



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

To,
General Manager Construction
091 Mall (Pvt) Ltd
Construction of 091 Mall at Main University Road, Peshawar

Reference # CED/TFL **37059** (Dr. Waseem Abbass)
Reference of the request letter # GM/FO/091/UET LHR/WMI/10

Dated: 17-09-2021
Dated: 08-09-2021

Tension Test Report (Page -1/4)

Date of Test 21-09-2021
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)			
1	12.70 (1/2")	775.0	778	17300	169.71	19400	190.31	199	>3.50	xx
2	12.70 (1/2")	775.0	779	16900	165.79	19400	190.31	198	>3.50	xx
3	12.70 (1/2")	775.0	778	16900	165.79	19200	188.35	199	>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

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UET Lahore, Pakistan.

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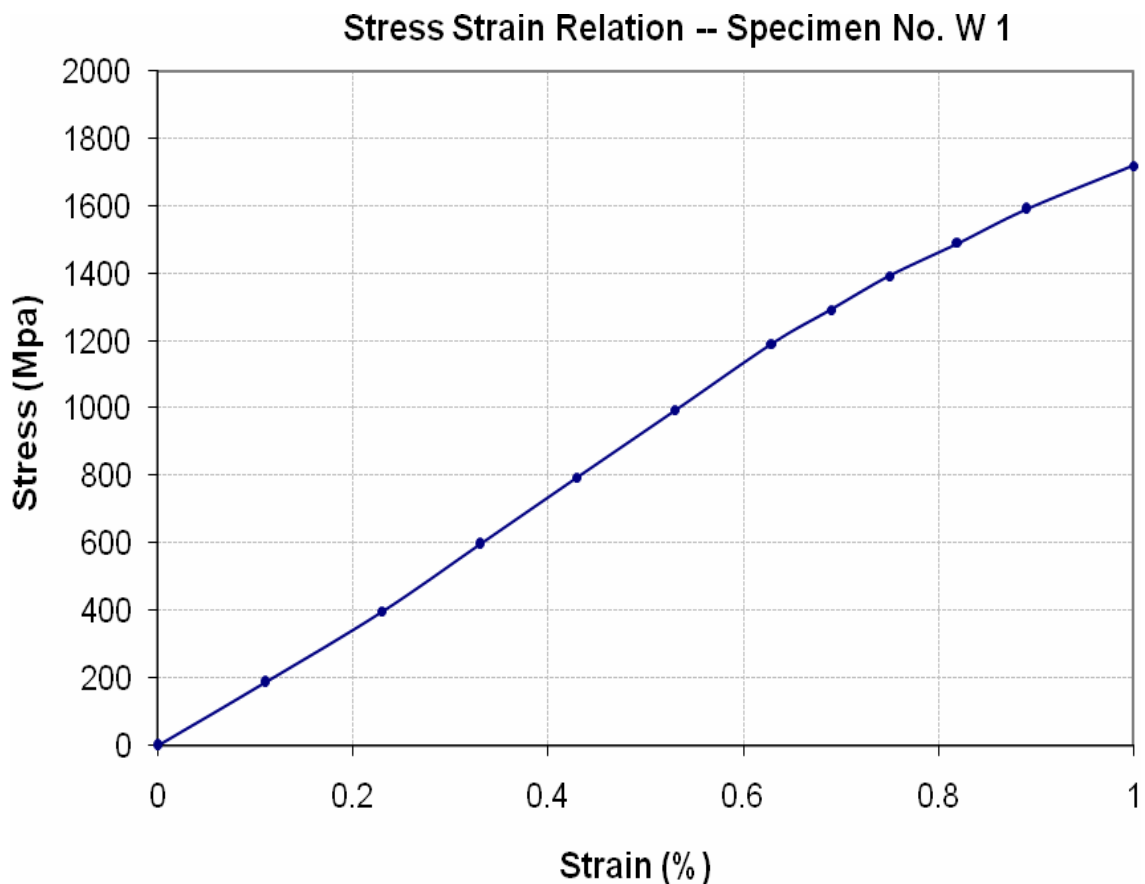
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Graph (Page – 2/4)



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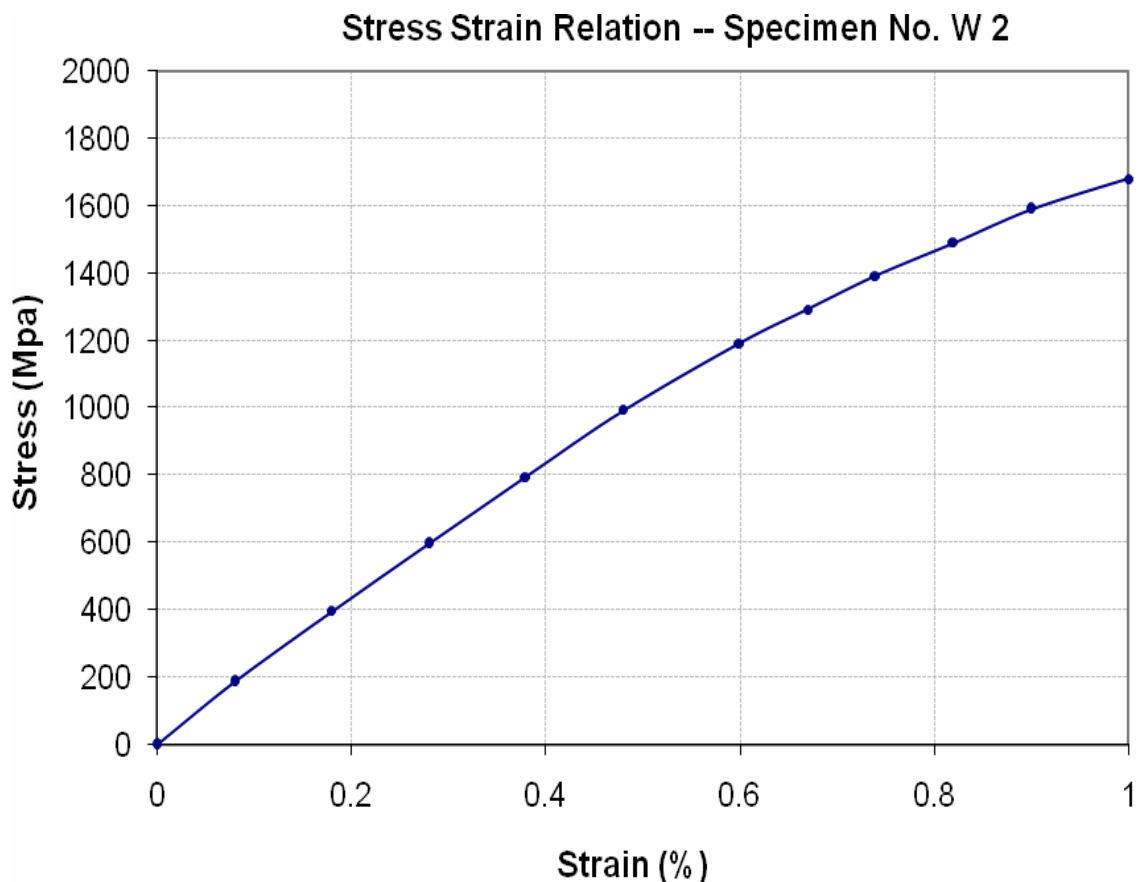
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Graph (Page – 3/4)



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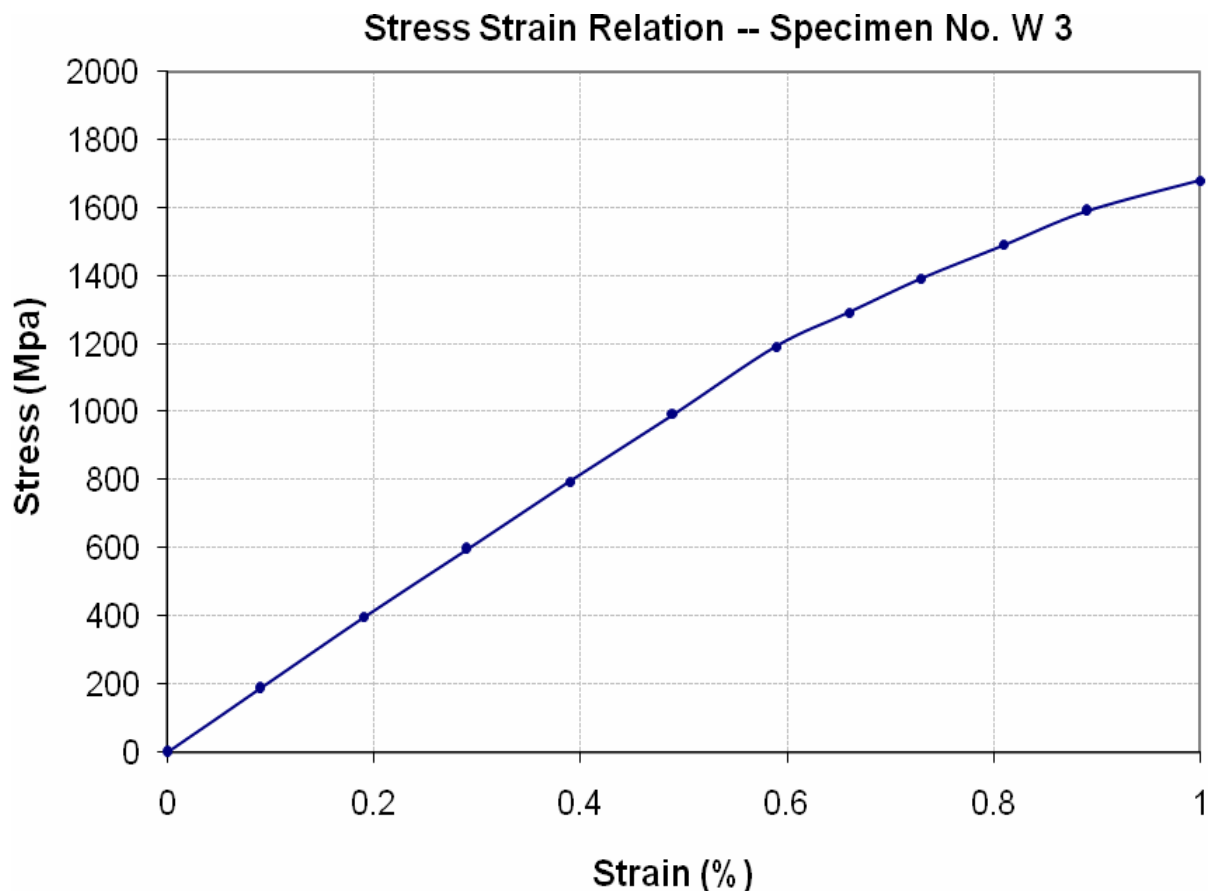
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Graph (Page – 4/4)



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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
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To,
 Manager Construction Civil
 Sitara Chemical Industries Ltd
 Ware House and Paking Material Store at Sitara Chemical Industries Ltd. 32 km Sheikhpura
 Road Faisalabad

Reference # CED/TFL **37070** (Dr. Waseem Abbass)

Dated: 20-09-2021

Reference of the request letter # Nil

Dated: 09-09-2021

Tension Test Report (Page -1/1)

Date of Test 21-09-2021

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	0.375	10	9.51	0.12	0.110	3800	5200	69812	76080	95533	104200	1.20	15.0	SJ Steel
2	0.372	10	9.48	0.12	0.109	3600	4800	66138	72530	88184	96700	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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To,
 GM Project
 Ittefaq Building Solutions Pvt Ltd
 Fauji Fresh n Freeze – Sahiwal

Reference # CED/TFL **37071** (Dr. Waseem Abbass)
 Reference of the request letter # Nil

Dated: 20-09-2021
 Dated: 20-09-2021

Tension Test Report (Page -1/1)

Date of Test 21-09-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight		Diameter/ Size		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	Nominal			Actual	Nominal	Actual	Nominal			
1	0.374	3	0.374	0.11	0.110	3300	4700	66200	66100	94200	94200	1.20	15.0		
2	0.376	3	0.375	0.11	0.111	3300	4700	66200	65740	94200	93700	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															

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To,
 Project Manager
 CCECC-MATRACON-HABIB Joint Venture
 Re-Construction & Up-gradation of Main Runway (18L/36R) at Allama Iqbal International
 Airport (AIIAP), Lahore
 (SJ Steel)

Reference # CED/TFL **37073** (Dr. Waseem Abbass) Dated: 20-09-2021

Reference of the request letter # AIIAP/CCECC-MATRACON-HABIB Jv/2021/645

Dated: 17-09-2021

Tension Test Report (Page -1/1)

Date of Test 21-09-2021

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	Heat No.
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.424	10	10.11	0.12	0.125	3900	5300	71650	69030	97370	93900	1.10	13.8	702
2	0.416	10	10.02	0.12	0.122	3900	5300	71650	70300	97370	95600	1.20	15.0	704
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: only two samples for tensile and two samples for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

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To,
 Resident Engineer
 NESPAK Jv TurkPak
 Resident Construction Supervision for Establishment of Dera Ghazi Khan Institute of
 Cardiology

Reference # CED/TFL **37076** (Dr. Waseem Abbass)

Dated: 21-09-2021

Reference of the request letter # 4161/RE/SFMKB/DGK/489

Dated: 07-09-2021

Tension Test Report (Page -1/1)

Date of Test 21-09-2021

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	0.415	3	0.394	0.11	0.122	4300	5400	86200	77640	108200	97500	1.20	15.0	Faizan Steel
2	0.414	3	0.394	0.11	0.122	4400	5400	88200	79600	108200	97700	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,
M/S Defence Housing Authority.
Lahore Cantt
(Construction of 1 Kanal Houses NGV DRGCC DHA Phase-VI) – (M/s Linker Developers (Pvt) Ltd)
Reference # CED/TFL **37078** (Dr. Waseem Abbass) Dated: 21-09-2021
Reference of the request letter # 408/241/E/Lab/135/39 Dated: 21-09-2021

Tension Test Report (Page -1/1)

Date of Test 21-09-2021
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	0.357	3	0.365	0.11	0.105	3600	5400	72200	75690	108200	113600	1.20	15.0	Afco Steel
2	0.358	3	0.366	0.11	0.105	3500	5500	70200	73360	110200	115300	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														

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