



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
 PWD PHE Division
 Bhimber AJK
 (Water Supply Scheme Bhimber Town Phase IV District Bhimber)
 Reference # CED/TFL **34834** (Dr. Qasim Khan)
 Reference of the request letter # 191-93

Dated: 19-03-2020
 Dated: 14-03-2020

Tension Test Report (Page – 1/2)

Date of Test 29-04-2020
 Gauge length 2 inches
 Description G.I Pipe Steel Strip Tensile and Bend 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	50	24.80x3.40	84.32	2450	2750	285.04	319.94	0.60	30.00	
2		24.80x3.40	84.32	2600	2900	302.49	337.39	0.60	30.00	
3	75	24.80x3.80	94.24	3700	4500	385.15	468.43	0.60	30.00	
4		24.80x3.80	94.24	3800	4600	395.56	478.84	0.60	30.00	
5	100	24.80x4.40	109.12	4100	4900	368.59	440.52	0.60	30.00	
6		24.80x4.50	111.60	4100	4900	360.40	430.73	0.60	30.00	
7	125	24.80x4.80	119.04	4300	5400	354.36	445.01	0.60	30.00	
8		24.80x4.80	119.04	4350	5400	358.48	445.01	0.60	30.00	
9	150	25.20x4.70	118.44	4000	4800	331.31	397.57	0.50	25.00	
10		25.20x4.70	118.44	4200	4700	347.87	389.29	0.60	30.00	
Only Ten Samples for Tensile and Five Samples for Bend Test										
Bend Test										
Strip Taken from G.I Pipe 50mm Bend Test Through 180° is Satisfactory										
Strip Taken from G.I Pipe 75mm Bend Test Through 180° is Satisfactory										
Strip Taken from G.I Pipe 100mm Bend Test Through 180° is Satisfactory										
Strip Taken from G.I Pipe 125mm Bend Test Through 180° is Satisfactory										
Strip Taken from G.I Pipe 150mm 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,
Executive Engineer
PWD PHE Division
Bhimber AJK
(Water Supply Scheme Bhimber Town Phase IV District Bhimber)

Reference # CED/TFL **34834** (Dr. Qasim Khan)
Reference of the request letter # 191-93

Dated: 19-03-2020
Dated: 14-03-2020

Weight & Size Test Report (Page – 2/2)

Date of Test 29-04-2020
Gauge length -----
Description G.I Pipe Steel Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	External Diameter	Internal Diameter	Thickness	Remark
	(mm)	(g)	(cm)	(kg/m)	(mm)	(mm)	(mm)	
1	50	2729	60.70	4.50	59.90	52.90	3.50	
2	75	4759	60.80	7.83	88.20	80.20	4.00	
3	100	7045	60.80	11.59	115.20	106.00	4.60	
4	125	9639	61.5	15.67	141.40	131.40	5.00	
5	150	10759	60.6	17.75	163.2	153.80	4.70	
-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	
Only Five Samples 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,
Resident Engineer
Zeeruk International (Pvt) Ltd
Construction of 2-Lanes Highway from Basima to Khuzdar Section (N-30)

Reference # CED/TFL **34859** (Dr. M Rizwan Riaz)
Reference of the request letter # ZI/RE/N-30/2020/28

Dated: 23-04-2020
Dated: 17-02-2020

Tension Test Report (Page – 1/4)

Date of Test 29-04-2020
Gauge length 640 mm
Description Steel Strand Tensile Test as per ASTM A-416-94a

Sr. No.	Nominal Diameter	Nominal Weight	Measured weight	Yield strength clause (6.3)		Breaking strength clause (6.2)		Young's Modulus of Elasticity "E"	% Elongation	Remarks / Coil No.
	(mm)	(kg/km)	(kg/km)	(kg)	(kN)	(kg)	(kN)	GPa		
1	12.70 (1/2")	775.0	779.0.0	17800	174.62	20200	198.16	199	>3.50	21011
2	12.70 (1/2")	775.0	779.0	18000	176.58	20200	198.16	198	>3.50	21013
3	12.70 (1/2")	775.0	766.0	18500	181.49	20200	198.16	199	>3.50	21015
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Only three samples for Test										

Note:

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

I/C Testing 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



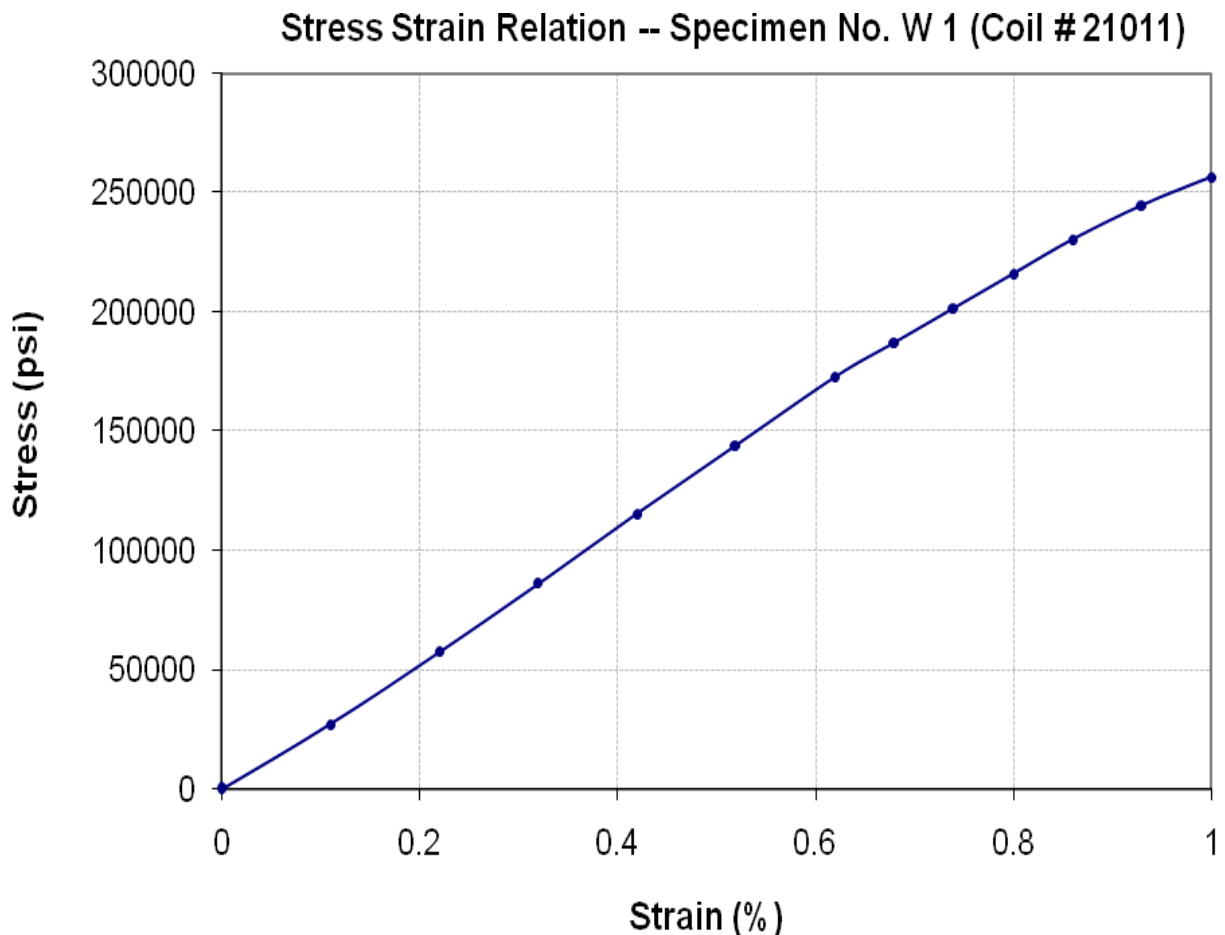
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer
Zeeruk International (Pvt) Ltd
Construction of 2-Lanes Highway from Basima to KhuzdarSection (N-30)

Reference # CED/TFL **34859** (Dr. M Rizwan Riaz)
Reference of the request letter # ZI/RE/N-30/2020/28

Dated: 23-04-2020
Dated: 17-02-2020

Graph (Page – 2/4)



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



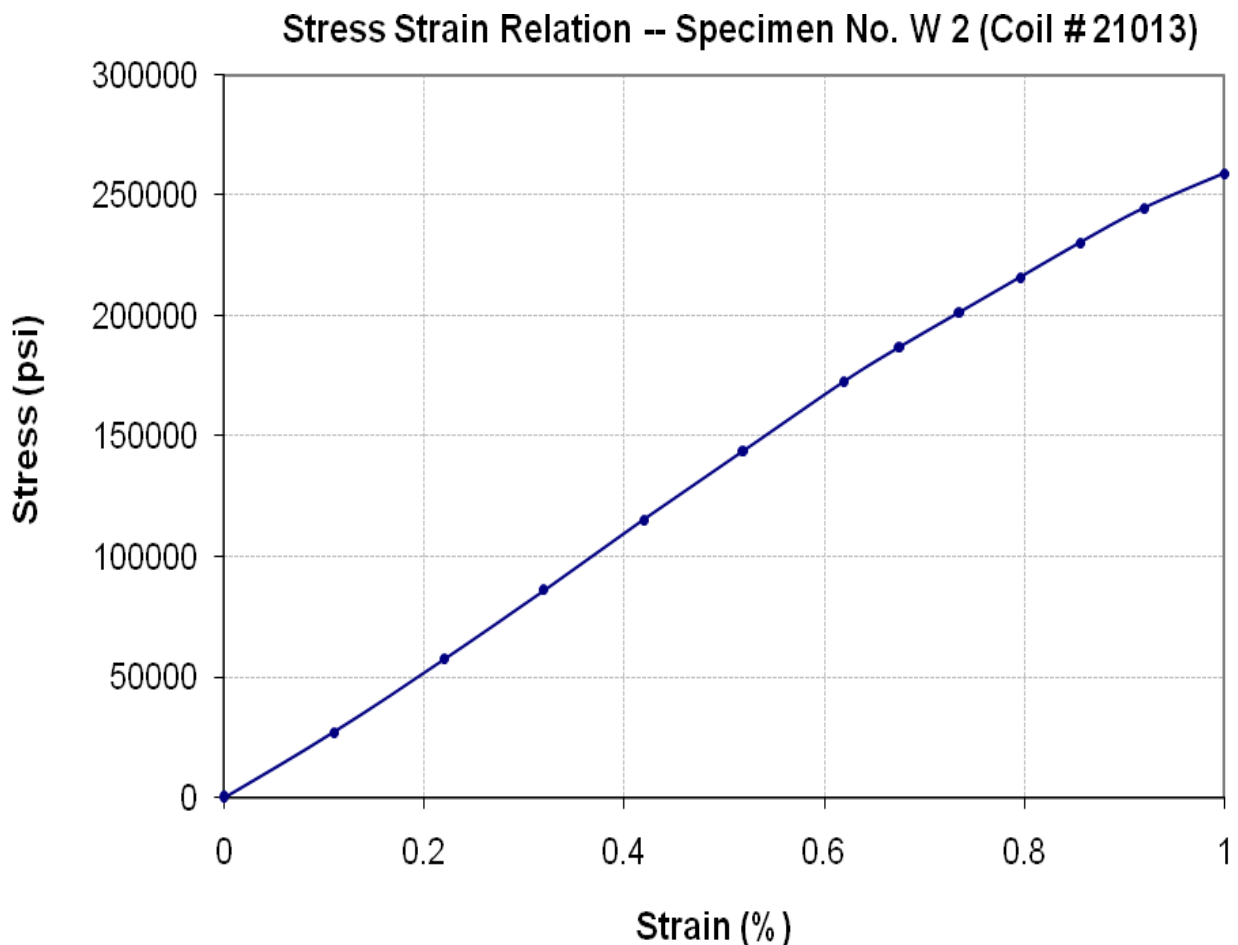
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer
Zeeruk International (Pvt) Ltd
Construction of 2-Lanes Highway from Basima to KhuzdarSection (N-30)

Reference # CED/TFL **34859** (Dr. M Rizwan Riaz)
Reference of the request letter # ZI/RE/N-30/2020/28

Dated: 23-04-2020
Dated: 17-02-2020

Graph (Page – 3/4)



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



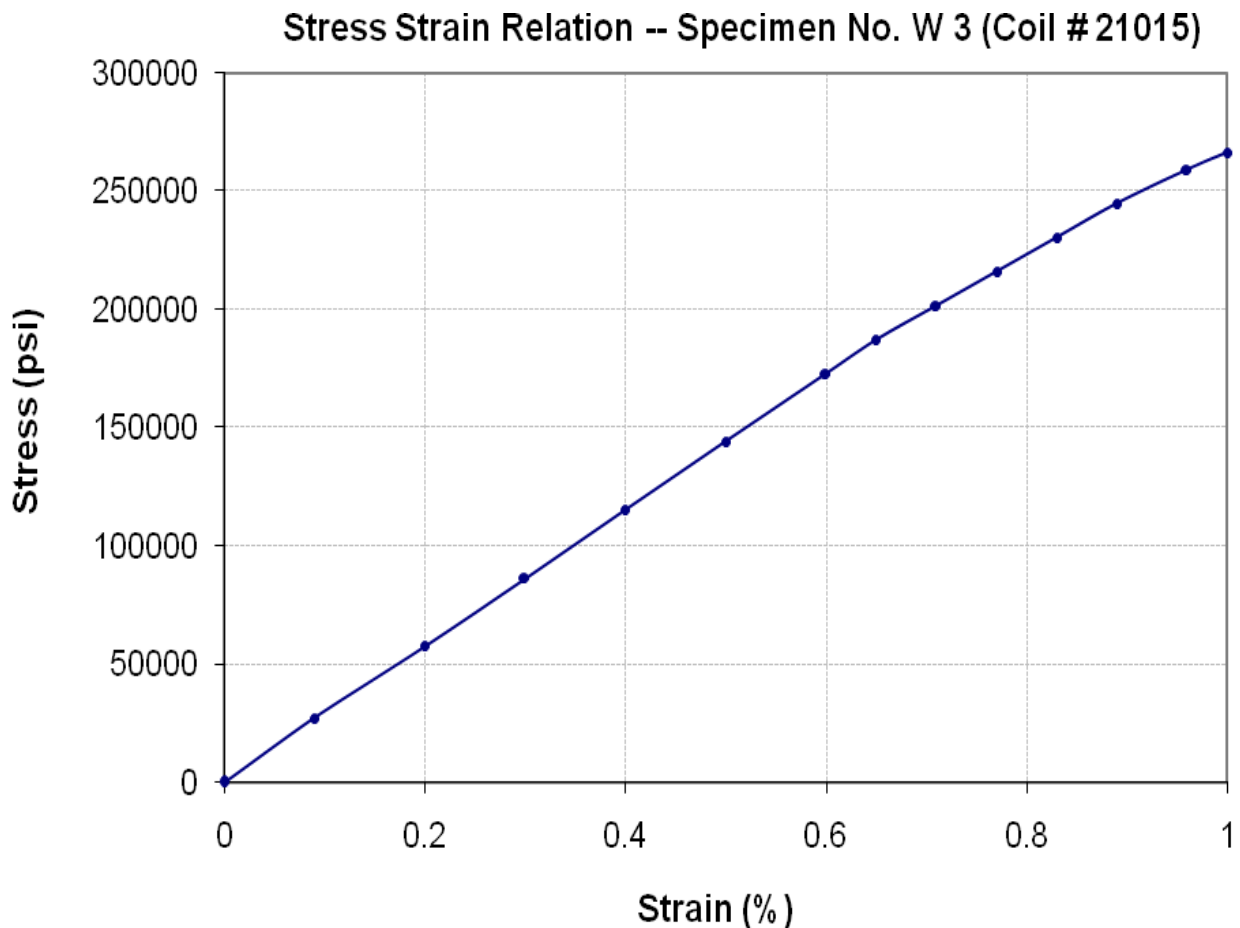
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer
Zeeruk International (Pvt) Ltd
Construction of 2-Lanes Highway from Basima to KhuzdarSection (N-30)

Reference # CED/TFL **34859** (Dr. M Rizwan Riaz)
Reference of the request letter # ZI/RE/N-30/2020/28

Dated: 23-04-2020
Dated: 17-02-2020

Graph (Page – 4/4)



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
Zeeruk International (Pvt) Ltd
Construction of 2-Lanes Highway from Basima to KhuzdarSection (N-30)

Reference # CED/TFL **34860** (Dr. M Rizwan Riaz)
Reference of the request letter # ZI/RE/N-30/2020/43

Dated: 23-04-2020
Dated: 17-03-2020

Tension Test Report (Page – 1/3)

Date of Test 29-04-2020
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	20000	196.20	198	>3.50	21114
2	12.70 (1/2")	775.0	777.0	17600	172.66	19900	195.22	199	>3.50	21125
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
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



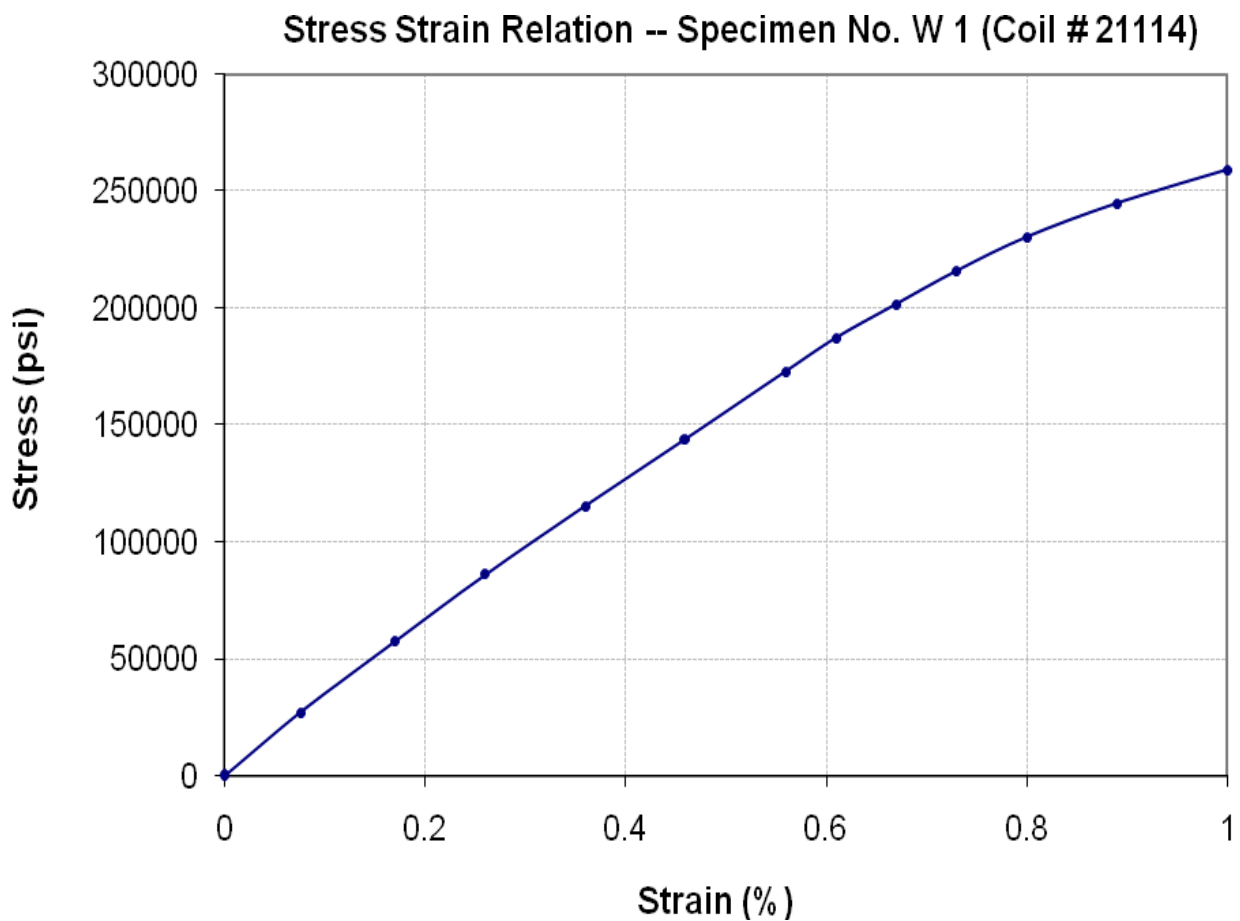
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer
Zeeruk International (Pvt) Ltd
Construction of 2-Lanes Highway from Basima to KhuzdarSection (N-30)

Reference # CED/TFL **34860** (Dr. M Rizwan Riaz)
Reference of the request letter # ZI/RE/N-30/2020/43

Dated: 23-04-2020
Dated: 17-03-2020

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



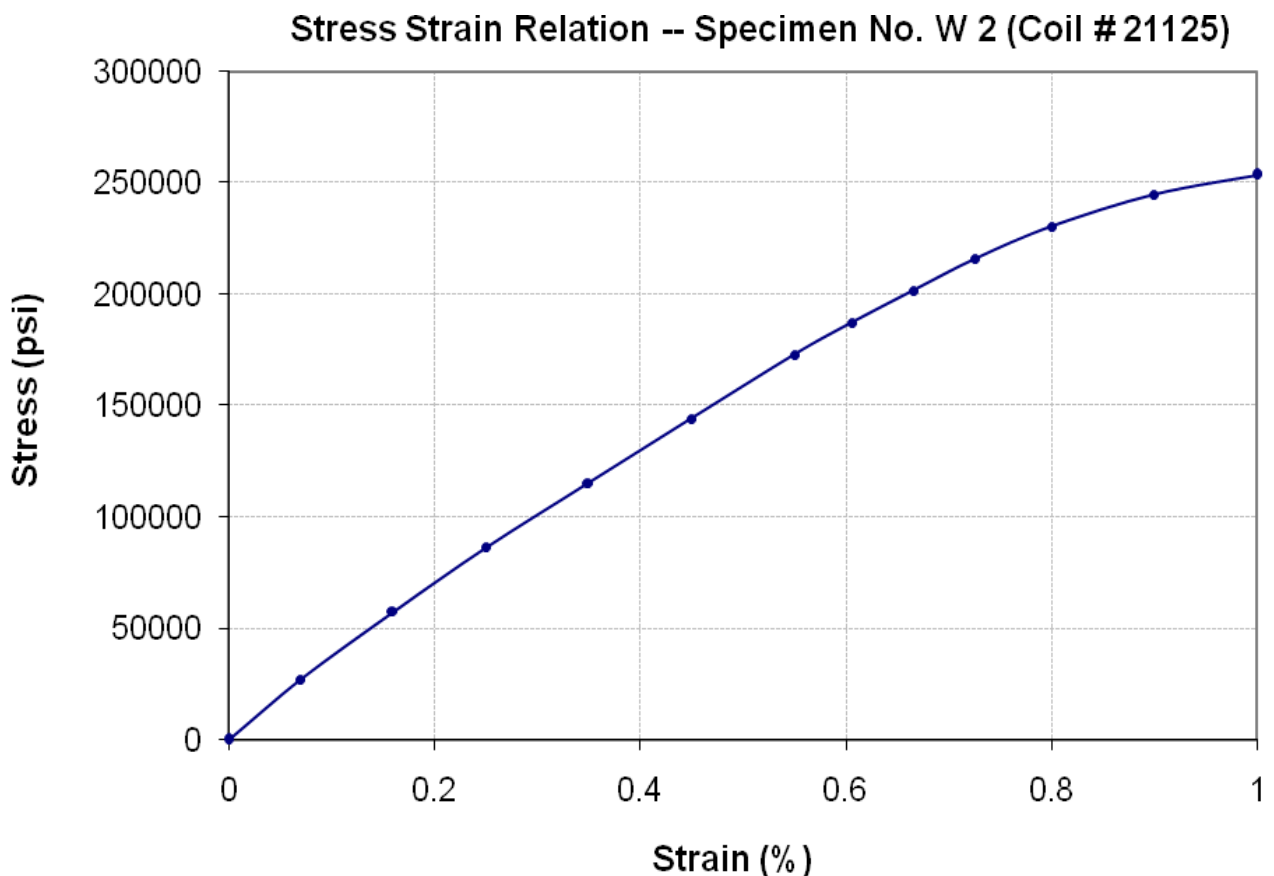
STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Resident Engineer
Zeeruk International (Pvt) Ltd
Construction of 2-Lanes Highway from Basima to KhuzdarSection (N-30)

Reference # CED/TFL **34860** (Dr. M Rizwan Riaz)
Reference of the request letter # ZI/RE/N-30/2020/43

Dated: 23-04-2020
Dated: 17-03-2020

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,
 Sub Divisional Officer
 Public Health Engg: Sub Division
 Sillanwali
 (Rural Water Supply Scheme Chak No. 61/SB Sargodha)

Reference # CED/TFL **34863** (Dr. Qasim Khan)
 Reference of the request letter # Nil

Dated: 24-04-2020
 Dated: 24-04-2020

Tension Test Report (Page -1/1)

Date of Test 29-04-2020
 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	0.351	3/8	0.363	0.11	0.103	3500	4500	70200	74680	90200	96100	1.20	15.0	
2	0.377	3/8	0.376	0.11	0.111	2500	3600	50100	49750	72200	71700	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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,
 Sub Divisional Officer
 Building Sub Division No. 15
 Lahore
 (Construction of New Administration Block in Premises of Lahore High Court Lahore)

Reference # CED/TFL **34868** (Dr. Qasim Khan)
 Reference of the request letter # 309

Dated: 27-04-2020
 Dated: 19-03-2020

Tension Test Report (Page -1/1)

Date of Test 29-04-2020
 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	0.375	3/8	0.374	0.11	0.110	3200	4900	64200	64060	98200	98100	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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,
 Sub Divisional Officer
 Buildings Sub Division
 Assembly, Lahore
 (Construction of 60-No. Staff Quarters (Grade 1 to 10) at MPA's Hostel Lahore)

Reference # CED/TFL **34869** (Dr. Qasim Khan)
 Reference of the request letter # 2397

Dated: 27-04-2020
 Dated: 28-03-2020

Tension Test Report (Page -1/1)

Date of Test 29-04-2020
 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	0.374	3/8	0.374	0.11	0.110	3400	4800	68200	68150	96200	96300	1.30	16.3	
2	0.375	3/8	0.375	0.11	0.110	3400	4800	68200	67960	96200	96000	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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 Defence Housing Authority.
 Lahore Cantt
 (Infra Dev Works Ph-IX Prism (Pkg-II, III & IV), DHA Ph-IX (M/s DHA Const.)

Reference # CED/TFL **34870** (Dr. M Rizwan Riaz)
 Reference of the request letter # 408/241/E/Lab/886/530

Dated: 27-04-2020
 Dated: 24-04-2020

Tension Test Report (Page -1/1)

Date of Test 29-04-2020
 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	0.389	3	0.382	0.11	0.114	3600	5500	72200	69320	110200	105900	1.30	16.3	Saeed Kasur
2	0.390	3	0.382	0.11	0.115	3500	5600	70200	67290	112300	107700	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



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
 Building Sub Division
 Nankana Sahib
 (Establishment of Baba Guru Nankana University Nankana Sahib (Construction of Boundary Wall))
 Reference # CED/TFL **34871** (Dr. Qasim Khan) Dated: 28-04-2020
 Reference of the request letter # 16/N Dated: 22-04-2020

Tension Test Report (Page -1/1)

Date of Test 29-04-2020
 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	0.366	3/8	0.370	0.11	0.108	3900	5000	78200	79880	100200	102500	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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

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