



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
 Allied Engineering Consultants (Pvt) Ltd
 Construction of Industrial Area Road from G.T Road to Ghazi Chak including Bridge on
 Bhimber Nullah and Upper Jhelum Canal Gujrat-II, Gujrat

Reference # CED/TFL **36403** (Dr. Qasim Khan)
 Reference of the request letter # AEC/GUJ/2021/01

Dated: 30-04-2021
 Dated: 26-04-2021

Tension Test Report (Page -1/1)

Date of Test 03-05-2021
 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	5.220	11	1.398	1.56	1.534	47400	67200	67000	68100	95000	96600	1.60	20.0	
2	5.185	11	1.393	1.56	1.524	42000	65000	59400	60740	91900	94000	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#11 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
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Pakistan. Ph: 92-42-99029202

To,
 Executive Engineer
 Highway Division, Gujrat
 Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length =
 31 kms in District Gujrat)(Group No. IV-A, Construction of Bridge over UJC alongwith
 Approaches)

Reference # CED/TFL **36404** (Dr. Qasim Khan)
 Reference of the request letter # 423/MCB

Dated: 30-04-2021
 Dated: 18-03-2021

Tension Test Report (Page -1/5)

Date of Test 03-05-2021
 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	3200	4900	64200	62670	98200	96000	1.40	17.5	
2	0.378	3	0.376	0.11	0.111	3200	4800	64200	63420	96200	95200	1.40	17.5	
3	4.306	10	1.269	1.27	1.266	39800	54600	69100	69320	94800	95100	1.70	21.3	
4	4.313	10	1.271	1.27	1.268	40000	54400	69500	69540	94500	94600	1.60	20.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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
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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
Department of Civil Engineering
University of Engineering and Technology Lahore, 54890
Pakistan. Ph: 92-42-99029202

To,
Executive Engineer
Highway Division, Gujrat
Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length =
31 kms in District Gujrat)(Group No. IV-A, Construction of Bridge over UJC alongwith
Approaches)

Reference # CED/TFL **36404** (Dr. Qasim Khan)
Reference of the request letter # 423/MCB

Dated: 30-04-2021
Dated: 18-03-2021

Tension Test Report (Page -2/5)

Date of Test 03-05-2021
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	776.0	16800	164.81	19100	187.37	199	>3.50	xx
2	12.70 (1/2")	775.0	775.0	17500	171.68	19100	187.37	198	>3.50	xx
3	12.70 (1/2")	775.0	774.0	17000	166.77	19100	187.37	199	>3.50	xx
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
Only three samples for Test										

Note:

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

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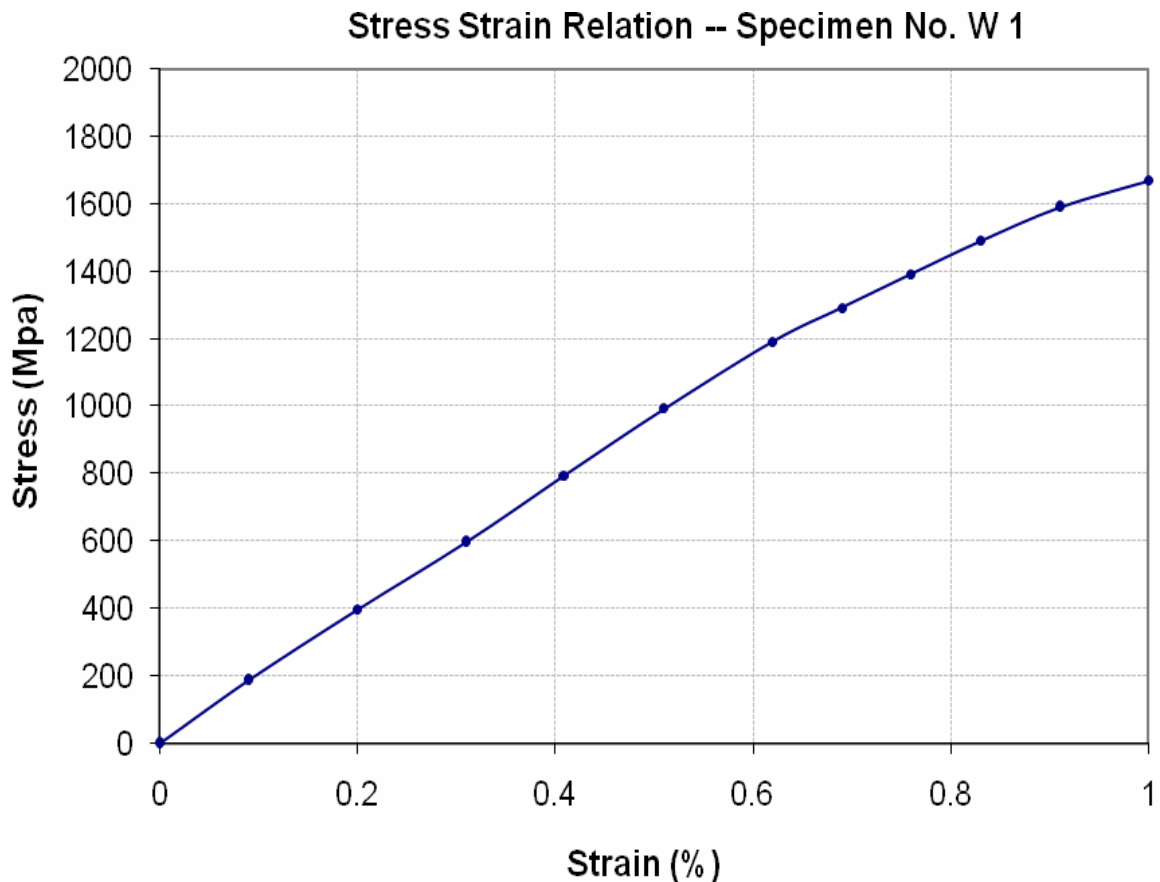
To,
Executive Engineer
Highway Division, Gujrat
Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length =
31 kms in District Gujrat)(Group No. IV-A, Construction of Bridge over UJC alongwith
Approaches)

Reference # CED/TFL **36404** (Dr. Qasim Khan)
Reference of the request letter # 423/MCB

Dated: 30-04-2021

Dated: 18-03-2021

Graph (Page – 3/5)



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Test Floor Laboratory
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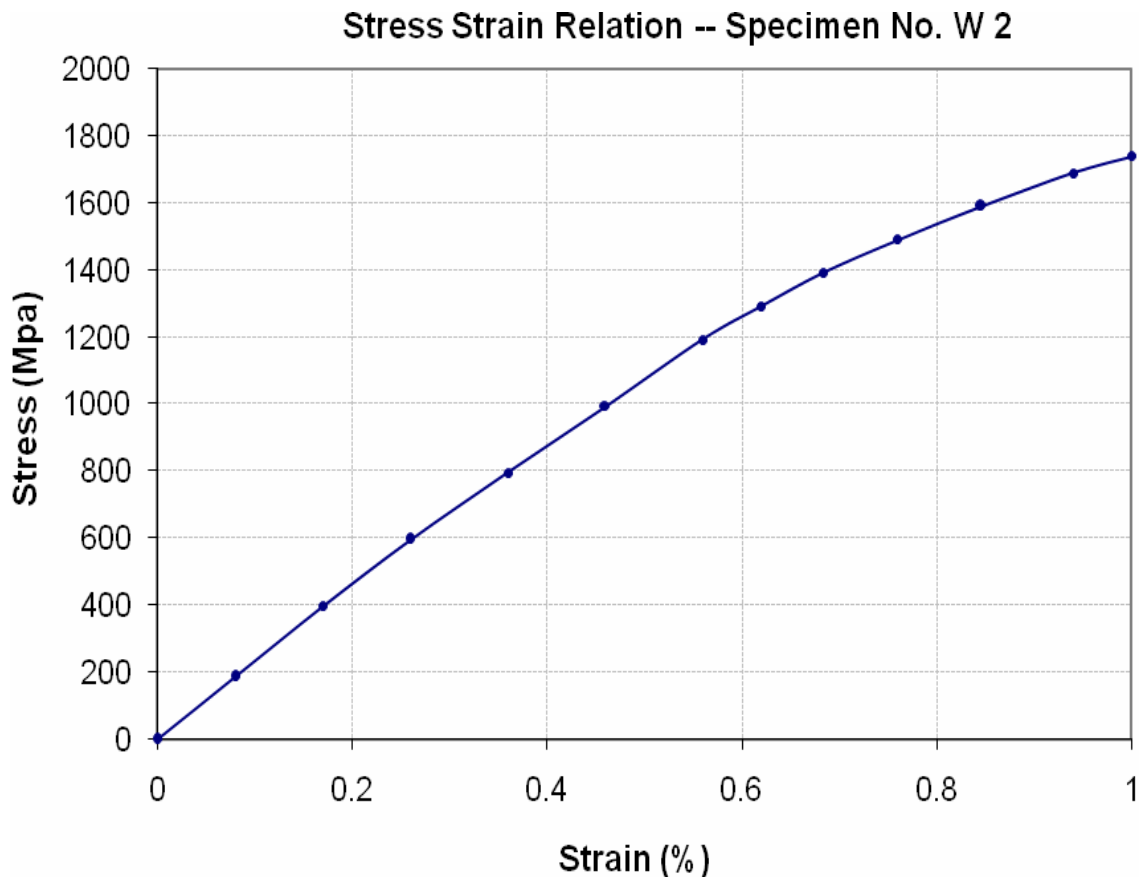
To,
Executive Engineer
Highway Division, Gujrat
Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length =
31 kms in District Gujrat)(Group No. IV-A, Construction of Bridge over UJC alongwith
Approaches)

Reference # CED/TFL **36404** (Dr. Qasim Khan)
Reference of the request letter # 423/MCB

Dated: 30-04-2021

Dated: 18-03-2021

Graph (Page – 4/5)



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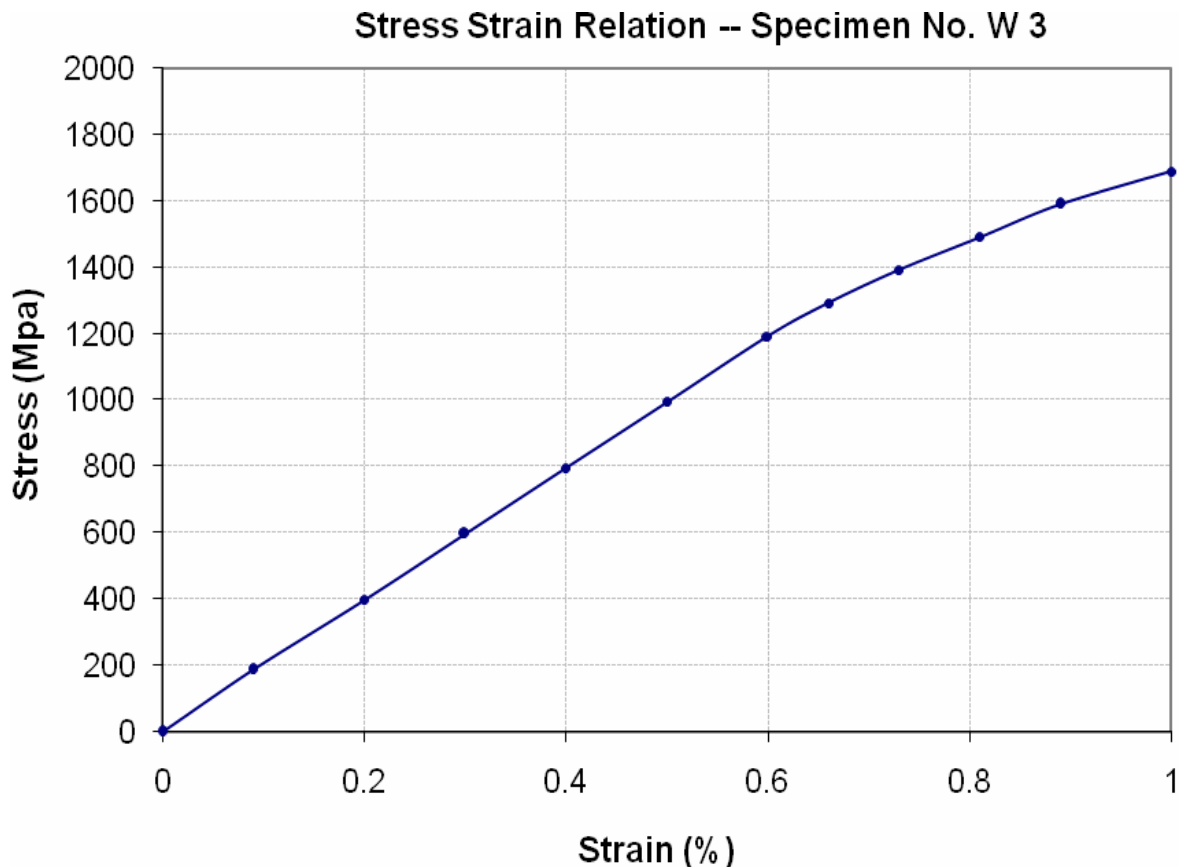
To,
Executive Engineer
Highway Division, Gujrat
Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length =
31 kms in District Gujrat)(Group No. IV-A, Construction of Bridge over UJC alongwith
Approaches)

Reference # CED/TFL **36404** (Dr. Qasim Khan)
Reference of the request letter # 423/MCB

Dated: 30-04-2021

Dated: 18-03-2021

Graph (Page – 5/5)



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

To,
 Executive Engineer
 State Bank of Pakistan
 Construction of Balance Works of New Office Building at Sialkot

Reference # CED/TFL **36407** (Dr. Qasim Khan)
 Reference of the request letter # ED/27901/SKT-NB/2021

Dated: 30-04-2021
 Dated: 13-04-2021

Tension Test Report (Page -1/1)

Date of Test 03-05-2021
 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	0.367	3	0.371	0.11	0.108	3500	4400	70200	71530	88200	90000	0.70	8.8	
2	0.382	3	0.378	0.11	0.112	3700	4700	74200	72670	94200	92400	0.85	10.6	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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To,
 XEN
 AGE (Army) Pasrur
 Const of 8 x sldrs Flats (G+3) Block No. 4 at Pasrur Cantt

Reference # CED/TFL **36409** (Dr. Qasim Khan)
 Reference of the request letter # 6045/04/E-6

Dated: 03-05-2021
 Dated: 29-04-2021

Tension Test Report (Page -1/1)

Date of Test 03-05-2021
 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	0.377	3/8	0.375	0.11	0.111	3400	4900	68200	67710	98200	97600	1.20	15.0	
2	0.377	3/8	0.376	0.11	0.111	3400	4800	68200	67630	96200	95500	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180° is Satisfactory														

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To,
 Deputy Director, Engg.
 Sec I & II, Package -I, LOLMTP
 LDA, Lahore
 (Construction of TMA Office, Shalamar Town, Lahore Orange Line Metro Train Project (Package-I))

Reference # CED/TFL **36412** (Dr. M Rizwan Riaz)

Dated: 03-05-2021

Reference of the request letter # DD/PKG-I/LOLMTP/LDA/34

Dated: 03-05-2021

Tension Test Report (Page -1/1)

Date of Test 03-05-2021

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	0.375	3	0.375	0.11	0.110	3520	5050	70600	70300	101200	100900	1.10	13.8	
2	0.374	3	0.374	0.11	0.110	3360	4940	67400	67380	99000	99100	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

Witness by M Irfan (Sub-Engineer LDA)

I/C Testing Laboratories
UET Lahore, Pakistan.

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