



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 Ikan Engineering Services (Pvt) Ltd
Lahore

Reference # CED/TFL **37315** (Dr. Usman Akmal)
Reference of the request letter # IKAN/ICI/PQR # 03

Dated: 05-11-2021

Dated: 05-11-2021

Tension Test Report (Page – 1/2)

Date of Test 11-11-2021

Gauge length 2 inches

Description Welded Metal Steel Strip Tensile and Bend Test
ASME Sec IX Ed 2019, SA-106 Gr B

Sr. No.	Designation	Size of Strip	X Section Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(kg)	(MPa)	(inch)		
1	31x5.50x300	19.80x5.30	104.94	5500	514.15	0.40	20.00	Failure at the location other than weld
2		19.70x5.80	114.26	5600	480.80	0.40	20.00	Failure at the location other than weld
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
Only two samples for tensile and Four samples for bend test								
Bend Test								
Strip taken from Welded Metal (19x5.54x300mm) Root Bend Test Through 180° is Satisfactory								
Strip taken from Welded Metal (19x5.54x300mm) Root Bend Test Through 180° is Satisfactory								
Strip taken from Welded Metal (19x5.54x300mm) Face Bend Test Through 180° is Satisfactory								
Strip taken from Welded Metal (19x5.54x300mm) Face 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 Ikan Engineering Services (Pvt) Ltd
Lahore

Reference # CED/TFL **37315** (Dr. Usman Akmal)
Reference of the request letter # IKAN/ICI/PQR # 04

Dated: 05-11-2021

Dated: 05-11-2021

Tension Test Report (Page – 2/2)

Date of Test 11-11-2021

Gauge length 2 inches

Description Welded Metal Steel Strip Tensile and Bend Test
ASME Sec IX Ed 2019, SA-106 Gr B

Sr. No.	Designation	Size of Strip	X Section Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(kg)	(MPa)	(inch)		
1	31x7.11x300	21.30x7.30	155.49	7200	454.25	0.40	20.00	Failure at the location other than weld
2		21.60x7.50	162.00	6900	417.83	0.30	15.00	Failure at the location other than weld
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
Only two samples for tensile and Four samples for bend test								
Bend Test								
Strip taken from Welded Metal (38x7.11x300mm) Root Bend Test Through 180° is Satisfactory								
Strip taken from Welded Metal (38x7.11x300mm) Root Bend Test Through 180° is Satisfactory								
Strip taken from Welded Metal (38x7.11x300mm) Face Bend Test Through 180° is Satisfactory								
Strip taken from Welded Metal (38x7.11x300mm) Face 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,
RE, NESPAK
Dualization of Old Bannu Road / Domail – Khurram Road Project (P - 01)
(WMI)

Reference # CED/TFL **37318** (Dr. Usman Akmal)
Reference of the request letter # 3968/OBR/P-01/RE/GRD/1044

Dated: 08-11-2021
Dated: 04-11-2021

Tension Test Report (Page -1/3)

Date of Test 11-11-2021
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	787.0	17200	168.73	19300	189.33	198	>3.50	xx
2	12.70 (1/2")	775.0	787.0	17900	175.60	19400	190.31	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

Only two samples for Test

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

I/C Testing 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



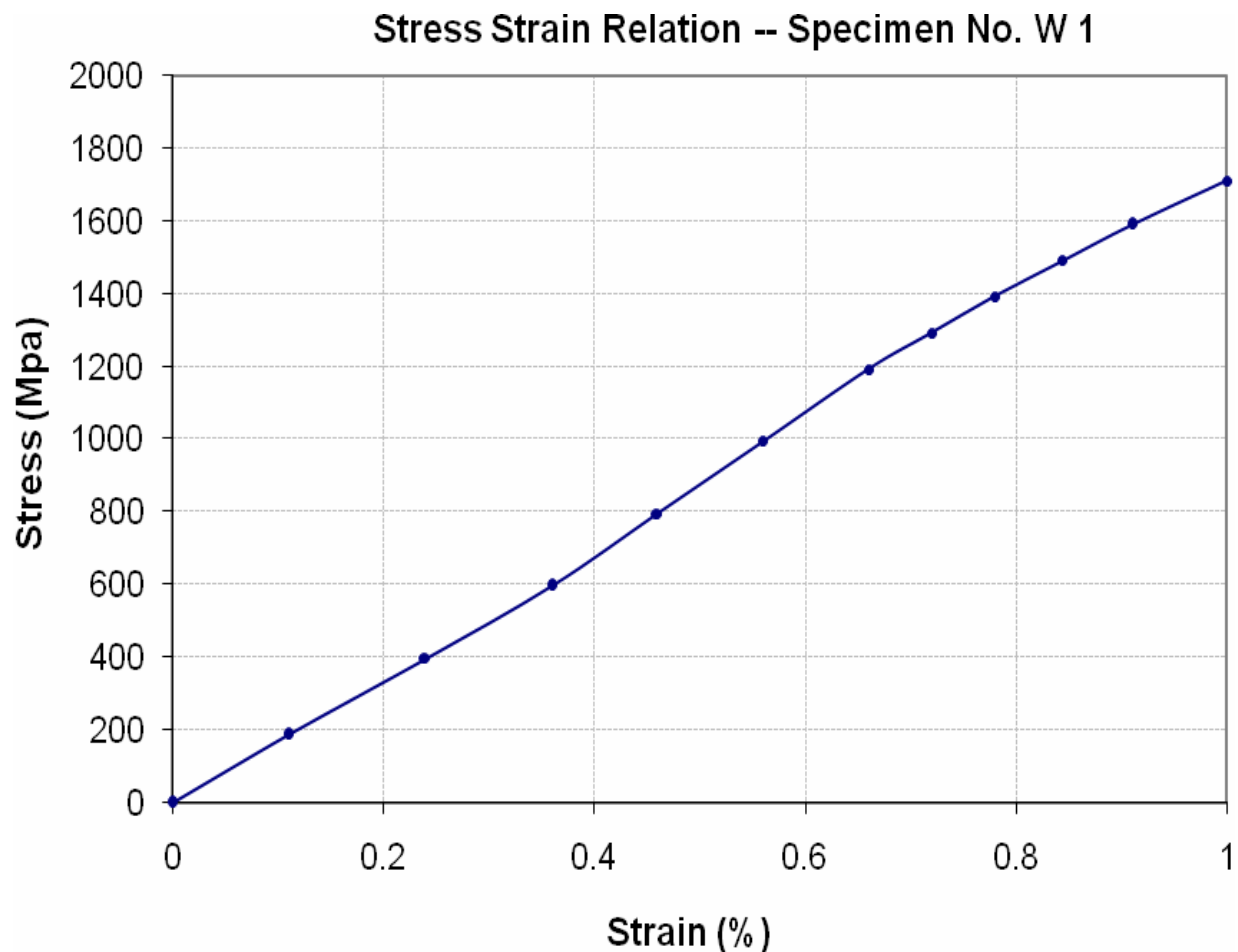
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
RE, NESPAK
Dualization of Old Bannu Road / Domail – Khurram Road Project (P - 01)
(WMI)

Reference # CED/TFL **37318** (Dr. Usman Akmal)
Reference of the request letter # 3968/OBR/P-01/RE/GRD/1044

Dated: 08-11-2021
Dated: 04-11-2021

Graph (Page – 2/3)



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,
RE, NESPAK
Dualization of Old Bannu Road / Domail – Khurram Road Project (P - 01)
(WMI)

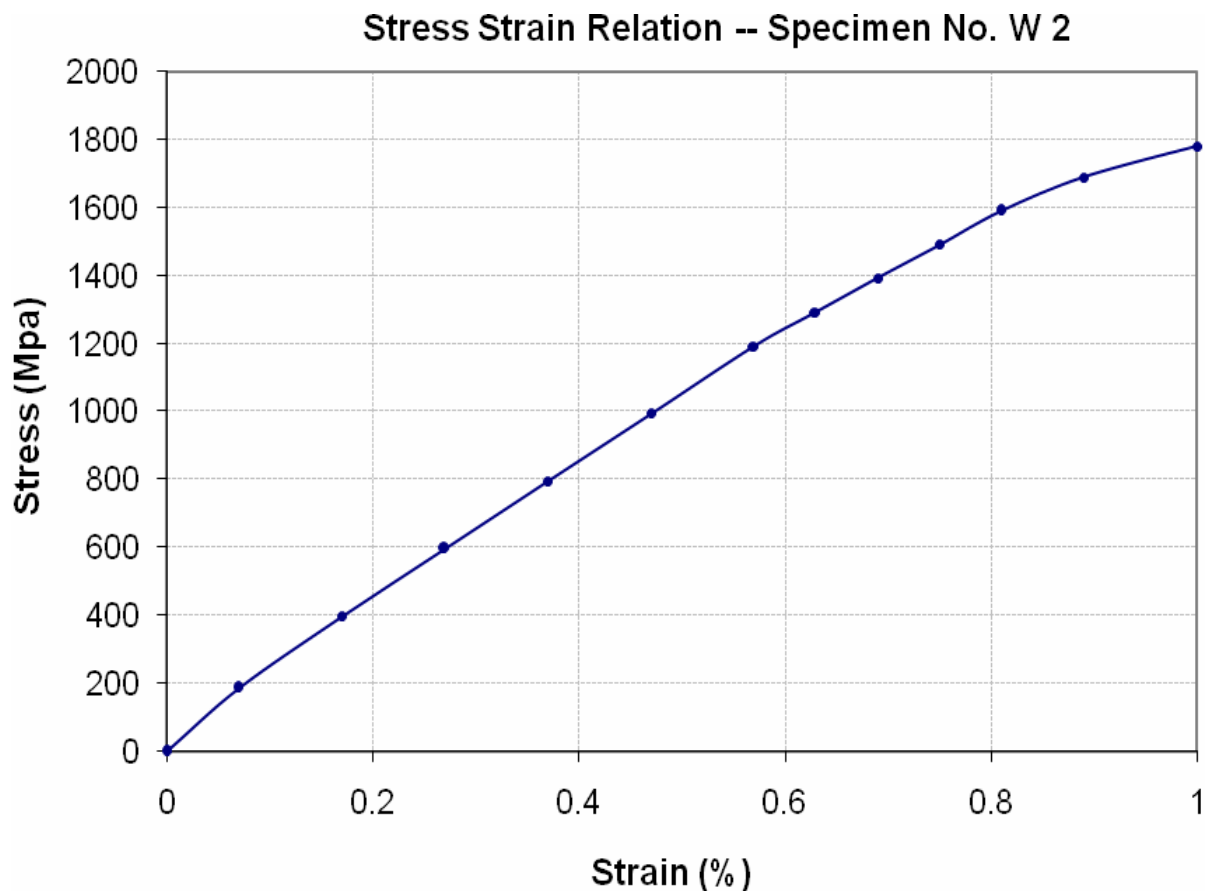
Reference # CED/TFL **37318** (Dr. Usman Akmal)

Dated: 08-11-2021

Reference of the request letter # 3968/OBR/P-01/RE/GRD/1044

Dated: 04-11-2021

Graph (Page – 3/3)



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,
M/S S.A Sheikh & Co.
Lahore

Reference # CED/TFL **37323** (Dr. Usman Akmal)
Reference of the request letter # SASheikh/ABSES/3

Dated: 08-11-2021

Dated: 08-11-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
Gauge length 8 inches
Description Plain Steel Bar Tensile Test

Sr. No.	Weight (kg/m)	Diameter/ size		Area (mm ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (MPa) Actual	Ultimate Stress (MPa) Actual	Elongation (inch)	% Elongation	Remarks
		Nominal (inch)	Actual (mm)	Nominal	Actual							
1	8.888	1.5	37.97	-----	1132.3	46000	77400	399	671	1.70	21.3	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test												
Bend Test												

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 S.P Nizam
Lahore

Reference # CED/TFL 37327 (Dr. Usman Akmal)
Reference of the request letter # Nil

Dated: 09-11-2021

Dated: 09-11-2021

Tension Test Report (Page – 1/1)

Date of Test 11-11-2021
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	
1	12	0.474	8200	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only one sample for Test				

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,
 Chief Technical Officer
 Sabcon Associates (Pvt) Ltd
 Construction of Commercial Building at 51A Gulberg III, Lahore

Reference # CED/TFL **37328** (Dr. Usman Akmal)
 Reference of the request letter # SABCON/2021/CTO/01

Dated: 09-11-2021
 Dated: 08-11-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
 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	0.398	3	0.386	0.11	0.117	4000	5400	80200	75450	108200	101900	1.20	15.0	FF Steel
2	0.381	3	0.378	0.11	0.112	3700	5300	74200	72850	106200	104400	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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



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 Munir Industry (Private) Limited
Lahore

Reference # CED/TFL **37330** (Dr. Usman Akaml)
Reference of the request letter # C.C.PVC/Gwd/02

Dated: 09-11-2021
Dated: 09-11-2021

Tension Test Report (Page -1/2)

Date of Test 11-11-2021
Gauge length 8 inches
Description PVC Wire Tensile Test (Wire Without Coating)

Sr. No.	Weight (kg/m)	Diameter/ size		Area (mm ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (MPa) Actual	Ultimate Stress (MPa) Actual	Elongation (inch)	% Elongation	Remarks
		Nominal (mm)	Actual (mm)	Nominal	Actual							
1	0.067	3.20	3.30	----	8.6	----	420	----	481	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test												
Bend Test												

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 Munir Industry (Private) Limited
Lahore

Reference # CED/TFL **37330** (Dr. Usman Akaml)
Reference of the request letter # C.C.PVC/Gwd/02

Dated: 09-11-2021

Dated: 09-11-2021

Tension Test Report (Page – 2/2)

Date of Test 11-11-2021

Description PVC Wire Breaking Load Test (Wire With Coating)

Sr. No.	Nominal Diameter	Measured Diameter	Breaking Load	Remark
	(mm)	(mm)	(kg)	
1	4.70	4.60	320	
-	-	-		
-	-	-		
-	-	-		-
-	-	-		-
-	-	-		-
-	-	-		
Only One Sample for Test				

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,
 Sr. QA/QC Manager
 Blue World City
 Islamabad

Reference # CED/TFL **37334** (Dr. Usman Akmal)
 Reference of the request letter # QC0014

Dated: 09-11-2021
 Dated: 06-07-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
 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	0.400	3	0.387	0.11	0.118	3600	5400	72200	67510	108200	101300	0.90	11.3	Shaheen Steel
2	0.401	3	0.387	0.11	0.118	3600	5400	72200	67340	108200	101100	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														

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. QA/QC Manager
 Blue World City
 Islamabad

Reference # CED/TFL **37335** (Dr. Usman Akmal)
 Reference of the request letter # QC0013

Dated: 09-11-2021
 Dated: 06-07-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
 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	0.380	3	0.377	0.11	0.112	3300	4900	66200	65110	98200	96700	1.50	18.8	Kamran Steel
2	0.377	3	0.376	0.11	0.111	3300	4900	66200	65600	98200	97400	1.40	17.5	
3	4.152	10	1.247	1.27	1.221	40000	55200	69500	72240	95800	99700	1.50	18.8	
4	4.202	10	1.254	1.27	1.235	40400	55800	70200	72100	96900	99600	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#10 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,
 Assistant Director - I
 Building Research Station
 Lahore
 (Ittefaq Steel)

Reference # CED/TFL **37336** (Dr. Usman Akmal)
 Reference of the request letter # 154-R/3367

Dated: 09-11-2021
 Dated: 08-11-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
 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	Grade
		Nominal (#)	Actual (inch)	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.373	3	0.374	0.11	0.110	3300	4900	66200	66350	98200	98600	1.30	16.3	60
2	0.371	3	0.373	0.11	0.109	3000	4500	60200	60640	90200	91000	1.50	18.8	40
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Note: only two samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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 Pak Elektron Limited
Ferozpur Road, Lahore
(Hsco Steel Pvt. Limited – IGP No. 39556)

Reference # CED/TFL 37337 (Dr. Usman Akmal)
Reference of the request letter # I & QC

Dated: 09-11-2021
Dated: 09-11-2021

Tension Test Report (Page – 1/1)

Date of Test 11-11-2021
Gauge length 8 inches
Description M.S. C.R Sheet Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(mm)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	1.2	33.70x1.10	37.07	800	1200	212	318	2.20	27.50	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only One Sample for Tensile Test										
Bend Test										

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,
Material Engineer
Banu Mukhtar Contracting (Pvt.) Ltd
Naveena Export (Pvt) Ltd.

Reference # CED/TFL **37358** (Dr. Rizwan Azam)
Reference of the request letter # BM/NaveenaExport/001

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

Tension Test Report (Page -1/2)

Date of Test 15-11-2021
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	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



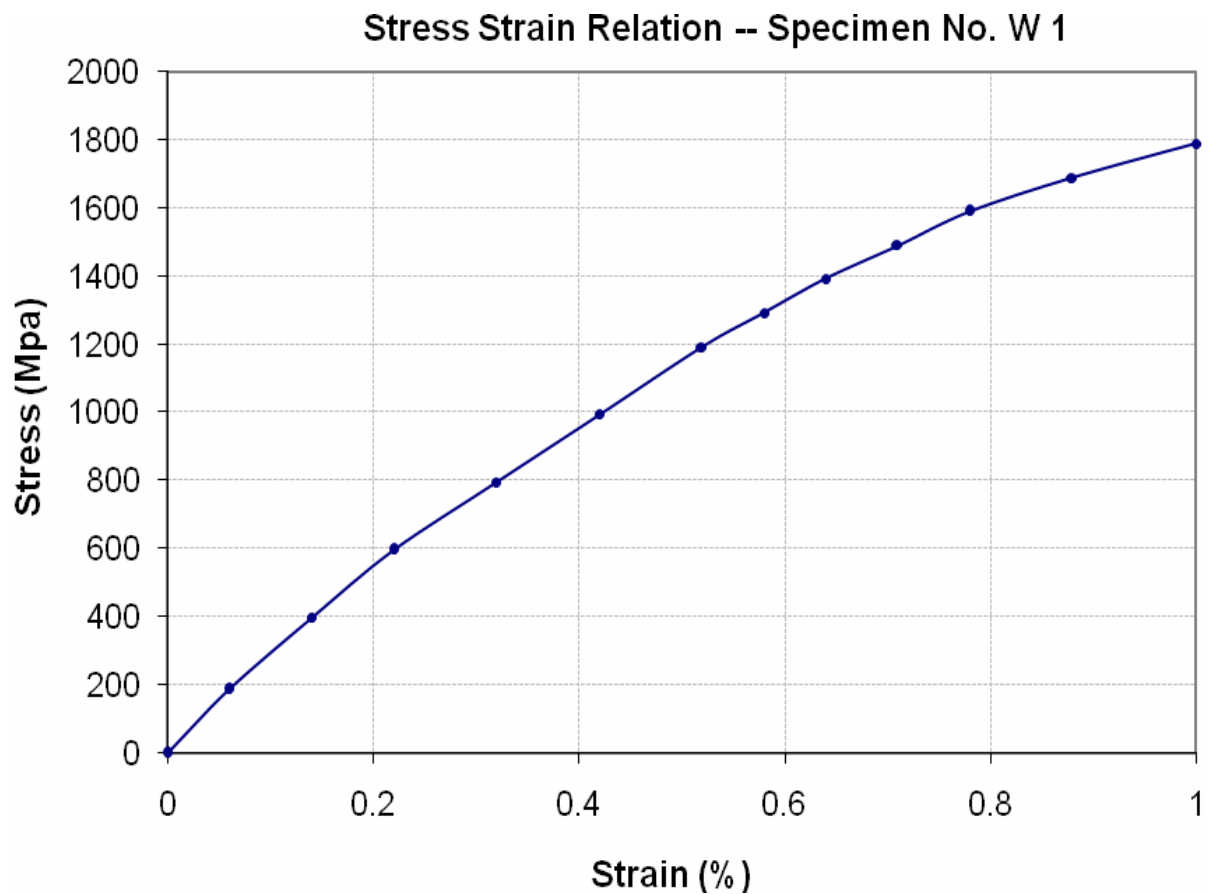
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Material Engineer
Banu Mukhtar Contracting (Pvt.) Ltd
Naveena Export (Pvt) Ltd.

Reference # CED/TFL **37358** (Dr. Rizwan Azam)
Reference of the request letter # BM/NaveenaExport/001

Dated: 12-11-2021
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,
Executive Engineer
Highway Division, Taunsa
(Construction of Mettalled Roads & Pile Foundation Bridge on Sangher Nullah for Tehsil Complex, Shah Suleman Stadium Mini Zoo and TEVTA ect)

Reference # CED/TFL **37340** (Dr. Usman Akmal)
Reference of the request letter # 1025

Dated: 10-11-2021
Dated: 26-10-2021

Tension Test Report (Page -1/3)

Date of Test 11-11-2021
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	781.0	17800	174.62	19200	188.35	199	>3.50	xx
2	12.70 (1/2")	775.0	780.0	17300	169.71	19200	188.35	198	>3.50	xx
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-

Only two samples for Test

Note:

1. Modulus of Elasticity is based on nominal steel area of the steel strand vide clause 13.3 of ASTM – A416a
2. Load versus percentage strain graphs are attached

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 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

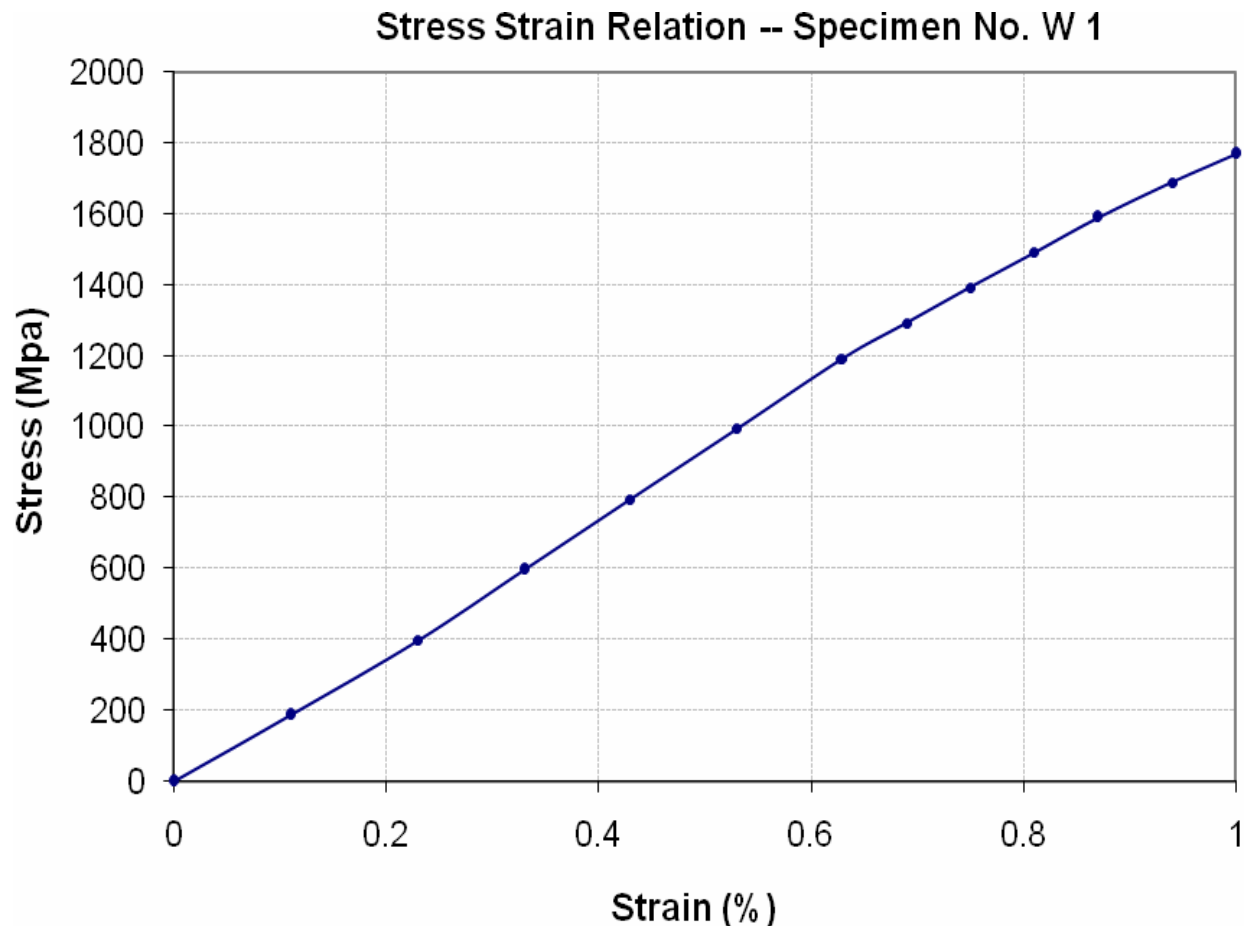
To,
Executive Engineer
Highway Division, Taunsa
(Construction of Mettalled Roads & Pile Foundation Bridge on Sangher Nullah for Tehsil Complex, Shah Suleman Stadium Mini Zoo and TEVTA ect)

Reference # CED/TFL **37340** (Dr. Usman Akmal)
Reference of the request letter # 1025

Dated: 10-11-2021

Dated: 26-10-2021

Graph (Page – 2/3)



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



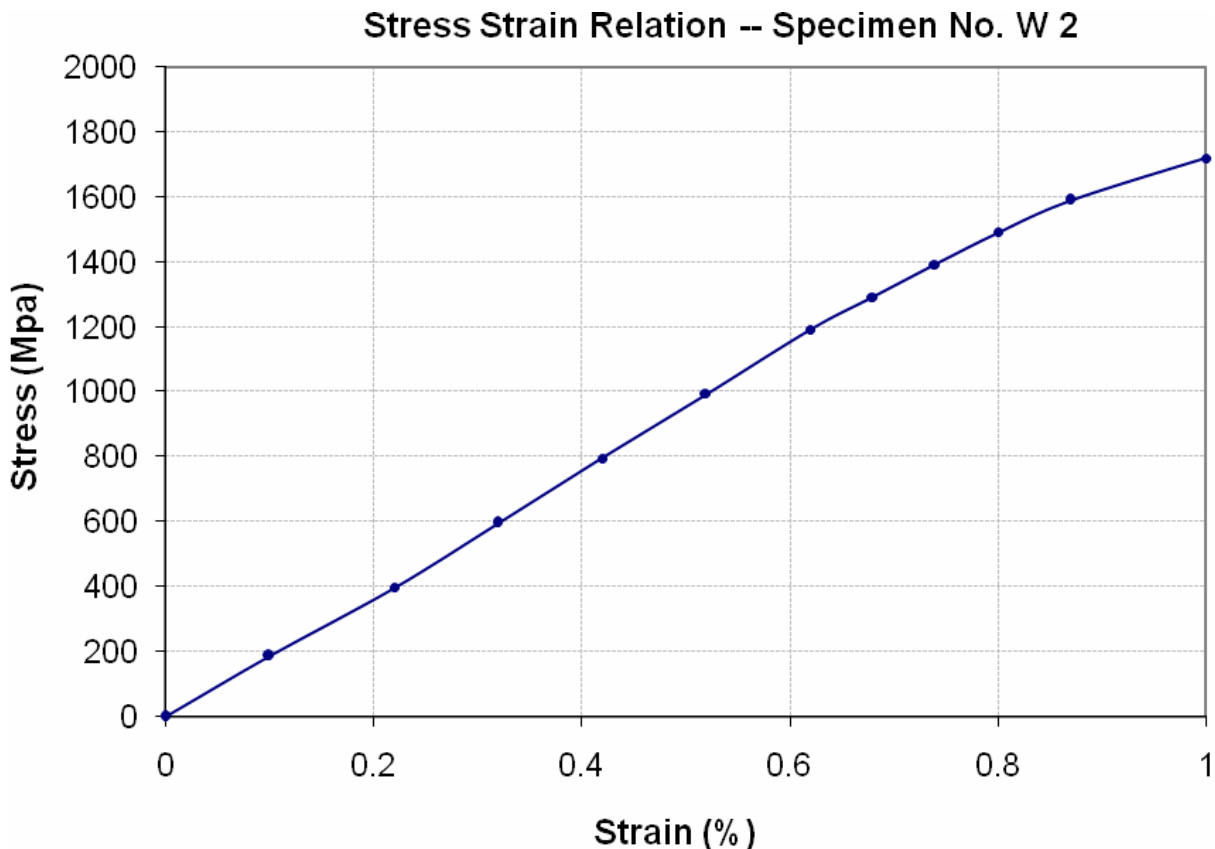
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Executive Engineer
Highway Division, Taunsa
(Construction of Mettalled Roads & Pile Foundation Bridge on Sangher Nullah for Tehsil Complex, Shah Suleman Stadium Mini Zoo and TEVTA ect)

Reference # CED/TFL **37340** (Dr. Usman Akmal)
Reference of the request letter # 1025

Dated: 10-11-2021
Dated: 26-10-2021

Graph (Page – 3/3)



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 CM Engineering (Pvt) Ltd
Lahore
(Project CMPAK Site ID: 43520, 42951, 43522)

Reference # CED/TFL **37343** (Dr. Usman Akmal)
Reference of the request letter # CME/Steel/CMPak/311

Dated: 10-11-2021
Dated: 08-11-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
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	0.394	10	9.76	0.12	0.116	3300	5000	60627	62780	91858	95200	1.20	15.0	
2	0.367	10	9.41	0.12	0.108	3200	4600	58789	65420	84510	94100	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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 Professional Construction Services (Pvt) Ltd
Lahore
(ABL PIA Road, Lahore)

Reference # CED/TFL **37344** (Dr. Usman Akmal)
Reference of the request letter # PCS/21/Eng-130

Dated: 10-11-2021
Dated: 10-11-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile 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	0.370	3	0.372	0.11	0.109	3700	4700	74200	74960	94200	95300	0.90	11.3	
2	0.367	3	0.370	0.11	0.108	3800	4900	76200	77690	98200	100200	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

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
 Bahria Town Private Limited
 Disposal of Storm Water Drain at Mini Golf Near Gate # 2 Bahria Orchard Lahore

Reference # CED/TFL **37345** (Dr. Usman Akmal)
 Reference of the request letter # QA/QC-Steel-2420

Dated: 10-11-2021
 Dated: 10-11-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
 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	0.376	3	0.375	0.11	0.110	3400	4900	68200	67870	98200	97900	1.10	13.8	FF Steel
2	0.377	3	0.376	0.11	0.111	3200	4700	64200	63690	94200	93600	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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



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

To,
 Deputy Executive Officer
 Punjab Safe Cities Authority
 Lahore
 (OFC Restoration Works at Gulab Devi, Shahkaam Chowk and Sheran Wala, Lahore)
 (M/s Communication Links)
 Reference # CED/TFL **37346** (Dr. Usman Akmal) Dated: 10-11-2021
 Reference of the request letter # 11652/Works/PSCA/2021 Dated: 10-11-2021

Tension Test Report (Page -1/2)

Date of Test 11-11-2021
 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	0.368	3	0.371	0.11	0.108	4100	5000	82200	83550	100200	101900	1.00	12.5	
2	0.371	3	0.372	0.11	0.109	3400	4700	68200	68810	94200	95200	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														

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 Executive Officer
 Punjab Safe Cities Authority
 Lahore
 (OSP Works at Entry and Exit Points of Lahore)(M/s Communication Links)

Reference # CED/TFL **37346** (Dr. Usman Akmal)
 Reference of the request letter # 11653/Works/PSCA/2021

Dated: 10-11-2021
 Dated: 10-11-2021

Tension Test Report (Page -2/2)

Date of Test 11-11-2021
 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	0.366	3	0.370	0.11	0.108	4000	5000	80200	81950	100200	102500	1.00	12.5	
2	0.363	3	0.369	0.11	0.107	4200	5100	84200	86670	102200	105300	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
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 M. Saleem Construction Company
Sheikhupura

Reference # CED/TFL **37347** (Dr. Usman Akmal)
Reference of the request letter # Nil

Dated: 10-11-2021
Dated: 10-11-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
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	3600	4800	72200	72870	96200	97200	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample 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 Sui Northern Gas Pipelines Limited
Lahore
(Construction of Room Pathways & Shed at Domestic Meter Inspection Shop, Sundar Lahore)

Reference # CED/TFL **37348** (Dr. Usman Akmal)
Reference of the request letter # CC/DMIS/SUNDAR/01

Dated: 11-11-2021
Dated: 01-09-2021

Tension Test Report (Page -1/1)

Date of Test 11-11-2021
Gauge length 8 inches
Description Deformed Steel Bar Tensile 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	0.360	3/8	0.367	0.11	0.106	3700	4700	74200	77060	94200	97900	0.90	11.3	
2	0.361	3/8	0.368	0.11	0.106	3800	4700	76200	78850	94200	97600	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

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 Inter-Fab
Lahore

Reference # CED/TFL **37350, 351** (Dr. Usman Akmal)
Reference of the request letter # Nil

Dated: 11-11-2021

Dated: 11-11-2021

Tension Test Report (Page – 1/1)

Date of Test 11-11-2021
Description Steel Wire Rope Tensile Test

Sr. No.	Nominal Diameter	Measured weight	Breaking Load	Remarks / Coil No.
	(mm)	(kg/m)	(kg)	
1	16	0.984	15400	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only one sample for Test				

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