



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

To,  
Construction Manager  
Guarantee Engineers (Pvt) Ltd  
Construction of Beaconhouse School System TNS 2 Gulberg-III Lahore

Reference # CED/TFL **37617** (Dr. Nauman Khurram)  
Reference of the request letter # TNS/GE/ST/007

Dated: 29-12-2021  
Dated: 29-12-2021

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

Date of Test 31-12-2021  
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 <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	0.376	10	9.53	0.12	0.111	3740	4610	68710	74600	84693	92000	1.10	13.8	
2	0.380	10	9.58	0.12	0.112	4000	5050	73487	78840	92777	99600	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														

Witness by Muhammad Ali Khan (Assistant Manager.)

**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)
- 2- The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,  
 Manager Projects (IDAP)  
 Infrastructure Development Authority of The Punjab  
 Construction of Government Officers Residences (GOR) in South Punjab Multan Secretariat

Reference # CED/TFL **37625** (Engr. Amina Rajput)

Dated: 30-12-2021

Reference of the request letter # GOR-Multan/IDAP/2021/07

Dated: 22-12-2021

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

Date of Test 31-12-2021

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 <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	0.372	3	0.373	0.11	0.109	3700	5200	74200	74620	104200	104900	0.90	11.3	FF Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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,  
 Director Projects  
 Innovative (R) Construction Company  
 National Furnisher Gujrat

Reference # CED/TFL **37627** (Engr. Amina Rajput)  
 Reference of the request letter # ICL/NF/GJT/01/01

Dated: 30-12-2021  
 Dated: 30-12-2021

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

Date of Test 31-12-2021  
 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 <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	0.410	3	0.392	0.11	0.121	3900	5300	78200	71250	106200	96900	1.40	17.5	
2	0.402	3	0.388	0.11	0.118	3700	5100	74200	68940	102200	95100	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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 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 Beacon Impex  
 34 – km Sheikhpura Road, Faisalabad  
 (Construction of Multi Story Building for Cutting & Kntting at Beacon Impex.)  
 (M/s M. Saleem Construction Company)

Reference # CED/TFL **37629** (Engr. Amina Rajput)  
 Reference of the request letter # B.I/CIVIL/21-131

Dated: 30-12-2021  
 Dated: 29-12-2021

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

Date of Test 31-12-2021  
 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 <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	0.398	3	0.386	0.11	0.117	3100	4500	62200	58410	90200	84800	1.60	20.0	Farooq Supreme
2	0.409	3	0.391	0.11	0.120	3100	4600	62200	56840	92200	84400	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<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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**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
 Muddasir Ali  
 Lahore

Reference # CED/TFL **37630** (Engr. Amina Rajput)  
 Reference of the request letter # Nil

Dated: 30-12-2021  
 Dated: 30-12-2021

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

Date of Test 31-12-2021  
 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 <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	4.373	10	1.279	1.27	1.285	37000	55000	64300	63450	95500	94400	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only one sample for tensile and one sample for bend test</b>														
Bend Test														
#10 Bar Bend Test Through 180° is Satisfactory														

**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 – I  
NESPAK  
Construction of Sheranwala Flyover, Lahore  
(WMI)

Reference # CED/TFL **37632** (Dr. Usman Akmal)  
Reference of the request letter # 3772/SF/103/MWA/04/217

Dated: 30-12-2021  
Dated: 29-12-2021

**Tension Test Report** (Page -1/2)

Date of Test 31-12-2021  
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)	GPa		
1	12.70 (1/2")	775.0	780.0	17300	169.71	19600	192.28	199	>3.50	23148
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
<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.**

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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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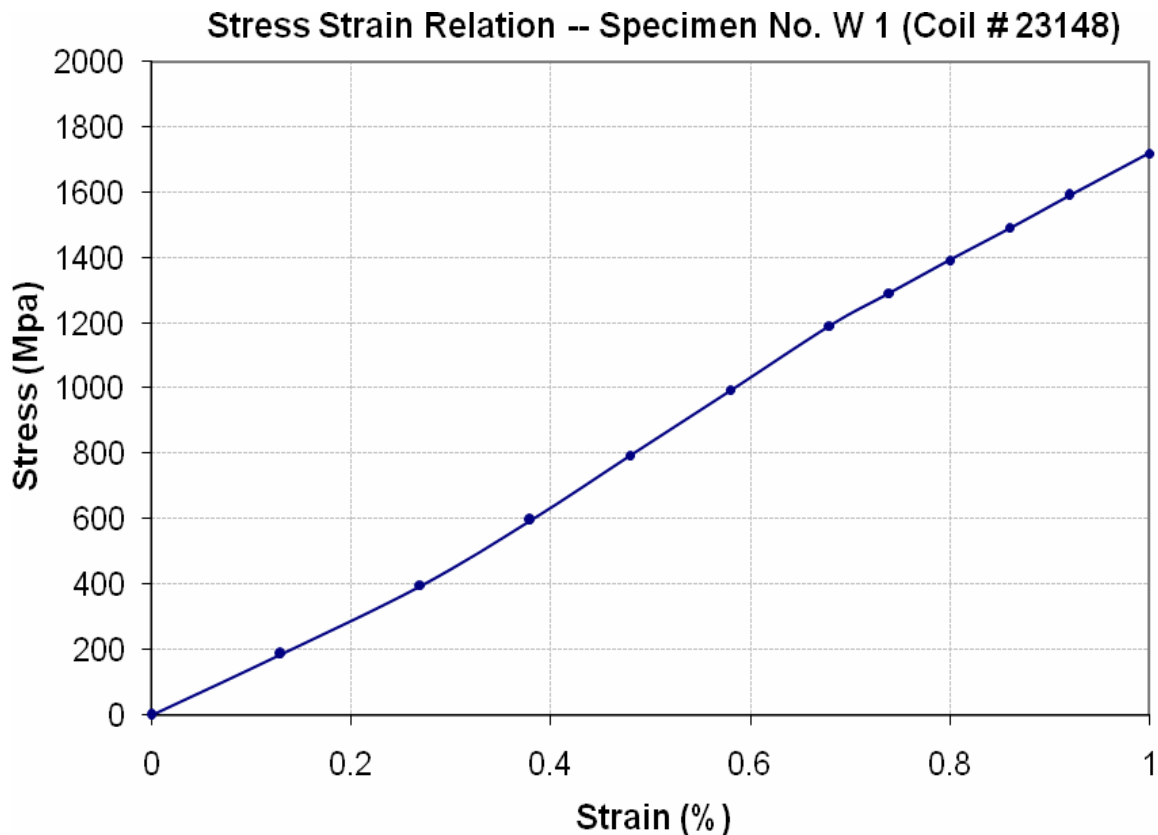
To,  
Resident Engineer – I  
NESPAK  
Construction of Sheranwala Flyover, Lahore  
(WMI)

Reference # CED/TFL **37632** (Dr. Usman Akmal)  
Reference of the request letter # 3772/SF/103/MWA/04/217

Dated: 30-12-2021

Dated: 29-12-2021

**Graph** (Page – 2/2)



**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,  
 Planning Engineer  
 The University of Lahore  
 Bridge Over Hudiyara Drain, The University of Lahore  
 (Westcon Construction Pvt. Ltd)

Reference # CED/TFL **37636** (Engr. Amina Rajput)  
 Reference of the request letter # Nil

Dated: 30-12-2021  
 Dated: 30-12-2021

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

Date of Test 31-12-2021  
 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 <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	4.168	10	1.249	1.27	1.225	35000	58600	60800	62970	101700	105500	1.20	15.0	
2	4.131	10	1.243	1.27	1.214	34600	58400	60100	62800	101400	106000	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
#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,  
M/S Mughal Iron & Steel Industries Limited  
Lahore

Reference # CED/TFL **37637** (Engr. Amina Rajput)  
Reference of the request letter # Nil

Dated: 30-12-2021  
Dated: 30-12-2021

**Tension Test Report** (Page -1/2)

Date of Test 31-12-2021  
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 <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	0.419	10	10.06	0.12	0.123	3800	5400	69812	67960	99207	96600	1.50	18.8	Mughal Steel
2	0.421	10	10.08	0.12	0.124	3900	5400	71650	69450	99207	96200	1.50	18.8	
3	4.326	32	32.32	1.25	1.272	39200	54800	69136	67950	96650	95000	1.60	20.0	
4	4.343	32	32.38	1.25	1.277	39000	55000	68784	67340	97002	95000	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only four samples for tensile and two samples for bend test</b>														
Bend Test														
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**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
**University of Engineering and Technology Lahore, 54890**  
**Pakistan. Ph: 92-42-99029202**

To,  
M/S Mughal Iron & Steel Industries Limited  
Lahore

Reference # CED/TFL 37637 (Engr. Amina Rajput)  
Reference of the request letter # Nil

Dated: 30-12-2021

Dated: 30-12-2021

**Tension Test Report** (Page -2/2)

Date of Test 31-12-2021  
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 <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	4.286	32	32.17	1.25	1.260	44600	62400	78660	78030	110054	109200	1.50	18.8	Mughal Steel
2	4.287	32	32.17	1.25	1.260	45800	62800	80777	80110	110759	109900	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and one sample for bend test</b>														
Bend Test														
32mm Dia Bar Bend Test Through 180° is Satisfactory														

**I/C Testing Laboratories**  
**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  
 CCECC-MATRACON-HABIB Joint Venture  
 Re-Construction & Up-gradation of Main Runway (18L/36R) at Allama Iqbal International  
 Airport (AIIAP), Lahore  
 (Batala Steel)

Reference # CED/TFL **37638** (Engr. Amina Rajput) Dated: 30-12-2021  
 Reference of the request letter # AIIAP/CCECC-MATRACON-HABIB Jv/2021/822  
 Dated: 29-12-2021

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

Date of Test 31-12-2021  
 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 <sup>2</sup> )		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	0.432	10	10.21	0.12	0.127	4100	5800	75324	71210	106556	100800	1.00	12.5	317
2	0.430	10	10.19	0.12	0.126	4100	5600	75324	71470	102881	97700	1.20	15.0	686
3	0.435	10	10.24	0.12	0.128	4300	5700	78998	74200	104719	98400	1.00	12.5	703
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Note: only three samples for tensile and three samples for bend test</b>														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
10mm Dia Bar Bend Test Through 180° is Satisfactory														
10mm 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**  
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To,  
Snr. Lab Tech/OIC  
DBH JVMC, Project  
DBH JV Projects  
DHA Homes Islamabad  
(Wire Manufacturing Industry Ltd.)

Reference # CED/TFL **37639** (Dr. Usman Akmal)  
Reference of the request letter # DBH/JVMC/QA/QC/2021/05/UET

Dated: 30-12-2021  
Dated: 28-12-2021

**Tension Test Report** (Page – 1/4)

Date of Test 31-12-2021  
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)	GPa		
1	12.70 (1/2")	775.0	771	17400	170.69	19300	189.33	198	>3.50	xx
2	12.70 (1/2")	775.0	773	17400	170.69	19300	189.33	199	>3.50	xx
3	12.70 (1/2")	775.0	773	17600	172.66	19200	188.35	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
<b>Only three samples 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

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Note:

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2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,  
Snr. Lab Tech/OIC  
DBH JVMC, Project  
DBH JV Projects  
DHA Homes Islamabad  
(Wire Manufacturing Industry Ltd.)

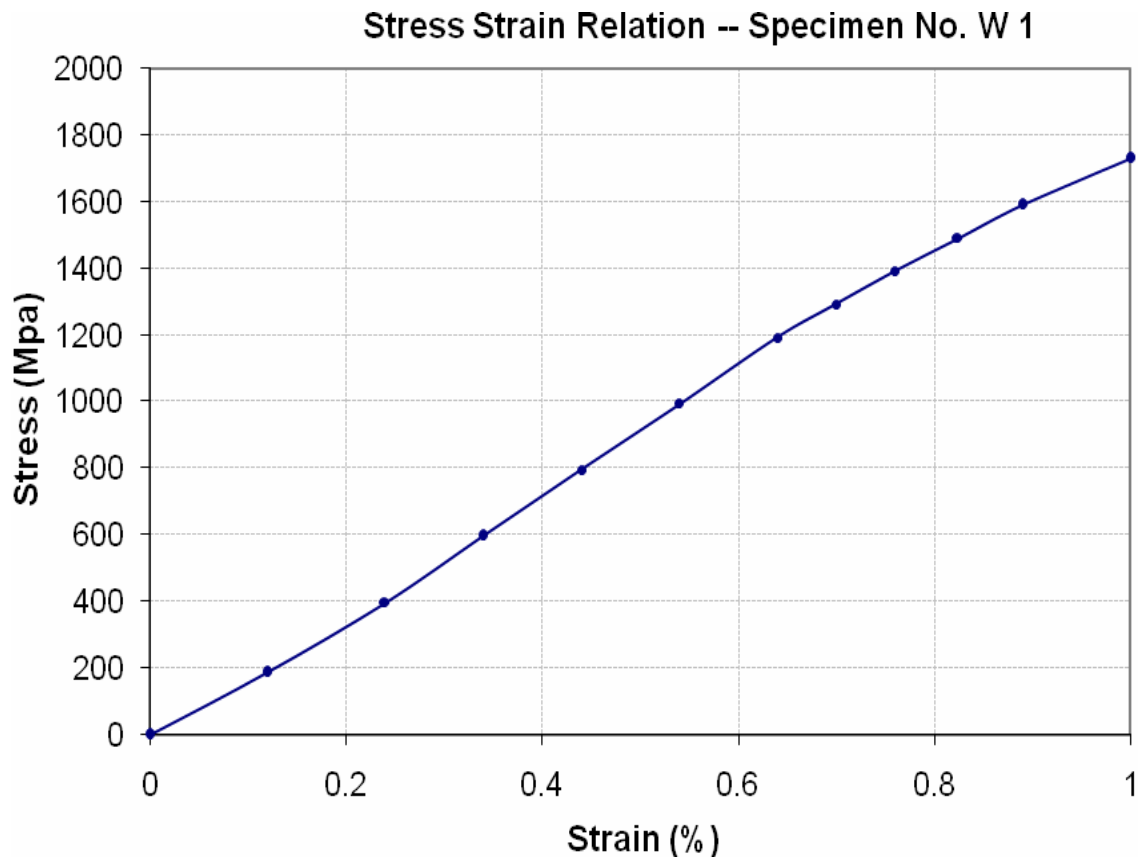
Reference # CED/TFL **37639** (Dr. Usman Akmal)

Dated: 30-12-2021

Reference of the request letter # DBH/JVMC/QA/QC/2021/05/UET

Dated: 28-12-2021

**Graph** (Page – 2/4)



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DBH JVMC, Project  
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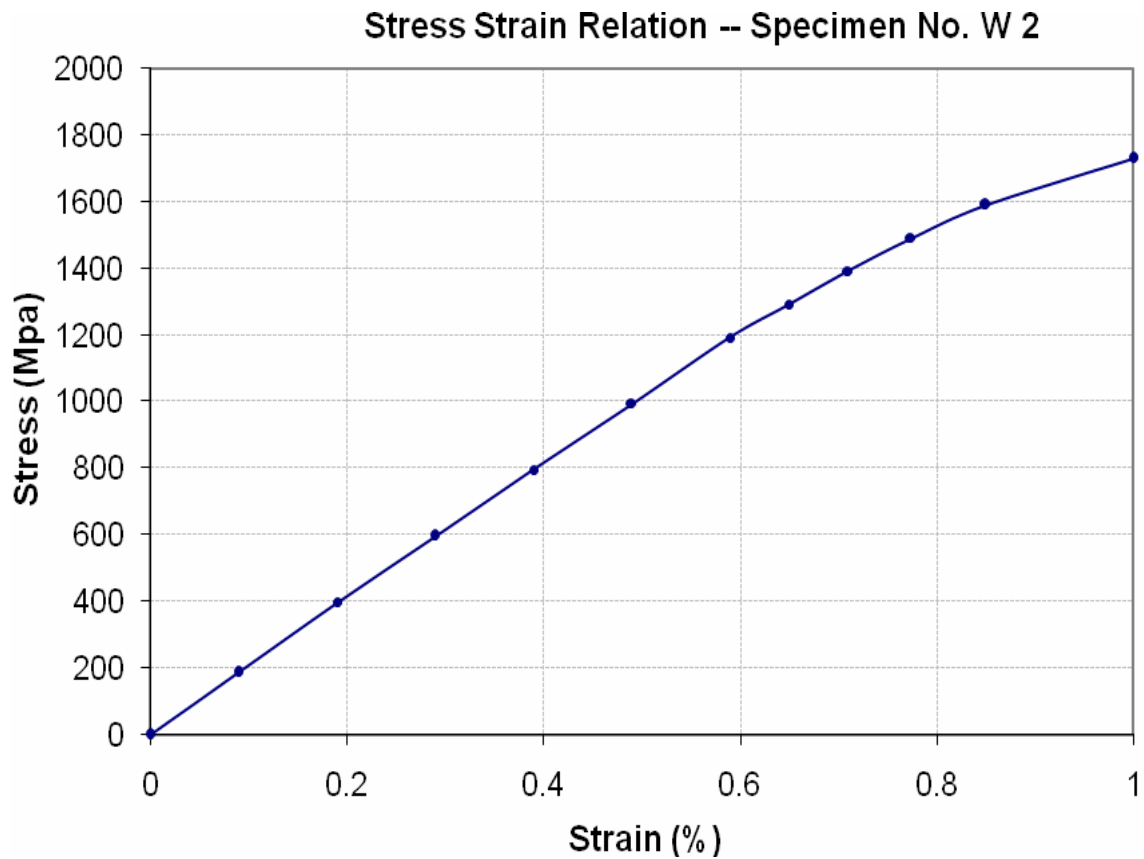
Reference # CED/TFL **37639** (Dr. Usman Akmal)

Dated: 30-12-2021

Reference of the request letter # DBH/JVMC/QA/QC/2021/05/UET

Dated: 28-12-2021

**Graph** (Page -3/4)



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**UET Lahore, Pakistan.**

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To,  
Snr. Lab Tech/OIC  
DBH JVMC, Project  
DBH JV Projects  
DHA Homes Islamabad  
(Wire Manufacturing Industry Ltd.)

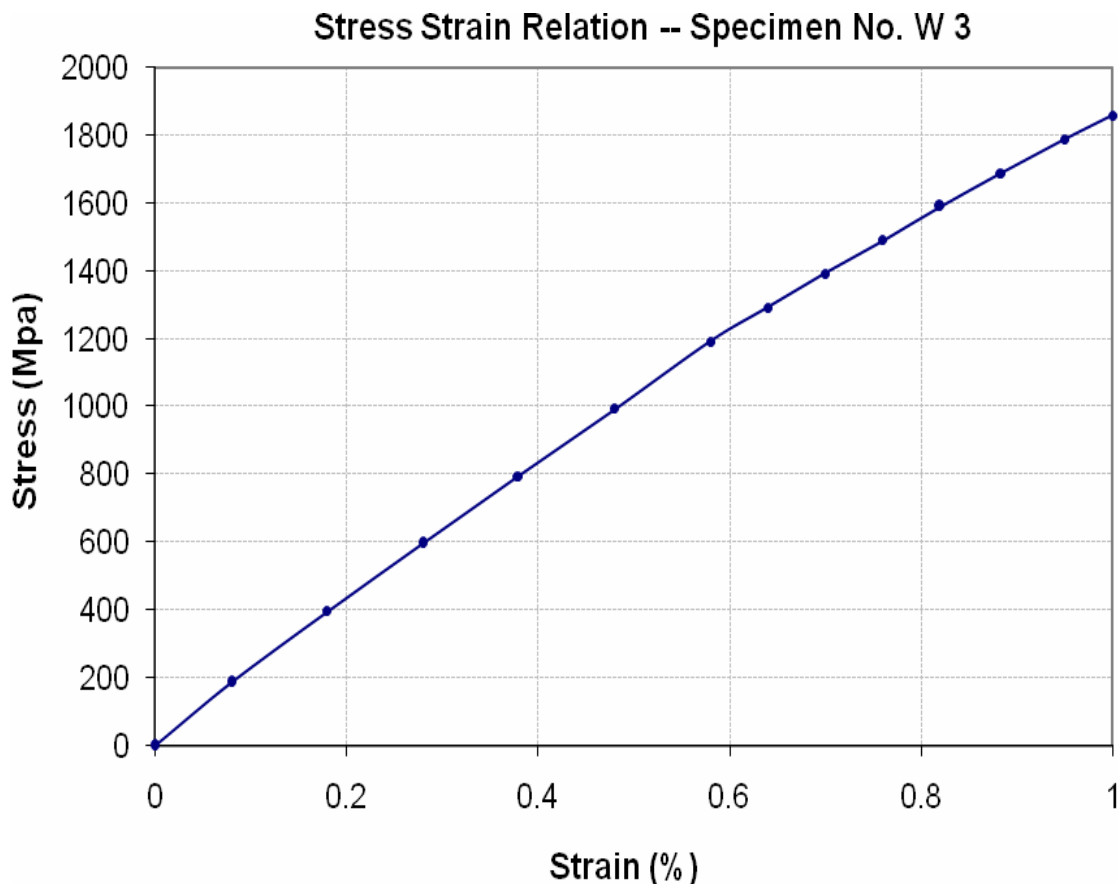
Reference # CED/TFL **37639** (Dr. Usman Akmal)

Dated: 30-12-2021

Reference of the request letter # DBH/JVMC/QA/QC/2021/05/UET

Dated: 28-12-2021

**Graph** (Page – 4/4)



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**UET Lahore, Pakistan.**

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

To,  
 Excutive Engineer  
 EHV S&I Division NTDC  
 Lahore  
 (Dimantling of Existing EA Type Tower (Location No. 81) and Pile Foundation, Stringing & Erection of Newly Proposed EG Type Tower of 220 kV D/C Sheikhpura – Atlas Honda Ravi T/Line  
 Reference # CED/TFL **37631, 633** (Engr. Amina Rajput) Dated: 30-12-2021  
 Reference of the request letter # 805-07/XEN/EHV/S&I Dated: 24-12-2021

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

Date of Test 31-12-2021  
 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 <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	0.364	3	0.369	0.11	0.107	4800	6800	96200	98830	136300	140100	0.40	5.0	Prime Steel
2	5.165	11	1.390	1.56	1.518	34200	55200	48400	49660	78000	80200	2.10	26.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>Note: only two samples for tensile and two samples for bend test</b>														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#11 Bar Bend Test Through 180° is Satisfactory														

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

Note:

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**STRUCTURAL ENGINEERING DIVISION**  
**Test Floor Laboratory**  
**Department of Civil Engineering**  
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**I/C Testing Laboratories**  
**UET Lahore, Pakistan.**

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