



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/12/37460

Dated: 03-12-2021

Dated of Test: 07-12-2021

To
Resident Engineer
NESPAK
Construction of Sheranwala Flyover, Lahore

Subject: TESTING OF R.C.C. PIPE [ASTM-C76 - 08a]

Reference to your letter No. 3772/SF/103/MWA/04/150, dated 01.11.2021 on the subject cited above. One R.C.C. Pipe as received by us has been tested.

The results are tabulated as under.

Sr. No	Nominal Size	Total Length	Loaded Length	External Diameter	Internal Diameter	Wall Thickness	Proof load	Ultimate Load	Proof Stress	Ultimate Stress
	(inch)	(foot)	(foot)	(foot)	(foot)	(inch)	(kg)	(kg)	Pound/Linear foot/foot	Pound/Linear foot/foot
1	36	8.06	7.65	3.64	2.98	3.94	23390	34060	2262	3295

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
- 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,
Deputy General Manager Projects
Habib Rafiq Engineering (Pvt) Limited
Construction of Sky Gardens Tower, Lahore

Reference # CED/TFL **37465** (Engr. Amina Rajput)
Reference of the request letter # HRLE/SKG/2021/051

Dated: 03-12-2021
Dated: 03-12-2021

Tension Test Report (Page -1/2)

Date of Test 07-12-2021
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	774.0	17500	171.68	19400	190.31	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 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
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



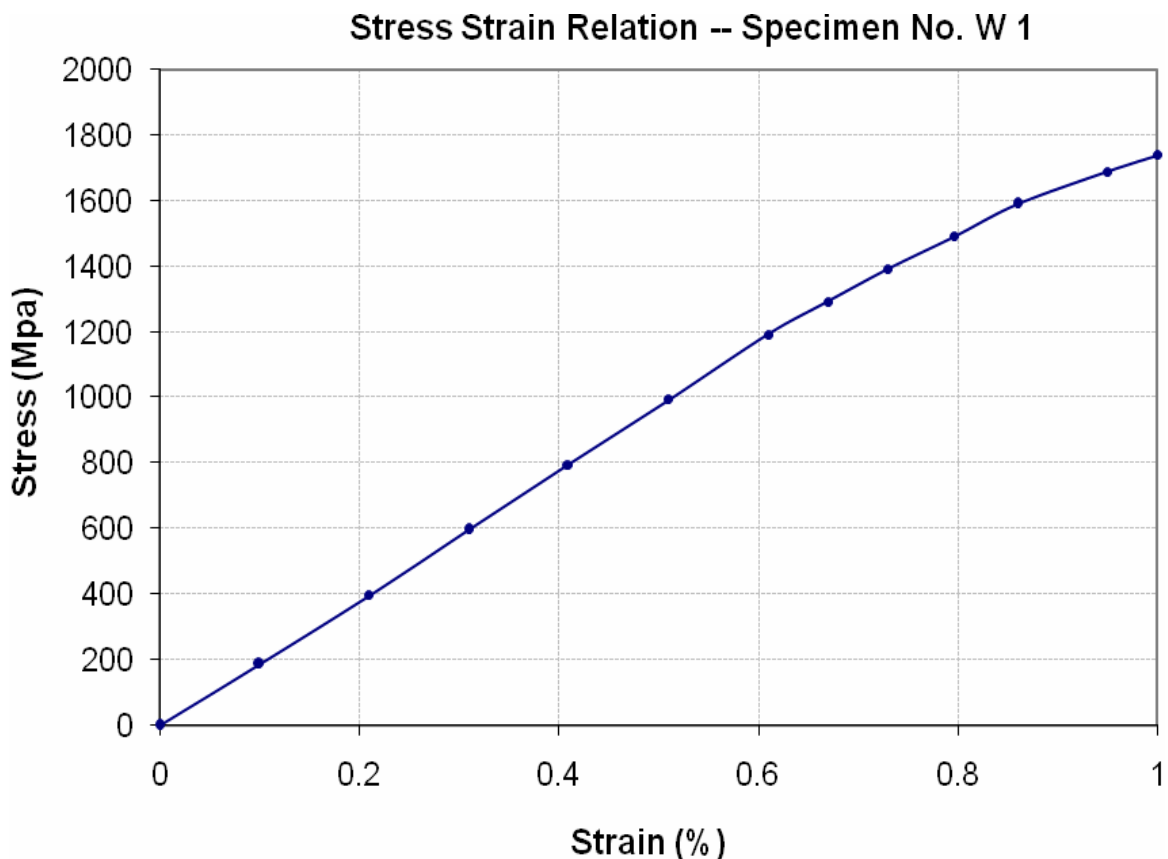
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Deputy General Manager Projects
Habib Rafiq Engineering (Pvt) Limited
Construction of Sky Gardens Tower, Lahore

Reference # CED/TFL **37465** (Engr. Amina Rajput)
Reference of the request letter # HRLE/SKG/2021/051

Dated: 03-12-2021
Dated: 03-12-2021

Graph (Page – 2/2)



I/C Testing Laboratories
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
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,
 Resident Engineer
 Engineering Consultancy Services Punjab (Pvt) Limited
 Infrastructure Development and Construction of Affordable Housing Unit at Chak 48 NB
 Sargodha

Reference # CED/TFL **37467** (Dr. Usman Akmal)
 Reference of the request letter # ECSP/RE/SG/17

Dated: 06-12-2021
 Dated: 15-11-2021

Tension Test Report (Page -1/4)

Date of Test 07-12-2021
 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 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	0.384	3	0.379	0.11	0.113	3400	4100	68200	66370	82200	80100	1.60	20.0	Ittefaq Steel
2	0.383	3	0.378	0.11	0.113	3300	4300	66200	64650	86200	84300	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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
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,
 Resident Engineer
 Engineering Consultancy Services Punjab (Pvt) Limited
 Infrastructure Development and Construction of Affordable Housing Unit at Chak 48 NB
 Sargodha

Reference # CED/TFL **37467** (Dr. Usman Akmal)
 Reference of the request letter # ECSP/RE/SG/21

Dated: 06-12-2021
 Dated: 15-11-2021

Tension Test Report (Page -2/4)

Date of Test 07-12-2021
 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 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	0.382	3	0.378	0.11	0.112	3400	4100	68200	66690	82200	80500	1.60	20.0	FF Steel
2	0.380	3	0.377	0.11	0.112	3200	4100	64200	63220	82200	81000	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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
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
 Resident Engineer
 Engineering Consultancy Services Punjab (Pvt) Limited
 Infrastructure Development and Construction of Affordable Housing Unit at Chak 48 NB
 Sargodha

Reference # CED/TFL **37467** (Dr. Usman Akmal)
 Reference of the request letter # ECSP/RE/SG/19

Dated: 06-12-2021
 Dated: 15-11-2021

Tension Test Report (Page -3/4)

Date of Test 07-12-2021
 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 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	0.383	3	0.379	0.11	0.113	3300	4100	66200	64620	82200	80300	1.40	17.5	Amreli Steel
2	0.384	3	0.379	0.11	0.113	3500	4100	70200	68350	82200	80100	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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
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
 Resident Engineer
 Engineering Consultancy Services Punjab (Pvt) Limited
 Infrastructure Development and Construction of Affordable Housing Unit at Chak 48 NB
 Sargodha

Reference # CED/TFL **37467** (Dr. Usman Akmal)
 Reference of the request letter # ECSP/RE/SG/23

Dated: 06-12-2021
 Dated: 15-11-2021

Tension Test Report (Page -4/4)

Date of Test 07-12-2021
 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 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	0.384	3	0.379	0.11	0.113	3400	4100	68200	66390	82200	80100	1.70	21.3	Mehboob Steel
2	0.381	3	0.378	0.11	0.112	3400	4100	68200	66940	82200	80800	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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
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,
 Resident Engineer
 Engineering Consultancy Services Punjab (Pvt) Limited
 Infrastructure Development and Construction of Affordable Housing Unit at Chak 48 NB
 Sargodha

Reference # CED/TFL **37468** (Dr. Usman Akmal)
 Reference of the request letter # ECSP/RE/SG/20

Dated: 06-12-2021
 Dated: 15-11-2021

Tension Test Report (Page -1/2)

Date of Test 07-12-2021
 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 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	0.371	3	0.373	0.11	0.109	3700	4800	74200	74700	96200	97000	1.00	12.5	FF Steel
2	0.378	3	0.376	0.11	0.111	3700	5100	74200	73400	102200	101200	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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
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,
 Resident Engineer
 Engineering Consultancy Services Punjab (Pvt) Limited
 Infrastructure Development and Construction of Affordable Housing Unit at Chak 48 NB
 Sargodha

Reference # CED/TFL **37468** (Dr. Usman Akmal)
 Reference of the request letter # ECSP/RE/SG/22

Dated: 06-12-2021
 Dated: 15-11-2021

Tension Test Report (Page -2/2)

Date of Test 07-12-2021
 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 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	0.377	3	0.376	0.11	0.111	3800	5000	76200	75600	100200	99500	1.10	13.8	Mehboob Steel
2	0.368	3	0.371	0.11	0.108	3600	4700	72200	73340	94200	95800	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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
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,
 Proprietor
 Ravi Associates
 Const. of MRR Site # 17 of 4090 SQN Arifwala at PAF Base Rafiqui

Reference # CED/TFL **37469** (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 06-12-2021
 Dated: 01-12-2021

Tension Test Report (Page -1/1)

Date of Test 07-12-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (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	0.371	3/8	0.372	0.11	0.109	4000	4700	80200	80950	94200	95200	0.80	10.0	
2	0.370	3/8	0.372	0.11	0.109	4200	4900	84200	85090	98200	99300	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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
- 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,
 Proprietor
 Ravi Associates
 1 x 128 Airmen Barrack is under Const at PAF Base Vehari

Reference # CED/TFL **37470** (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 06-12-2021
 Dated: 01-12-2021

Tension Test Report (Page -1/1)

Date of Test 07-12-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (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	0.370	3/8	0.372	0.11	0.109	4100	5000	82200	83050	100200	101300	0.80	10.0	
2	0.370	3/8	0.372	0.11	0.109	3900	4800	78200	78990	96200	97300	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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
- 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,
M/S CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Power Project – N15 Relocation Highway Material
(Liu Zhou Ovm Machinery Co., Ltd.)

Reference # CED/TFL **37471** (Engr. Amina Rajput)
Reference of the request letter # Nil

Dated: 06-12-2021
Dated: 29-11-2021

Tension Test Report (Page – 1/2)

Date of Test 07-12-2021
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	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	E, GPa		
1	15.24 (0.6")	1102.0	1117.0	24100	236.42	26900	263.89	199	>3.50	YPW115-SJ-21091
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
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 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
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



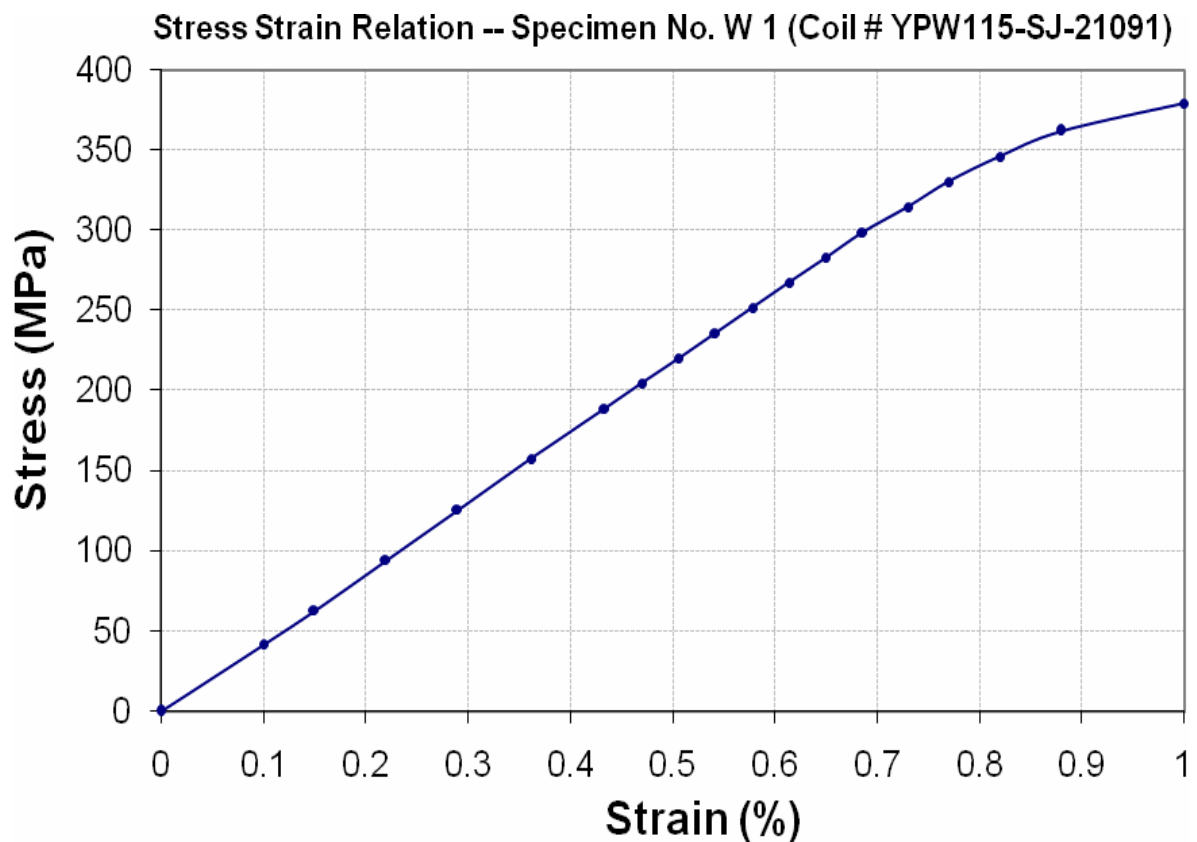
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
M/S CGGC Suki Kinari Project Management in Pakistan
874 MW Suki Kinari Power Project – N15 Relocation Highway Material
(Liu Zhou Ovm Machinery Co., Ltd.)

Reference # CED/TFL 37471 (Engr. Amina Rajput)
Reference of the request letter # Nil

Dated: 06-12-2021
Dated: 29-11-2021

Graph (Page – 2/2)



I/C Testing Laboratories
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
- 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,
 Resident Engineer
 City Survey & Engineering Consultants
 Green View Executive Apartments Phase-V

Reference # CED/TFL **37472** (Dr. Usman Akmal)
 Reference of the request letter # GVA/RE/02/21

Dated: 06-12-2021
 Dated: 06-12-2021

Tension Test Report (Page -1/1)

Date of Test 07-12-2021
 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 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	0.386	3	0.380	0.11	0.114	3900	5000	78200	75670	100200	97100	1.40	17.5	
2	0.393	3	0.384	0.11	0.116	3900	5000	78200	74320	100200	95300	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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
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,
M/S Tijaarat Developers
Lahore
(Construction Site of OPos 30 A Block L Gulberg III, Lahore)

Reference # CED/TFL **37473** (Dr. Usman Akmal)
Reference of the request letter # TD/UET-OPUS/0419-01

Dated: 06-12-2021
Dated: 05-12-2021

Tension Test Report (Page -1/1)

Date of Test 07-12-2021
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 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	0.364	3	0.369	0.11	0.107	3500	4700	70200	72150	94200	96900	1.30	16.3	
2	0.369	3	0.371	0.11	0.108	3400	4700	68200	69180	94200	95700	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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
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,
 Resident Engineer
 New Vision
 Site Office DHA Bahawalpur
 Civil Infrastructure Development Works for MB-01 Extension (West) bridge DHAB

Reference # CED/TFL **37474** (Dr. Usman Akmal)

Dated: 06-12-2021

Reference of the request letter # RE/NVEC/Site-MB-01/77

Dated: 30-11-2021

Tension Test Report (Page -1/1)

Date of Test 07-12-2021

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 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	0.451	3	0.411	0.11	0.133	4200	5300	84200	69870	106200	88200	1.40	17.5	Pak Steel
2	0.448	3	0.410	0.11	0.132	4100	5200	82200	68600	104200	87000	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 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
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,
Sub Divisional Officer
Highway Sub Division
Burewala
Construction of Dual Carriage Way from Burewala to Chichwzatni Road, Vehari (Remaining Portion) from km 3.00 to 23.14 Length = 20.14 km District Vehari (Section Group –III
Construction of Bridge on Pakpattan Canal and Sukh Bias i/c Approaches Length = 0.71 km)

Reference # CED/TFL **37475** (Engr. Amina Rajput)
Reference of the request letter # 143

Dated: 06-12-2021
Dated: 11-11-2021

Tension Test Report (Page -1/2)

Date of Test 07-12-2021
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	18200	178.54	20000	196.20	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.

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



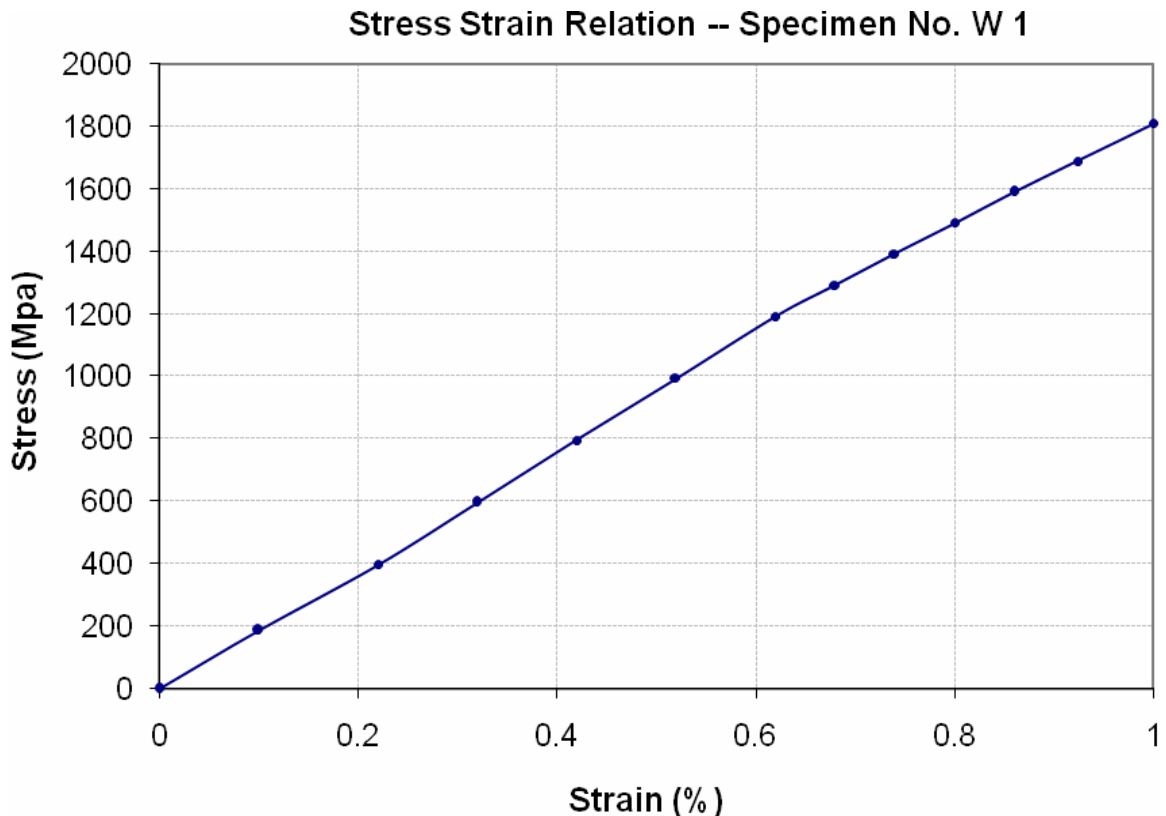
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Sub Divisional Officer
Highway Sub Division
Burewala
Construction of Dual Carriage Way from Burewala to Chichwzatni Road, Vehari (Remaining Portion) from km 3.00 to 23.14 Length = 20.14 km District Vehari (Section Group –III
Construction of Bridge on Pakpattan Canal and Sukh Bias i/c Approaches Length = 0.71 km)

Reference # CED/TFL **37475** (Engr. Amina Rajput)
Reference of the request letter # 143

Dated: 06-12-2021
Dated: 11-11-2021

Graph (Page – 2/2)



I/C Testing Laboratories
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
- 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,
Resident Engineer
CEC – H & B (Jv)
Construction Supervision of “F/S Design and Construction of 02 No Flyover on Mingora –
Kanju Road SH: Mingora Bypass and Kanju Chowk, District Swat, SH: Flyover at Mingora
Bypass Road (Phase-I)
Reference # CED/TFL **37476** (Engr. Amina Rajput) Dated: 06-12-2021
Reference of the request letter # CEC-H&B/PKHA/RE/SWT/185.steel Dated: 11-10-2021

Tension Test Report (Page -1/4)

Date of Test 07-12-2021
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	777.0	17300	169.71	19500	191.30	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 Laboratoires
UET Lahore, Pakistan.

Note:

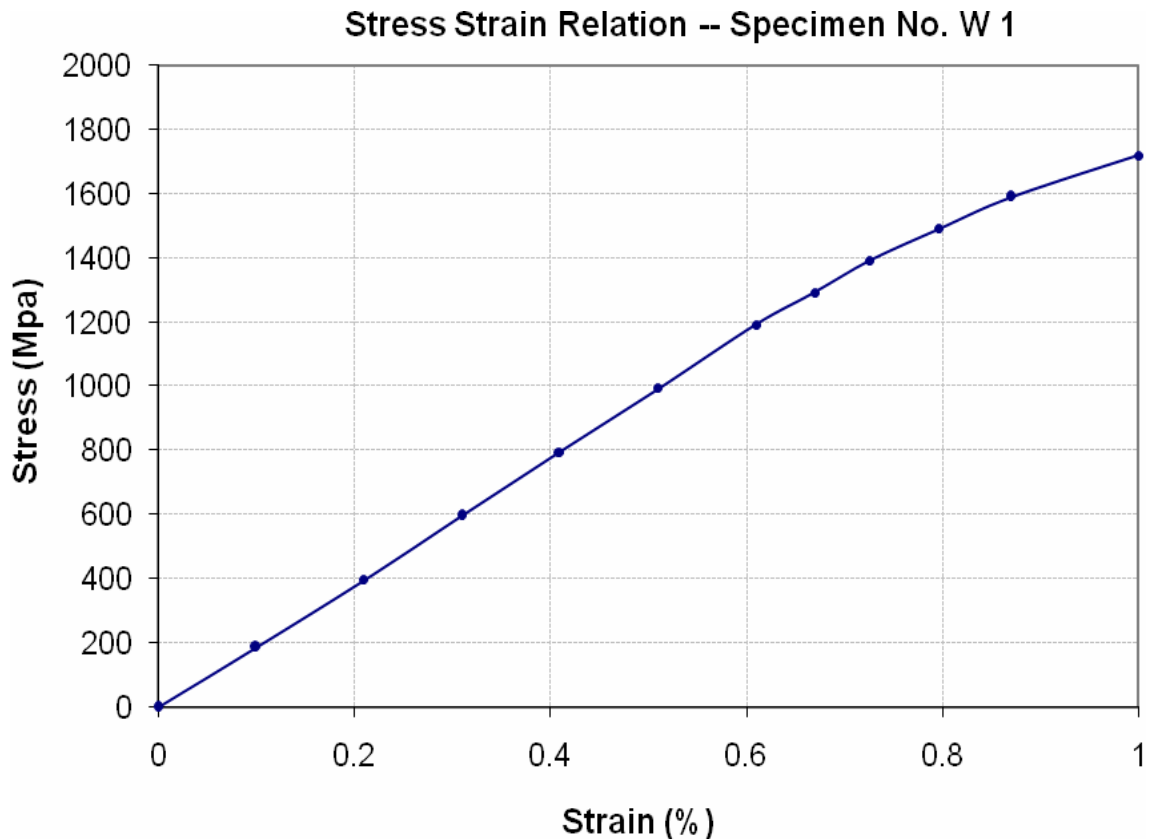
- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,
Resident Engineer
CEC – H & B (Jv)
Construction Supervision of F/S Design and Construction of 02 No Flyover on Mingora – Kanju
Road SH: Mingora Bypass and Kanju Chowk, District Swat, SH: Flyover at Mingora Bypass
Road (Phase-I)
Reference # CED/TFL **37476** (Engr. Amina Rajput) Dated: 06-12-2021
Reference of the request letter # CEC-H&B/PKHA/RE/SWT/185.steel Dated: 11-10-2021

Graph (Page – 2/4)



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
- 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,
Resident Engineer
CEC – H & B (Jv)
Construction Supervision of F/S Design and Construction of 02 No Flyover on Mingora – Kanju
Road SH: Mingora Bypass and Kanju Chowk, District Swat, SH: Flyover at Mingora Bypass
Road (Phase-I)
Reference # CED/TFL **37476** (Engr. Amina Rajput) Dated: 06-12-2021
Reference of the request letter # CEC-H&B/PKHA/RE/SWT/195.steel Dated: 05-11-2021

Tension Test Report (Page -3/4)

Date of Test 07-12-2021
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)			
1	12.70 (1/2")	775.0	777.0	17200	168.73	19400	190.31	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 Laboratoires
UET Lahore, Pakistan.

Note:

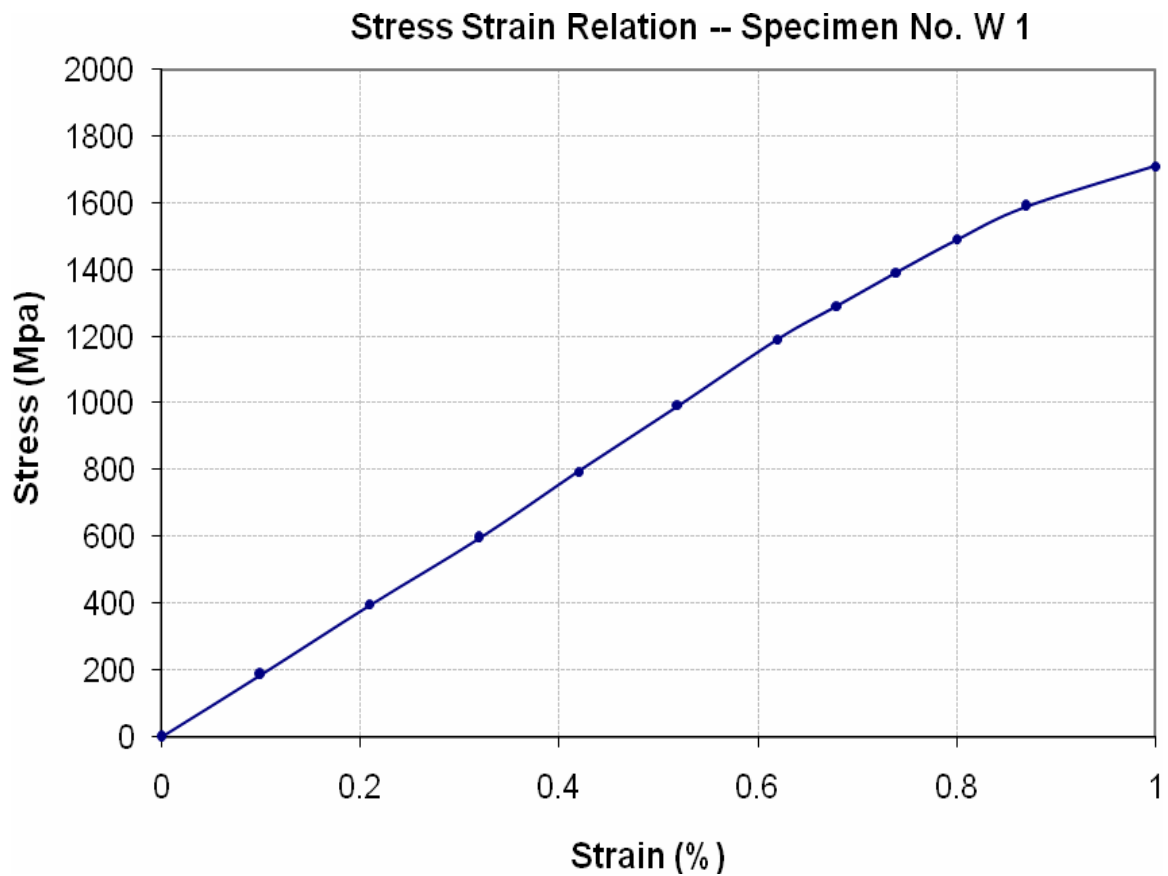
- 1- You can See your reports On Internet in the following web site
http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing_reports
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To,
Resident Engineer
CEC – H & B (Jv)
Construction Supervision of F/S Design and Construction of 02 No Flyover on Mingora – Kanju
Road SH: Mingora Bypass and Kanju Chowk, District Swat, SH: Flyover at Mingora Bypass
Road (Phase-I)
Reference # CED/TFL **37476** (Engr. Amina Rajput) Dated: 06-12-2021
Reference of the request letter # CEC-H&B/PKHA/RE/SWT/195.steel Dated: 05-11-2021

Graph (Page – 4/4)



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
- 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,
Deputy General Manager Projects
Habib Rafiq Engineering (Pvt) Limited
Construction of Sky Gardens Tower, Lahore

Reference # CED/TFL 37477 (Engr. Amina Rajput)
Reference of the request letter # HRLE/SKG/2021/051

Dated: 06-12-2021
Dated: 06-12-2021

Tension Test Report (Page -1/2)

Date of Test 07-12-2021
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	778.0	18000	176.58	19800	194.24	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 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
2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



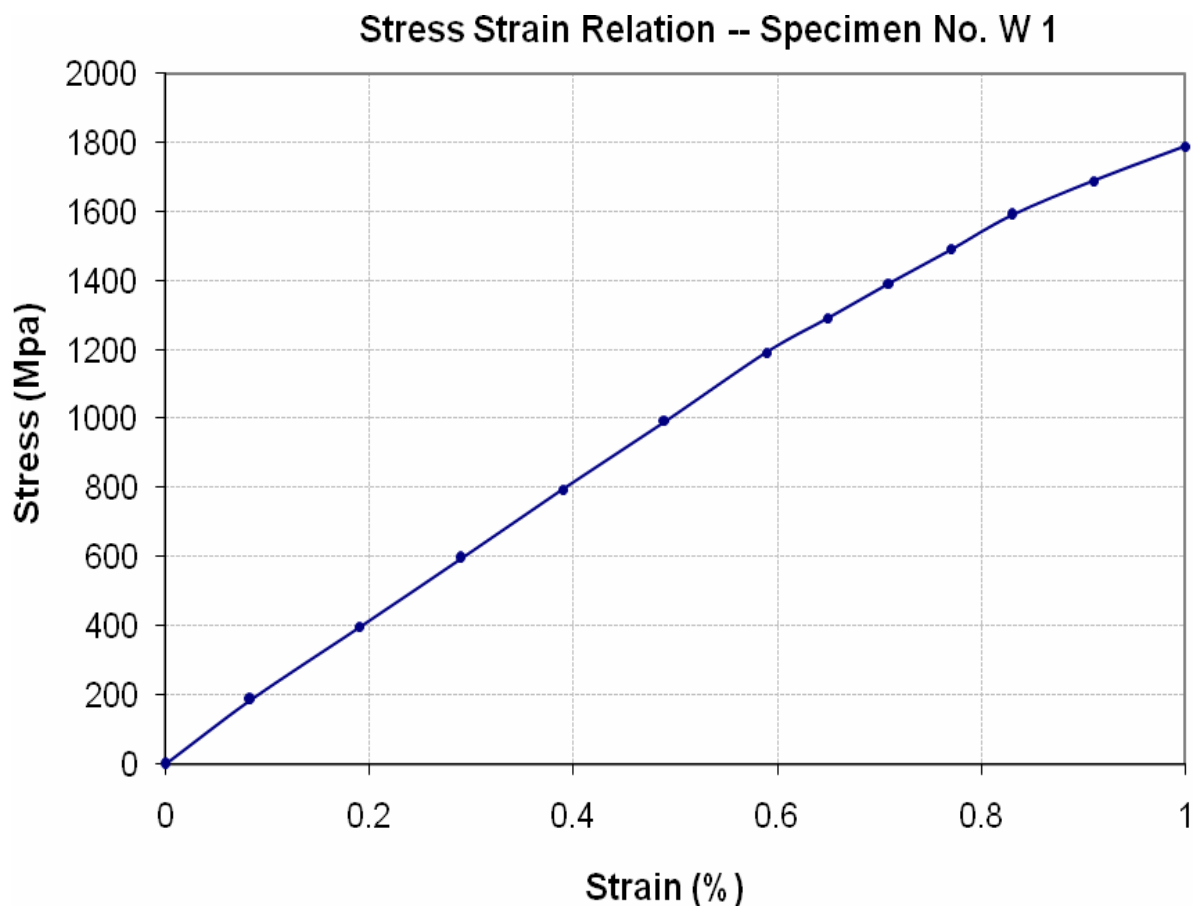
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Deputy General Manager Projects
Habib Rafiq Engineering (Pvt) Limited
Construction of Sky Gardens Tower, Lahore

Reference # CED/TFL 37477 (Engr. Amina Rajput)
Reference of the request letter # HRLE/SKG/2021/051

Dated: 06-12-2021
Dated: 06-12-2021

Graph (Page – 2/2)



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
- 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,
 Sr. QS
 Thaheem Construction Company
 Jadeed Poultry Farm at Sanjwal

Reference # CED/TFL **37478** (Dr. Usman Akmal)
 Reference of the request letter # TCC/UET/316

Dated: 06-12-2021
 Dated: 04-12-2021

Tension Test Report (Page -1/1)

Date of Test 07-12-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight (lbs/ft)	Diameter/ Size (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	0.346	3/8	0.360	0.11	0.102	3700	4800	74200	80180	96200	104100	0.90	11.3	
2	0.389	3/8	0.382	0.11	0.114	3000	4200	60200	57820	84200	81000	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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
- 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,
 Construction Manager
 Zameen Aurum
 Construction of Zameen Aurum at Plot No. 15 Block L, Gulberg-III, Main Feroze Pur Road,
 Lahore
 Reference # CED/TFL **37484** (Dr. Usman Akmal) Dated: 07-12-2021
 Reference of the request letter # ZD/ZA/STR017 Dated: 07-12-2021

Tension Test Report (Page -1/1)

Date of Test 07-12-2021
 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 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	0.385	3	0.379	0.11	0.113	3300	4900	66200	64330	98200	95600	1.20	15.0	Afaq Steel
2	0.378	3	0.376	0.11	0.111	3200	4800	64200	63460	96200	95200	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.

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