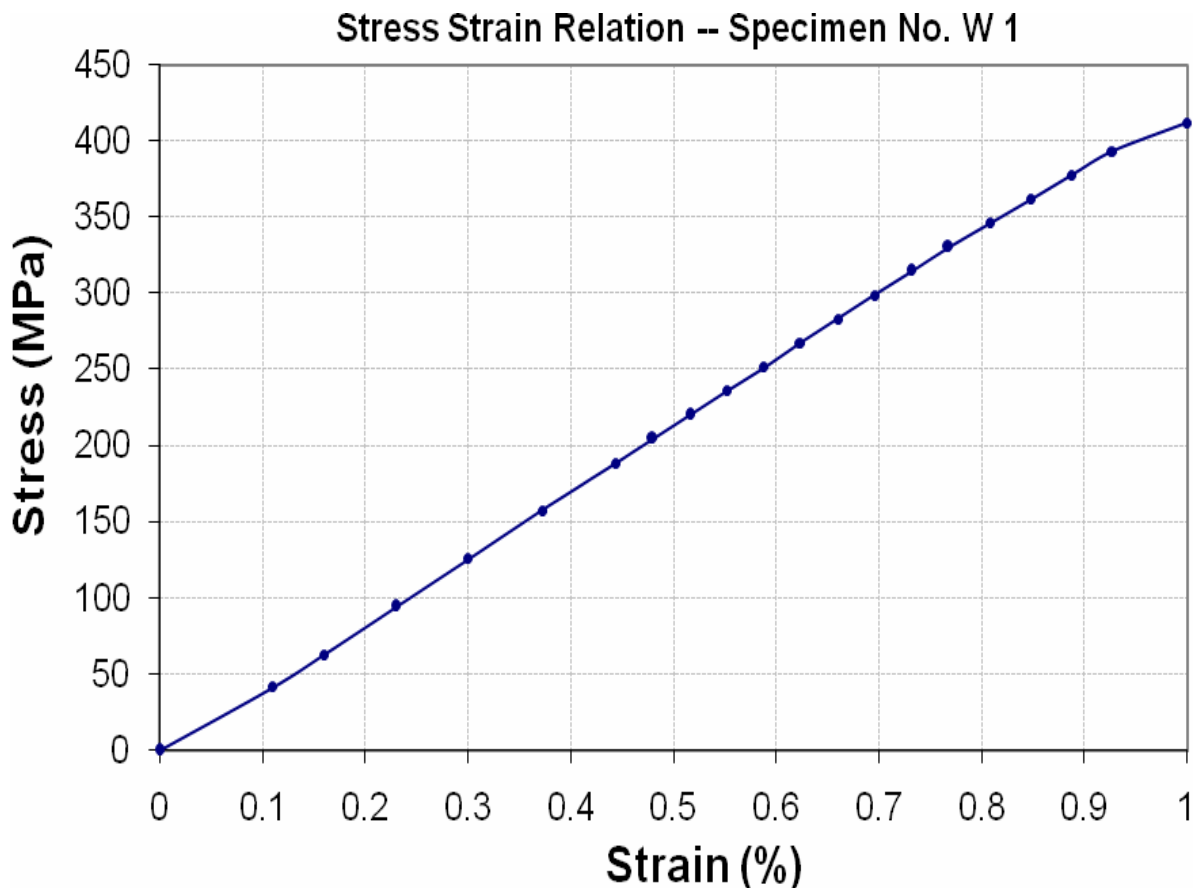
Reference # CED/TFL **904** (Dr. Ali Ahmed)

Dated: 17-02-2022

Reference of the request letter # DBCGL/Lab/PF-JV/2022/008

Dated: 16-02-2022

Graph (Page – 2/2)



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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 Director (QCD)
 WASA, LDA, Lahore
 Rainwater Management – Drainage Arrangement for Storepoint at Sheranwala Gate, Lahore
 (M/s Zealcon – AEPL- MASTIC (Jv))

Reference # CED/TFL **905** (Dr. Rizwan Azam)
 Reference of the request letter # QCD/360-61

Dated: 17-02-2022
 Dated: 15-02-2022

Tension Test Report (Page -1/1)

Date of Test 21-02-2022
 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	0.378	3	0.376	0.11	0.111	3130	4510	62800	62100	90400	89500	1.40	17.5	
2	0.383	3	0.379	0.11	0.113	3310	4590	66400	64800	92000	89900	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
 Maintenance Engineer
 University of The Punjab
 Construction School of Economics at Q.A.C. University of The Punjab, Lahore

Reference # CED/TFL 912 (Dr. Rizwan Azam)
 Reference of the request letter # D-744-ME

Dated: 18-02-2022
 Dated: 18-01-2022

Tension Test Report (Page -1/1)

Date of Test 21-02-2022
 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	0.363	3	0.369	0.11	0.107	3980	4760	79800	82170	95400	98300	1.00	12.5	
2	0.366	3	0.370	0.11	0.108	4400	5170	88200	90170	103600	106000	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														

I/C Testing Laboratoires
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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
 Bahria Town Private Limited
 Precast Slab at Pjian Drain Southern Ext. Block, Phase-I Bahria Orchard Lahore

Reference # CED/TFL **915** (Dr. Rizwan Azam)
 Reference of the request letter # QA/QC-Steel-2502

Dated: 18-02-2022
 Dated: 17-02-2022

Tension Test Report (Page -1/1)

Date of Test 21-02-2022
 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	0.407	3	0.390	0.11	0.120	4460	5450	89400	82210	109200	100500	0.90	11.3	FF Steel
2	0.406	3	0.390	0.11	0.119	3920	5050	78600	72340	101200	93200	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
University of Engineering and Technology Lahore, 54890
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To,
M/S Imran Construction
Multan
(Mehmood Textile Unit # 6, Chak Sarwar Saheed MM Road Muzaffargarh

Reference # CED/TFL **916** (Dr. Rizwan Azam)
Reference of the request letter # Nil

Dated: 18-02-2022
Dated: 18-01-2022

Tension Test Report (Page -1/1)

Date of Test 21-02-2022
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	0.373	10	9.49	0.12	0.110	3890	4990	71466	78240	91675	100400	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample 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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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
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To,
 M/S Defence Housing Authority.
 Lahore Cantt
 (Infra Dev Works of Pkg II, III & IV (Prism) of DHA Phase-9) – (M/s DHA-C)

Reference # CED/TFL 921 (Dr. Rizwan Azam)
 Reference of the request letter # 408/241/32/Lab/52/08

Dated: 21-02-2022
 Dated: 18-02-2022

Tension Test Report (Page -1/1)

Date of Test 21-02-2022
 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	0.420	3	0.397	0.11	0.123	4350	5200	87200	77640	104200	92900	1.20	15.0	Mughal Steel
2	0.416	3	0.395	0.11	0.122	4330	5200	86800	78080	104200	93800	1.00	12.5	
3	0.424	3	0.398	0.11	0.125	4330	5170	86800	76540	103600	91400	1.10	13.8	
4	0.418	3	0.396	0.11	0.123	4480	5420	89800	80340	108600	97200	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four 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														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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