



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

To,  
Material Engineer  
NESPAK  
Up-Gradation/Dualization of Motorway Link from Kohat via Jand Pindigheb to Khushal Garh  
(Pkg-1)(W.M.I)

Reference # CED/TFL **33512** (Dr. Waseem Abbas)  
Reference of the request letter # 36264/103/JH/017

Dated: 09-07-2019  
Dated: 26-06-2019

**Tension Test Report** (Page – 1/4)

Date of Test 11-07-2019  
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	798.0	17700	173.64	19700	193.26	198	>3.50	xx
2	12.70 (1/2")	775.0	799.0	17500	171.68	19600	192.28	199	>3.50	xx
3	12.70 (1/2")	775.0	800.0	17700	173.64	19700	193.26	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

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

Note:

- 1- You can See your reports On Internet in the following web site  
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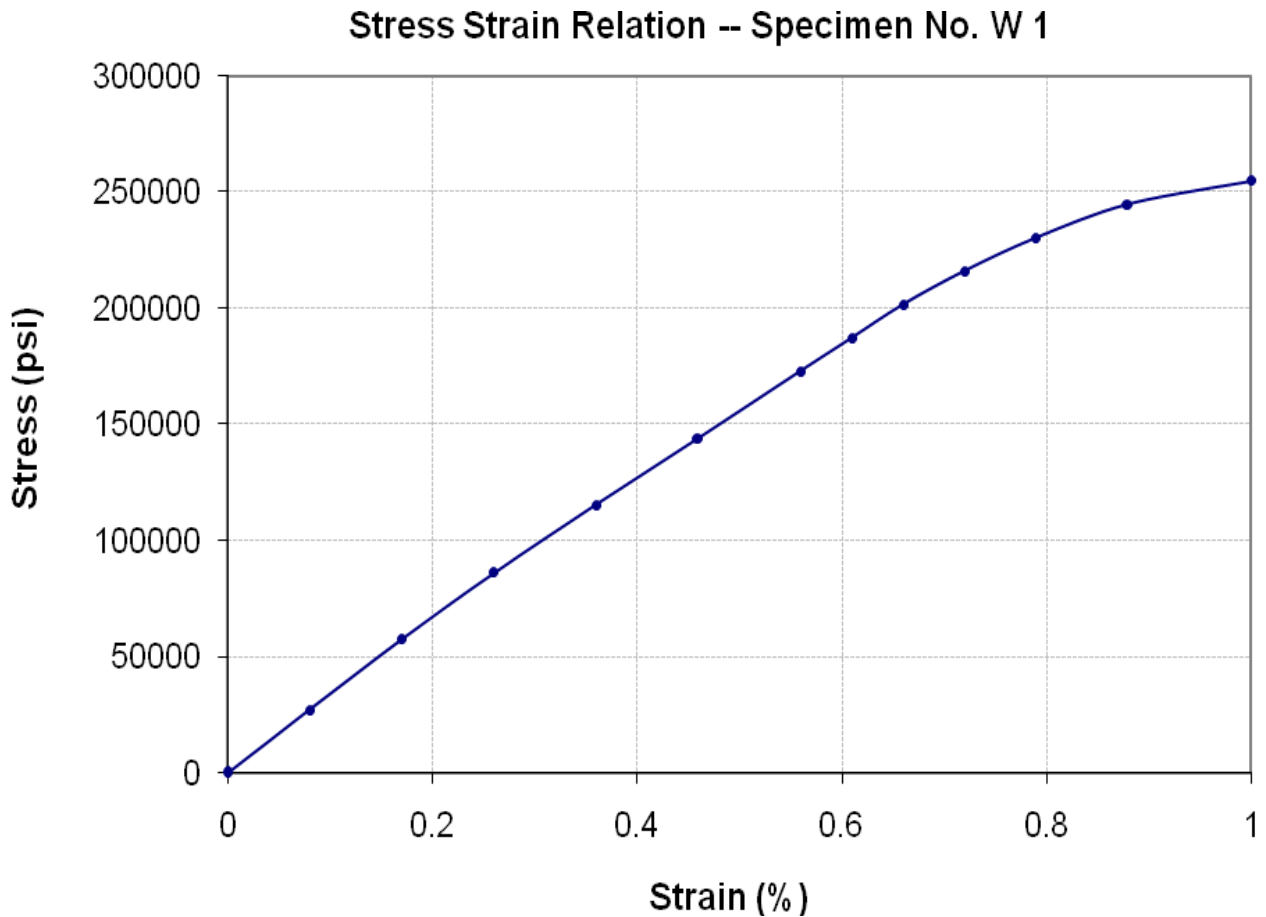
**STRUCTURAL ENGINEERING DIVISION**  
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Reference # CED/TFL **33512** (Dr. Waseem Abbas)  
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Dated: 09-07-2019  
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**Graph** (Page – 2/4)



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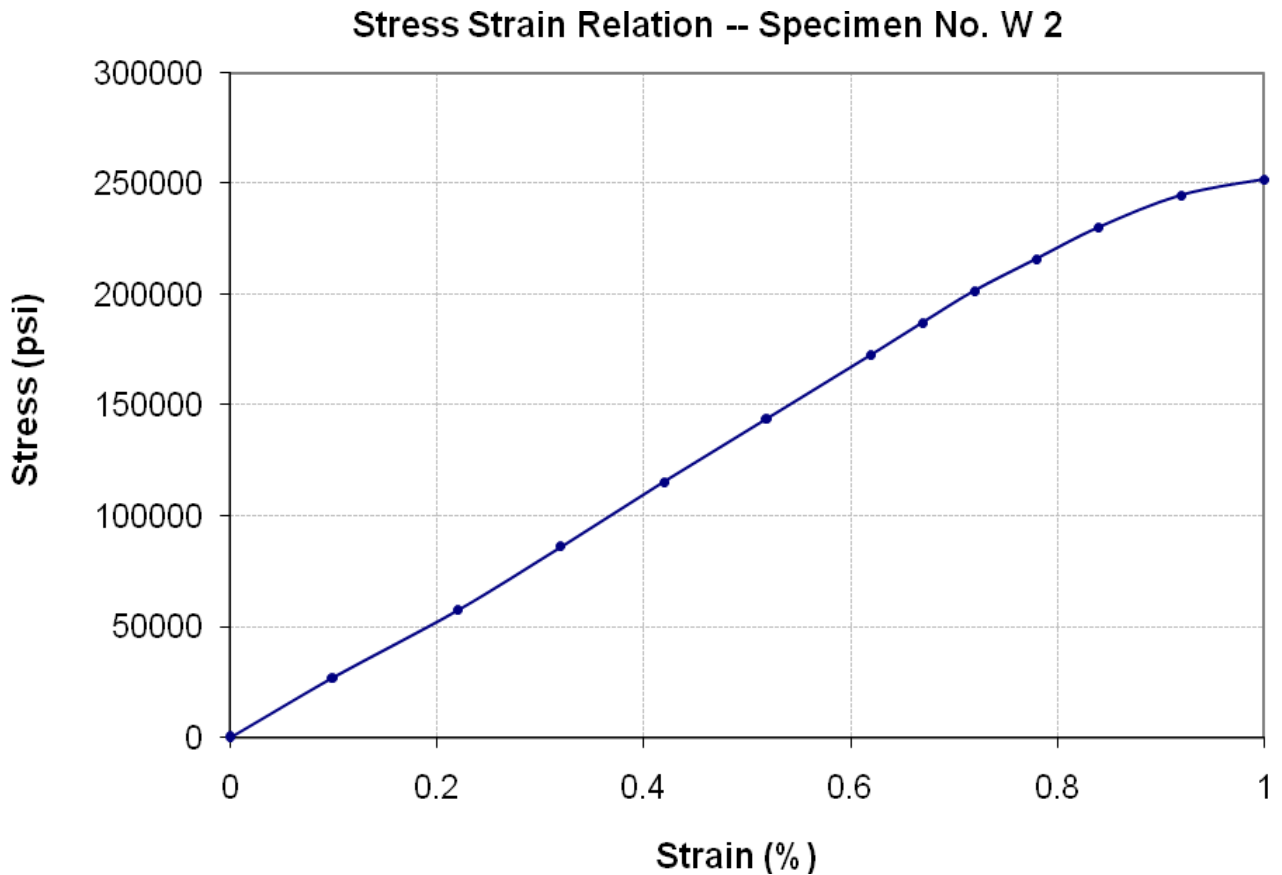
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Dated: 09-07-2019  
Dated: 26-06-2019

**Graph** (Page – 3/4)



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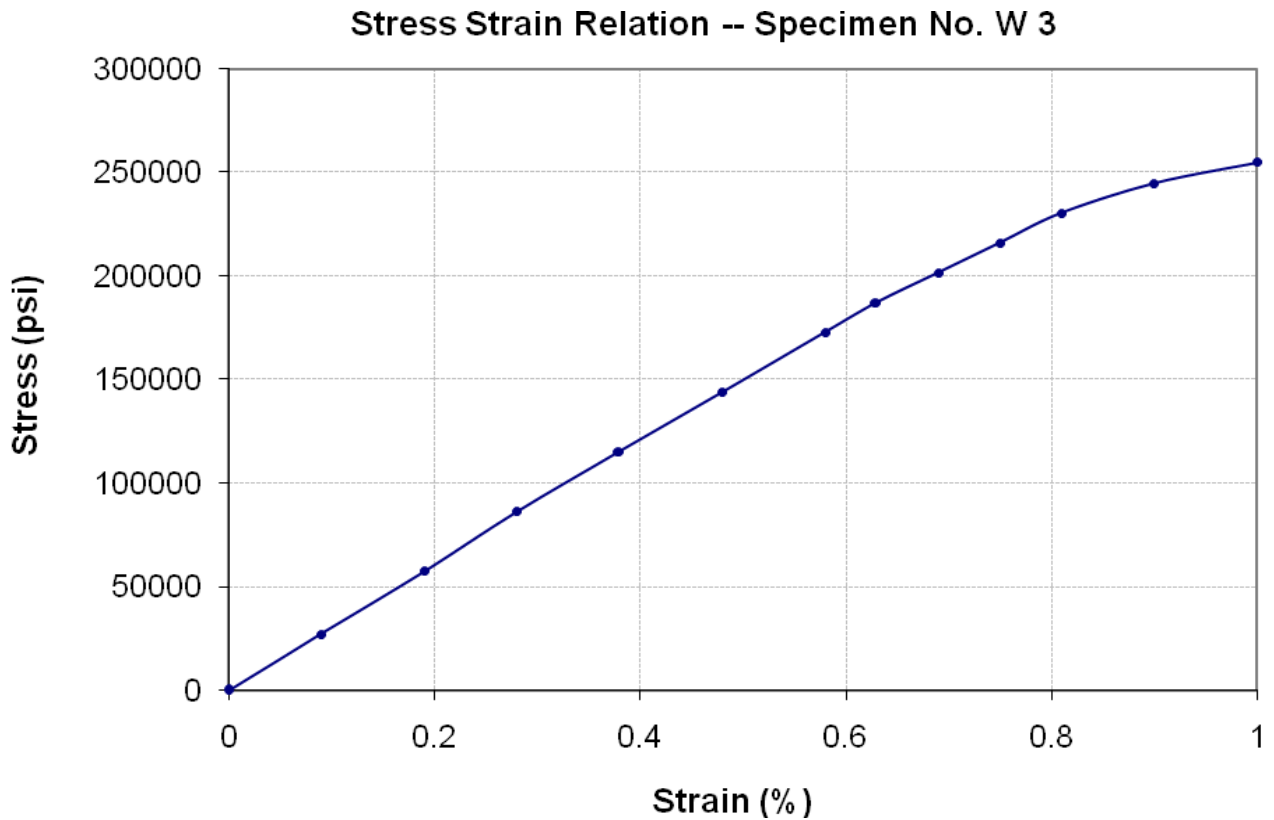
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Dated: 09-07-2019  
Dated: 26-06-2019

**Graph** (Page – 4/4)



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

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

To,  
DCRE  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project  
(Steel Complex)

Reference # CED/TFL **33519** (Dr. Waseem Abbas)  
Reference of the request letter # LSMP/RE-II/St/19/343

Dated: 09-07-2019  
Dated: 05-07-2019

**Tension Test Report** (Page – 1/9)

Date of Test 11-07-2019  
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	787.0	17900	175.60	19500	191.30	199	>3.50	xx
2	12.70 (1/2")	775.0	785.0	17600	172.66	19500	191.30	198	>3.50	xx
3	12.70 (1/2")	775.0	787.0	17600	172.66	19800	194.24	199	>3.50	xx
4	12.70 (1/2")	775.0	786.0	17500	171.68	19500	191.30	199	>3.50	xx
5	12.70 (1/2")	775.0	786.0	17200	168.73	19800	194.24	198	>3.50	xx
6	12.70 (1/2")	775.0	786.0	17700	173.64	19800	194.24	199	>3.50	xx
7	12.70 (1/2")	775.0	786.0	17600	172.66	19800	194.24	1989	>3.50	xx
8	12.70 (1/2")	775.0	787.0	18300	179.52	19700	193.26	199	>3.50	xx

**Only eight 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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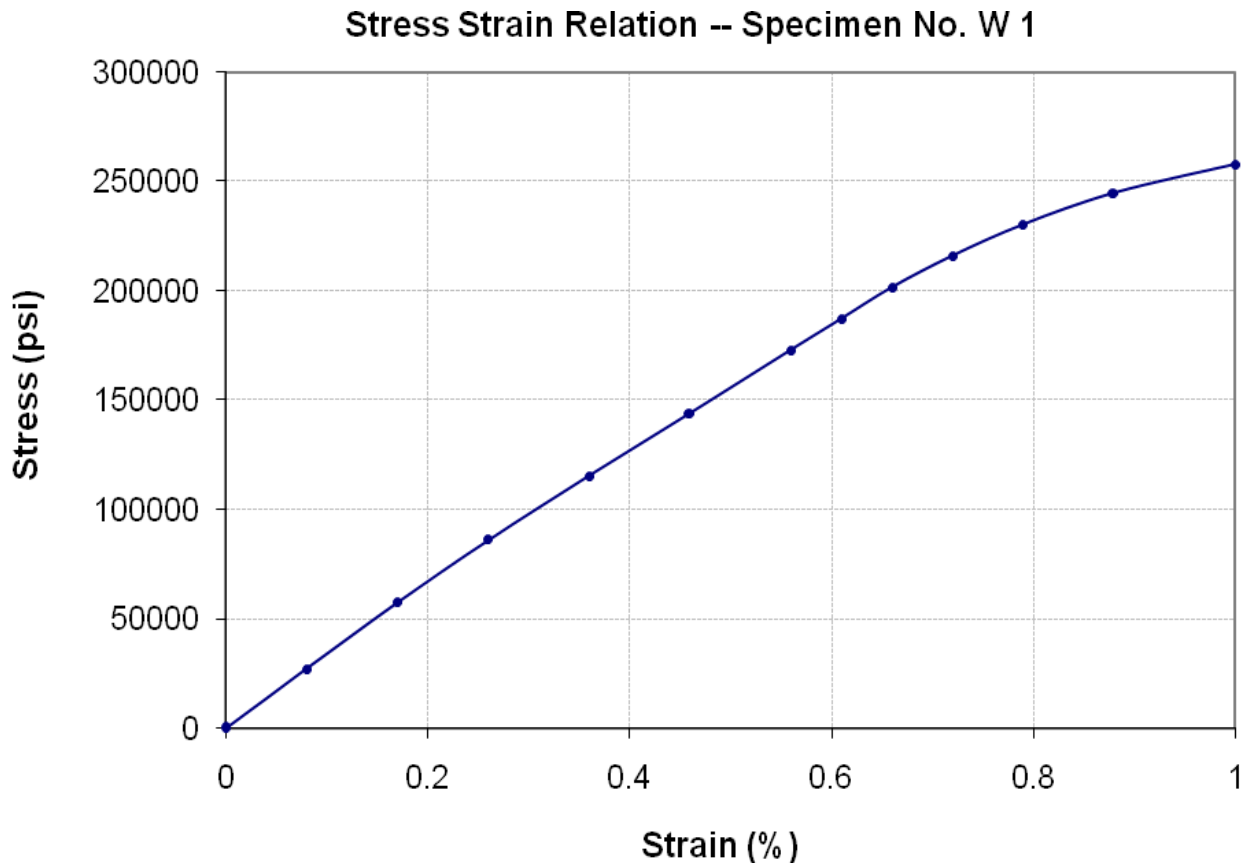
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**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
DCRE  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project  
(Steel Complex)

Reference # CED/TFL **33519** (Dr. Waseem Abbas)  
Reference of the request letter # LSMP/RE-II/St/19/343

Dated: 09-07-2019  
Dated: 05-07-2019

**Graph** (Page – 2/9)



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

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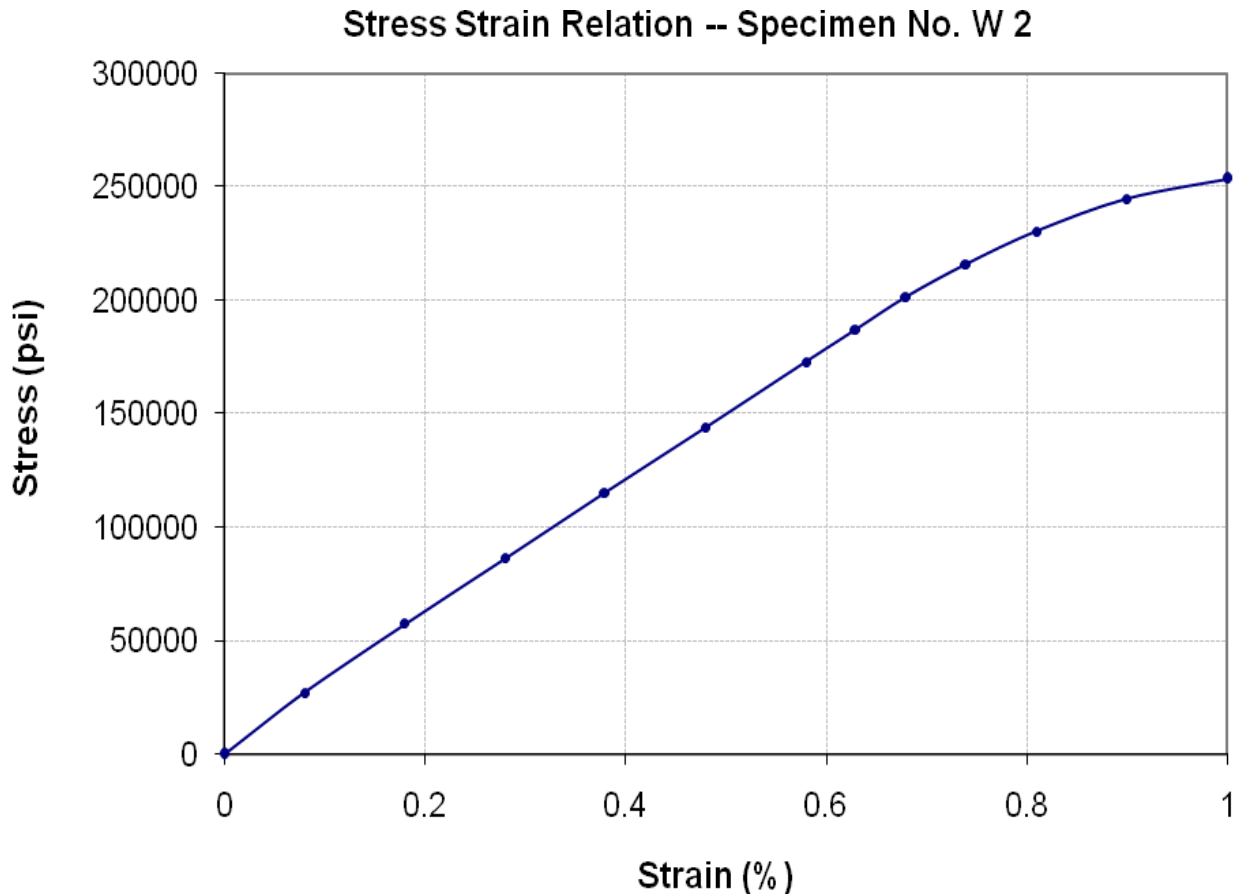
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**Department of Civil Engineering**  
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To,  
DCRE  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project  
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Reference # CED/TFL **33519** (Dr. Waseem Abbas)  
Reference of the request letter # LSMP/RE-II/St/19/343

Dated: 09-07-2019  
Dated: 05-07-2019

**Graph** (Page – 3/9)



**I/C Testing Laboratories**  
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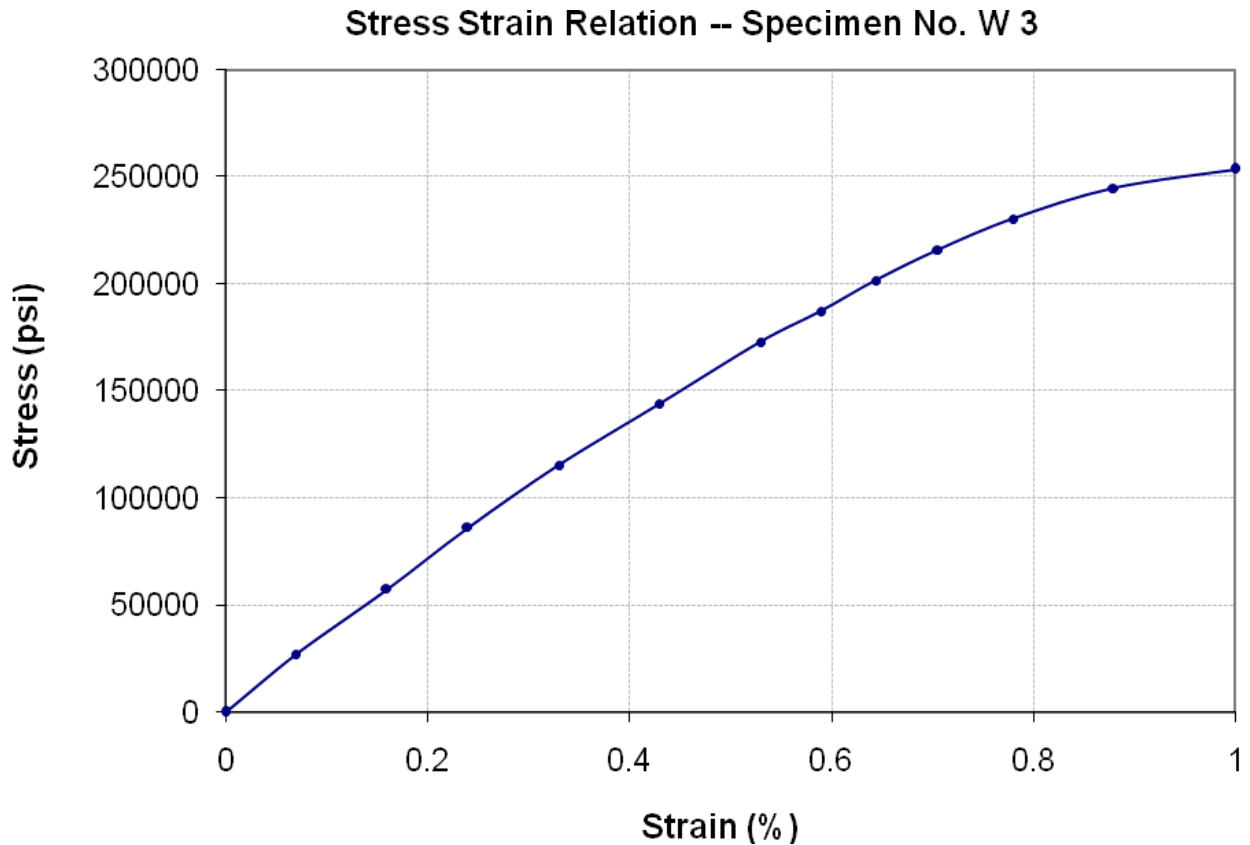
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**Department of Civil Engineering**  
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Lahore Sialkot Motorway Project  
(Steel Complex)

Reference # CED/TFL **33519** (Dr. Waseem Abbas)  
Reference of the request letter # LSMP/RE-II/St/19/343

Dated: 09-07-2019  
Dated: 05-07-2019

**Graph** (Page – 4/9)



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

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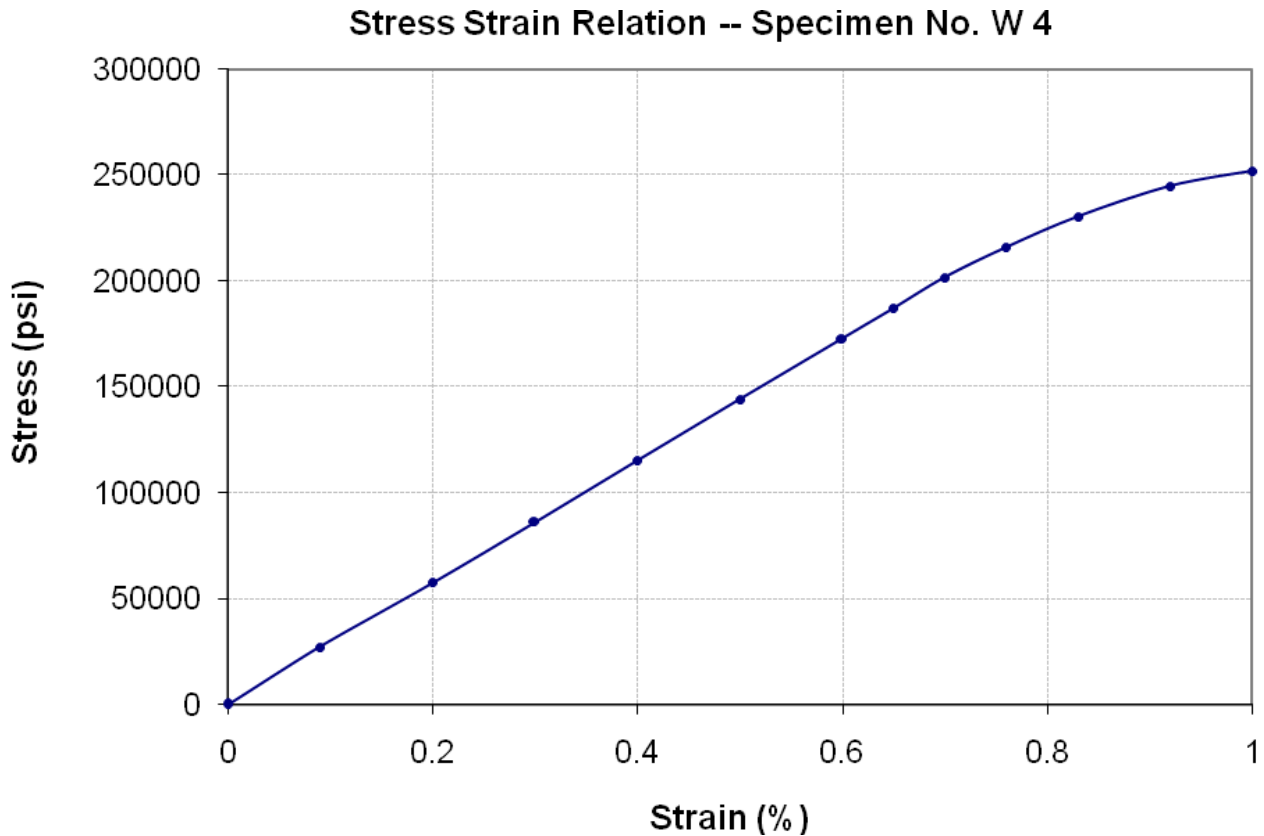
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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
DCRE  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project  
(Steel Complex)

Reference # CED/TFL **33519** (Dr. Waseem Abbas)  
Reference of the request letter # LSMP/RE-II/St/19/343

Dated: 09-07-2019  
Dated: 05-07-2019

**Graph** (Page – 5/9)



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

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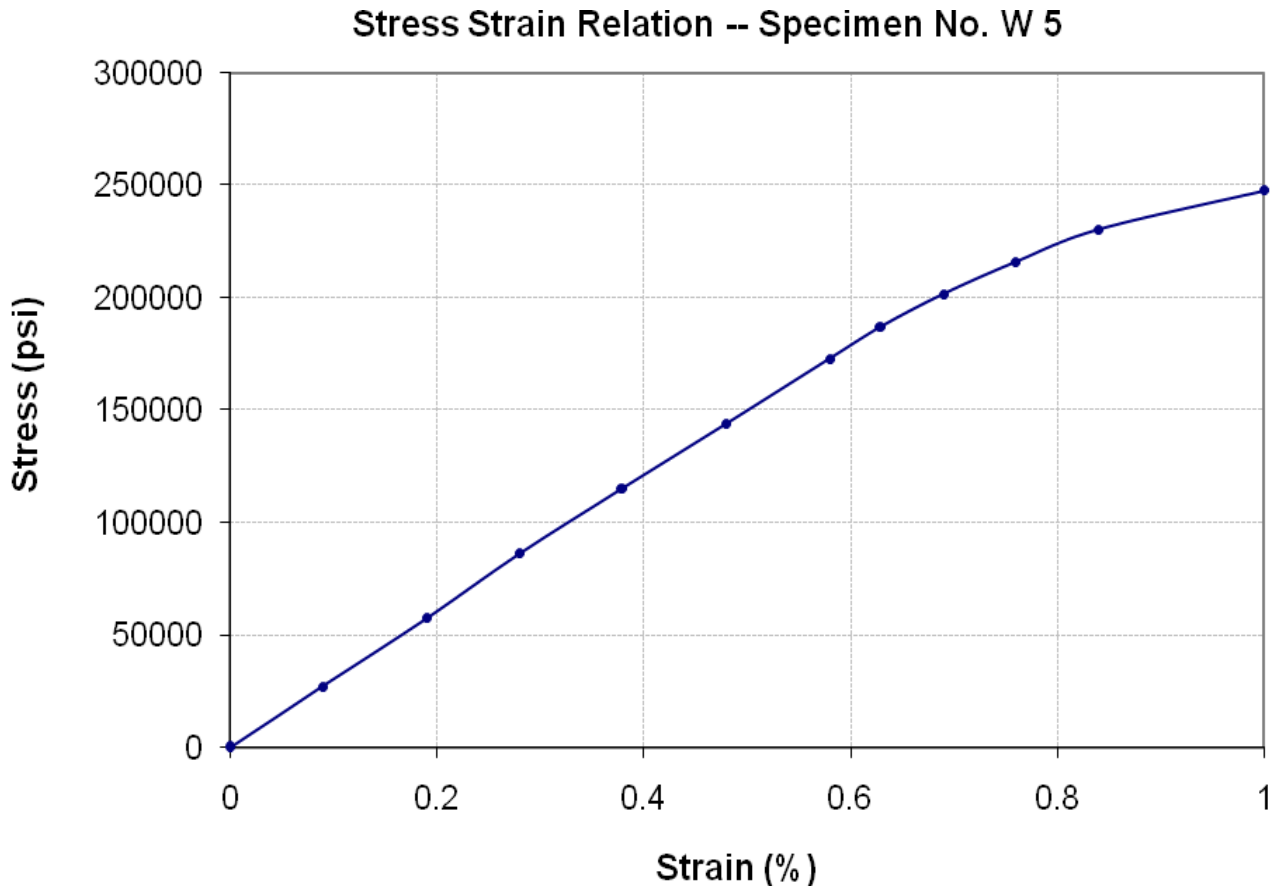
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To,  
DCRE  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project  
(Steel Complex)

Reference # CED/TFL **33519** (Dr. Waseem Abbas)  
Reference of the request letter # LSMP/RE-II/St/19/343

Dated: 09-07-2019  
Dated: 05-07-2019

**Graph** (Page – 6/9)



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

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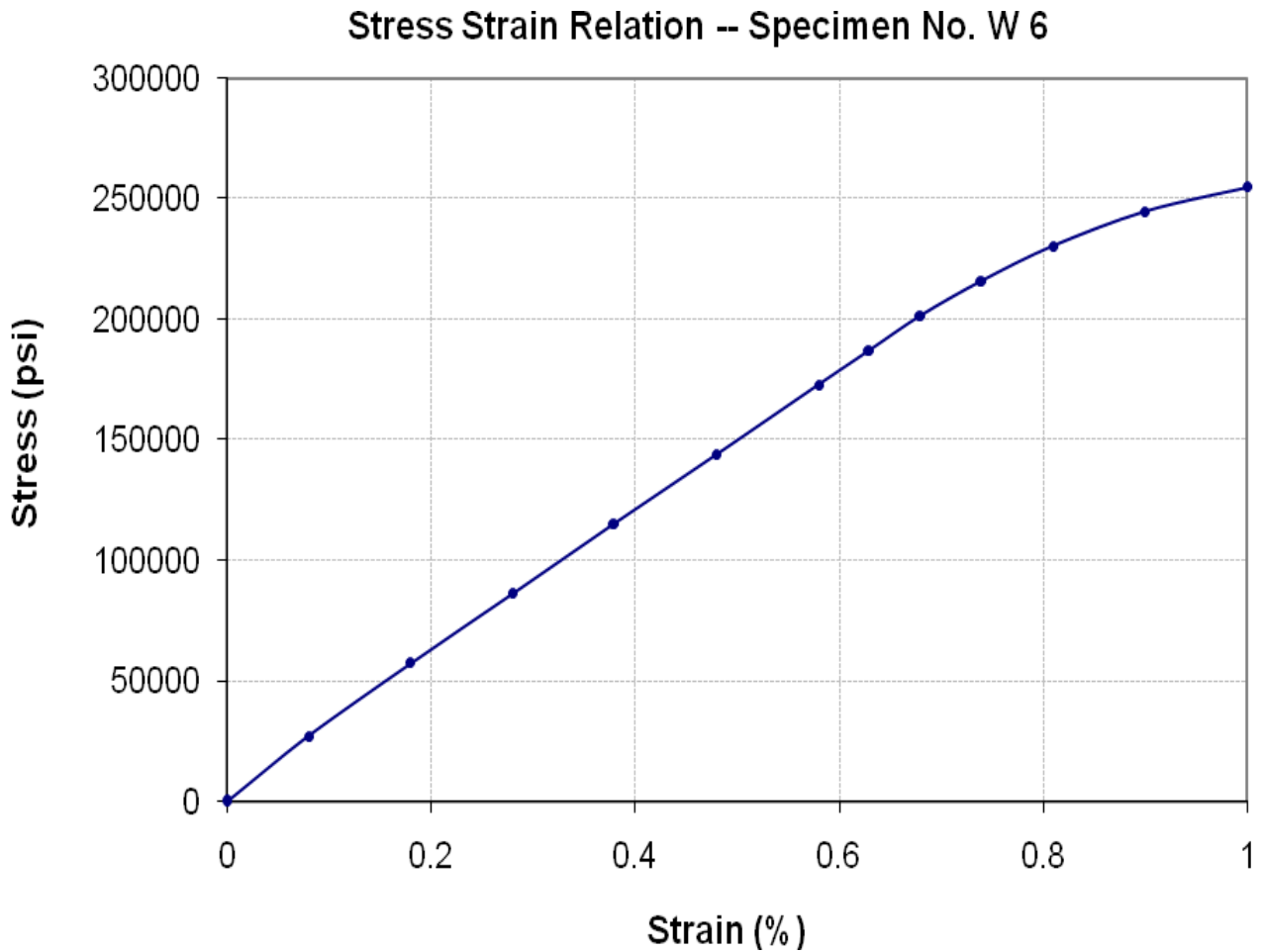
**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
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**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
DCRE  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project  
(Steel Complex)

Reference # CED/TFL **33519** (Dr. Waseem Abbas)  
Reference of the request letter # LSMP/RE-II/St/19/343

Dated: 09-07-2019  
Dated: 05-07-2019

**Graph** (Page – 7/9)



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

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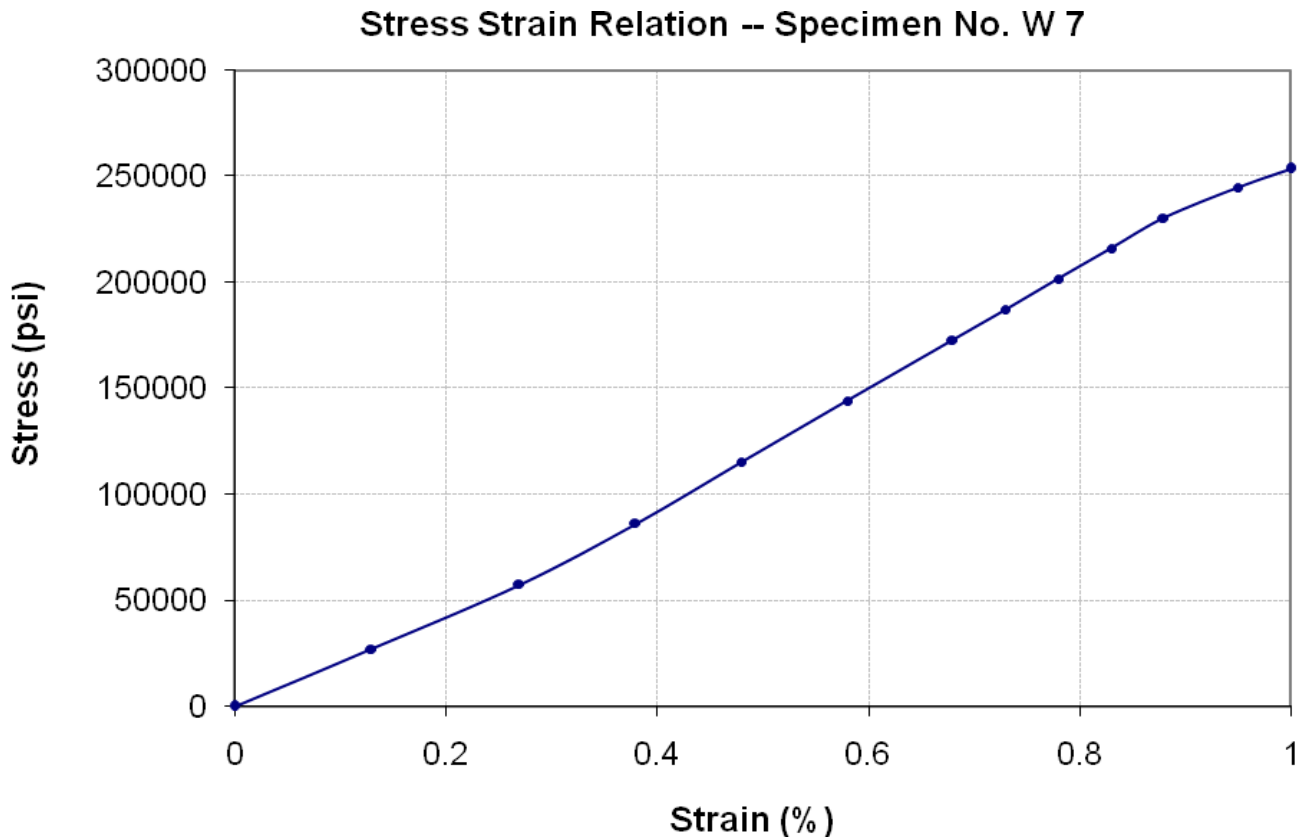
To,  
DCRE  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project  
(Steel Complex)

Reference # CED/TFL **33519** (Dr. Waseem Abbas)  
Reference of the request letter # LSMP/RE-II/St/19/343

Dated: 09-07-2019

Dated: 05-07-2019

**Graph** (Page – 8/9)



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

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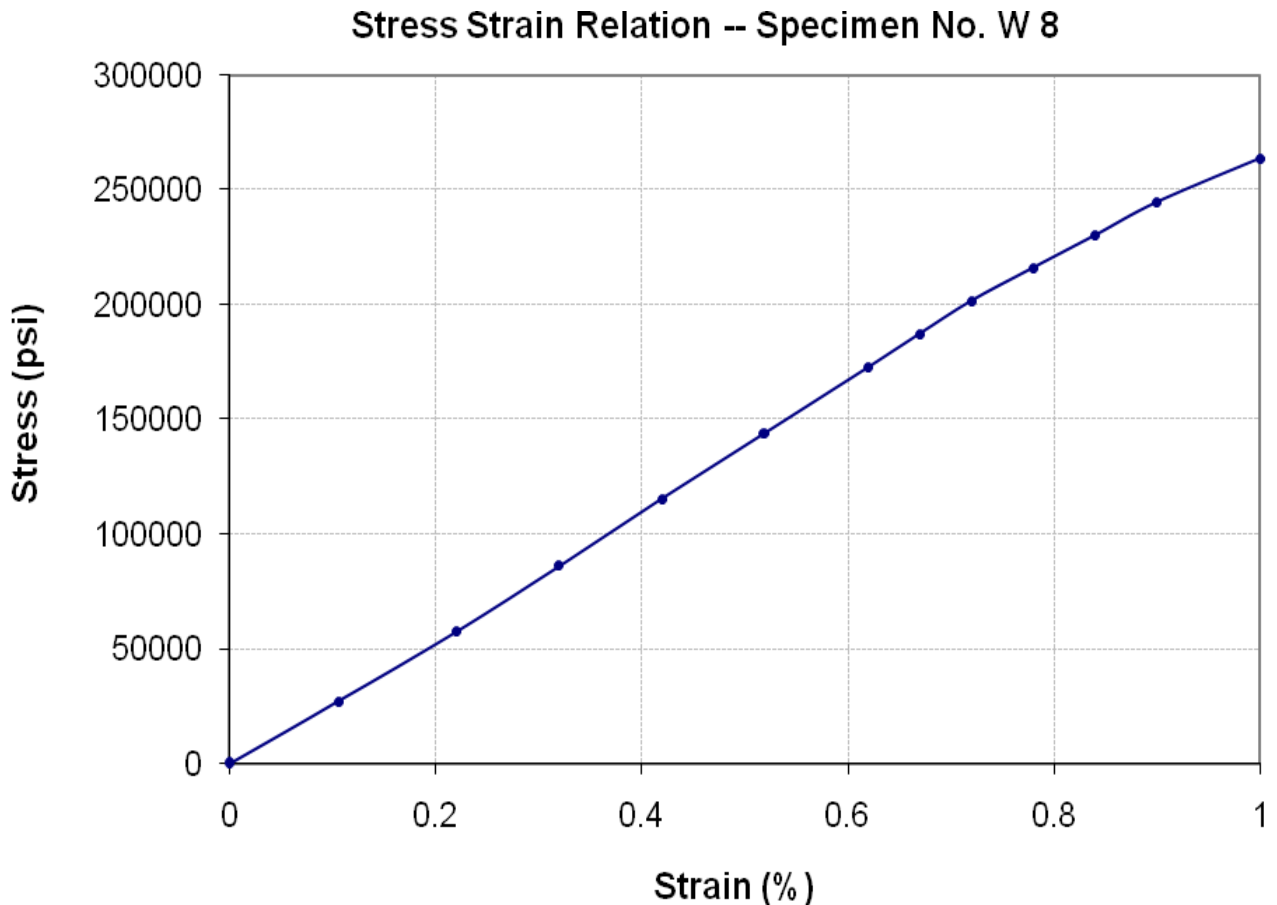
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To,  
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Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project  
(Steel Complex)

Reference # CED/TFL **33519** (Dr. Waseem Abbas)  
Reference of the request letter # LSMP/RE-II/St/19/343

Dated: 09-07-2019  
Dated: 05-07-2019

**Graph** (Page – 9/9)



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

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**STRUCTURAL ENGINEERING DIVISION**  
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To,  
M/S Defence Housing Authority.  
Lahore Cantt  
(Construction of 1-Kanal Villas at DRGCC Club House DHA Ph-6)(M/s Linker Developers  
(Pvt) Ltd)

Reference # CED/TFL **33527** (Dr. Waseem Abbas)  
Reference of the request letter # 408/241/E/Lab/635/186

Dated: 10-07-2019  
Dated: 09-07-2019

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

Date of Test 11-07-2019  
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	0.376	3	0.375	0.11	0.110	3200	4900	64200	63870	98200	97800	1.30	16.3	Ittefaq Steel
2	0.373	3	0.373	0.11	0.110	3000	4800	60200	60360	96200	96600	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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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**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 EPS Solutions  
EPS Solutions Pakistan Pvt Ltd  
(Bilal Steel Mill)

Reference # CED/TFL **33528** (Dr. Waseem Abbas)  
Reference of the request letter # BSM/EPS/Lab/003

Dated: 10-07-2019  
Dated: 10-07-2019

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

Date of Test 11-07-2019  
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 <sup>2</sup> )		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	0.413	10	9.98	0.12	0.121	3900	5200	71650	70850	95533	94500	1.30	16.3	
2	0.413	10	9.98	0.12	0.121	4100	5300	75324	74480	97370	96300	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

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

Note:

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To,  
M/S Macrise (Pvt) Ltd  
Lahore  
EPS Solutions Pakistan Pvt Ltd  
(Pak Steel)

Reference # CED/TFL **33529** (Dr. Waseem Abbas)  
Reference of the request letter # MC/EPS/Lab/004

Dated: 10-07-2019  
Dated: 10-07-2019

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

Date of Test 11-07-2019  
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 <sup>2</sup> )		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	0.387	10	9.67	0.12	0.114	4300	5600	78998	83270	102881	108500	0.90	11.3	
2	0.388	10	9.68	0.12	0.114	4200	5600	77161	81150	102881	108200	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

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

Note:

- 1- You can See your reports On Internet in the following web site  
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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,  
Asghar Khan Khalil  
Peshawar  
(Kund Cable Car)

Reference # CED/TFL **33533** (Dr. Safer Abbas)  
Reference of the request letter # Nil

Dated: 11-07-2019  
Dated: 11-07-2019

**Tension Test Report** (Page – 1/1)

Date of Test 11-07-2019  
Gauge length -----  
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Yield Load	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	(kg)	
1	30	3.85	-----	42200	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
-	-	-	-	-	
<b>Only one sample for Test</b>					

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

**Note:**

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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,  
RE (Roads)  
NESPAK, Mansehra  
Reconstruction & Rehabilitation of Bridge on Shergarh Kumharian Road

Reference # CED/TFL **33536** (Dr. Asif Hameed)  
Reference of the request letter # 2778/3321/GA/02/-10987

Dated: 11-07-2019  
Dated: 10-07-2019

**Tension Test Report** (Page – 1/2)

Date of Test 11-07-2019  
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	779.0	17800	174.62	19600	192.28	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
<b>Only one sample for Test</b>										

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:

- 1- You can See your reports On Internet in the following web site  
[http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\\_reports](http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports)
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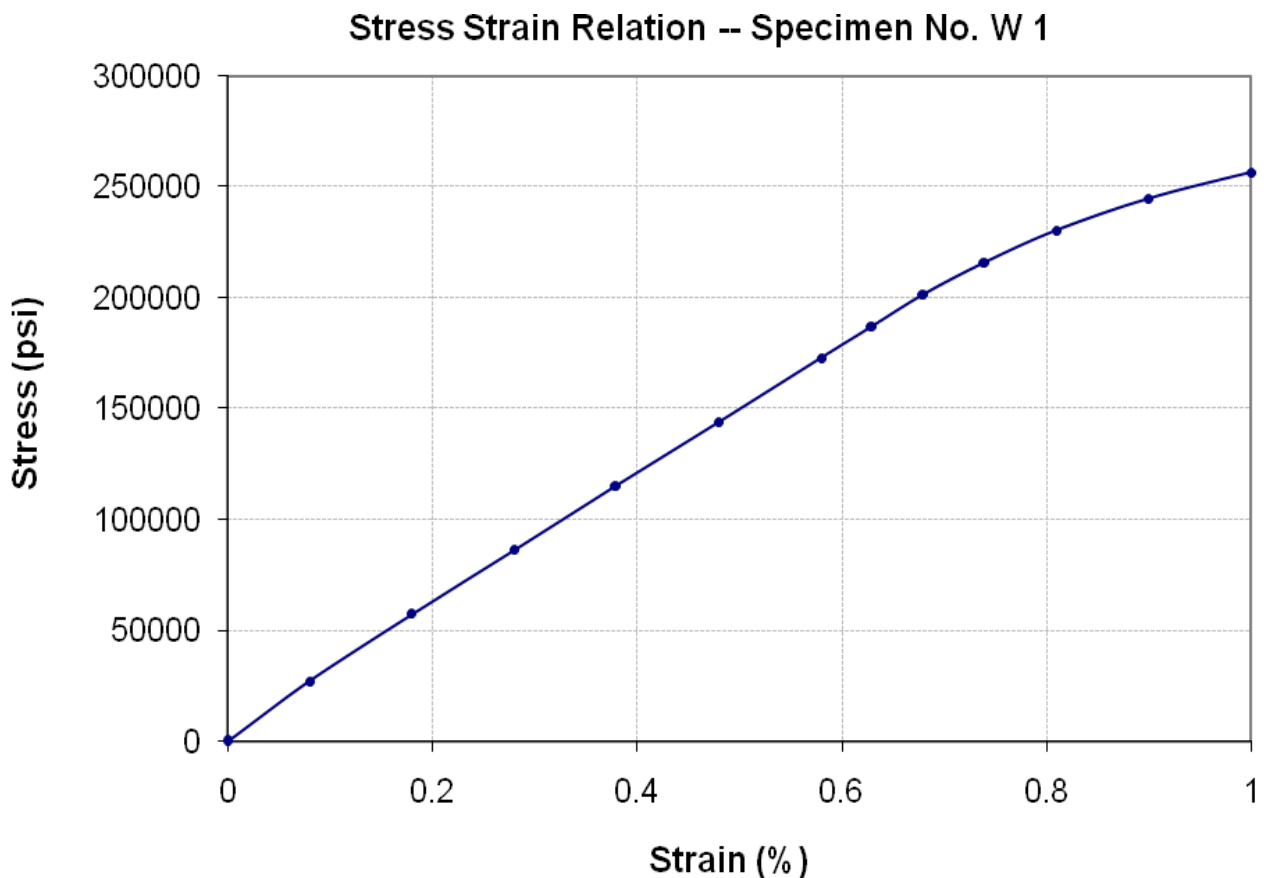
**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
RE (Roads)  
NESPAK, Mansehra  
Reconstruction & Rehabilitation of Bridge on Shergarh Kumharian Road

Reference # CED/TFL **33536** (Dr. Asif Hameed)  
Reference of the request letter # 2778/3321/GA/02/-10987

Dated: 11-07-2019  
Dated: 10-07-2019

**Graph** (Page – 2/2)



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

**Note:**

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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,  
 Project Manager  
 Maypole Lime Light (Front Building)

Reference # CED/TFL **33537** (Dr. Safer Abbas)  
 Reference of the request letter # MLL-02

Dated: 11-07-2019  
 Dated: 11-07-2019

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

Date of Test 11-07-2019  
 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	0.419	3	0.396	0.11	0.123	5220	5880	104600	93510	117900	105400	0.80	10.0	
2	0.420	3	0.397	0.11	0.123	5710	6290	114500	101920	126100	112300	0.60	7.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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

Note:

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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,  
M/S Defence Housing Authority.  
Lahore Cantt  
(Const of Kennel Hospital Sector-E (Extn) DHA Ph-6)(M/s Fauz Engrs)

Reference # CED/TFL **33538** (Dr. Safer Abbas)  
Reference of the request letter # 408/241/E/Lab/638

Dated: 11-07-2019  
Dated: 10-07-2019

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

Date of Test 11-07-2019  
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	0.371	3	0.373	0.11	0.109	3230	4860	64800	65300	97400	98300	1.10	13.8	CitySteel
2	0.371	3	0.373	0.11	0.109	3180	4890	63800	64210	98000	98800	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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**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/07/33539

Dated: 11-07-19

To,  
DCRE/RE-1  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/33539) (Page -1/2)

Reference to your Letter No. LSM/RE-I/2019/932, Dated: 10/07/2019 on the subject cited above. One Pressure Gauge No. AES-3401 as received by us has been calibrated. The results are tabulated as under:

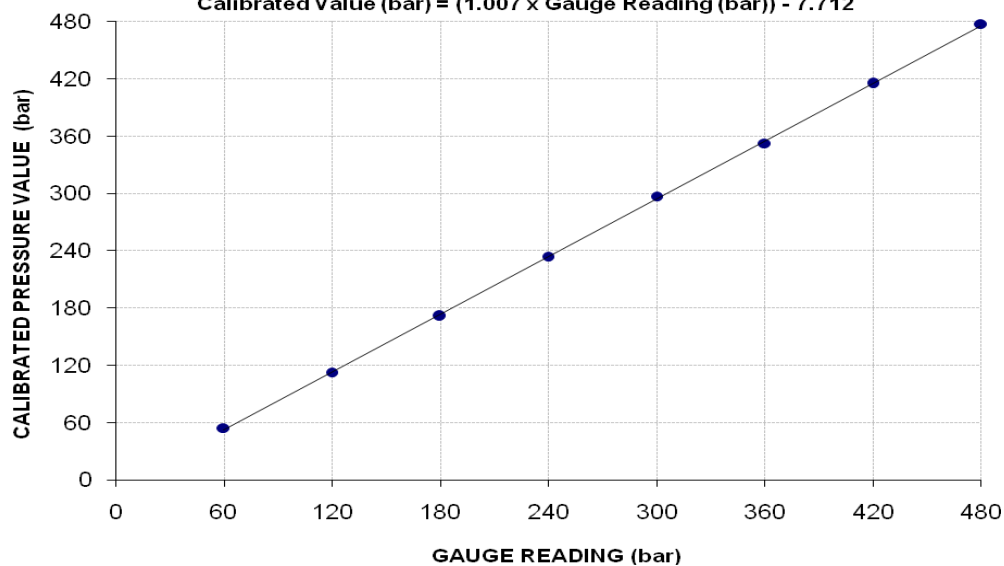
**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 480 (bar)**

Pressure Gauge Reading (bar)	60	120	180	240	300	360	420	480
Calibrated Load (kg)	11000	22800	34600	47200	60000	71200	83800	96400
Calibrated Pressure (bar)	54.48	112.93	171.37	233.78	297.18	352.66	415.06	477.47

The Ram Are use for Calibration = 198 cm<sup>2</sup>

**Calibration Curve for Pressure Gauge No. AES-3401**

Calibrated Value (bar) = (1.007 x Gauge Reading (bar)) - 7.712



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

Note:

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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**

Ref: CED/TFL/07/33539

Dated: 11-07-19

To,  
DCRE/RE-1  
Zeeruk International (Pvt) Ltd  
Lahore Sialkot Motorway Project

Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/07/33539) (Page -2/2)

Reference to your Letter No. LSM/RE-I/2019/932, Dated: 10/07/2019 on the subject cited above. One Pressure Gauge No. AES-3402 as received by us has been calibrated. The results are tabulated as under:

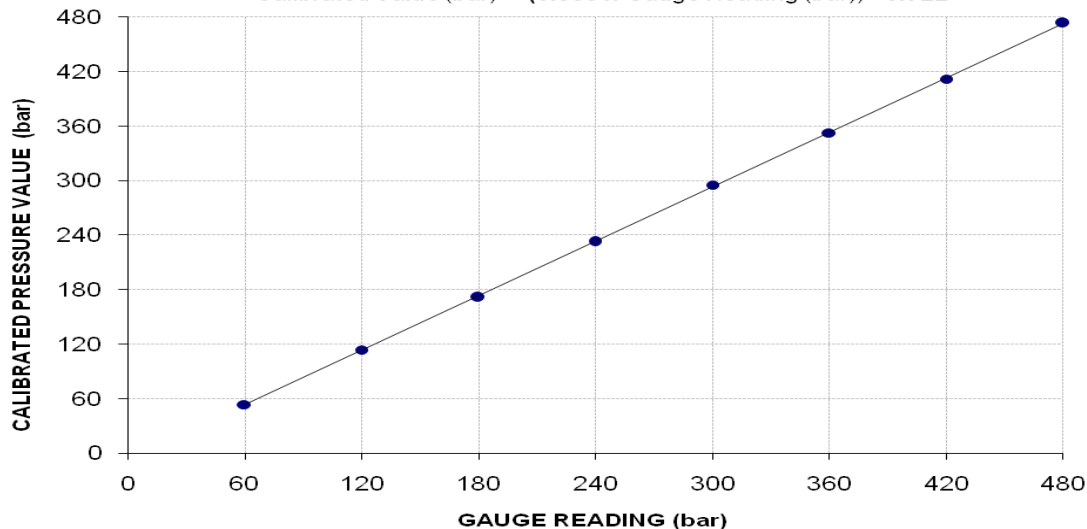
**Total Range : Zero - 1000 (bar)**  
**Calibrated Range : Zero - 480 (bar)**

Pressure Gauge Reading (bar)	60	120	180	240	300	360	420	480
Calibrated Load (kg)	10800	23000	34600	47000	59600	71200	83200	95600
Calibrated Pressure (bar)	53.49	113.92	171.37	232.79	295.20	352.66	412.09	473.51

The Ram Area used for Calibration = 198 cm<sup>2</sup>

**Calibration Curve for Pressure Gauge No. AES-3402**

Calibrated Value (bar) = (0.999 x Gauge Reading (bar)) - 6.722



**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  
G3 Engineering Consultant (Pvt) Ltd  
Construction of Infrastructure and Allied at Rachna Industrial Parks at District Sheikhpura.  
Phase-II (BSM)  
Reference # CED/TFL **33540** (Dr. Safer Abbas) Dated: 11-07-2019  
Reference of the request letter # G-3/0207/10450 Dated: 11-07-2019

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

Date of Test 11-07-2019  
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	0.385	3	0.379	0.11	0.113	3690	4610	74000	71940	92400	89900	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Note: only one sample for tensile and one sample for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

Witness by M Asif (Material Engr. G3 Consultant)

I/C Testing Laboratoires  
UET Lahore, Pakistan.

Note:

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