



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
 EGC (Pvt) Ltd
 KQC Road Project N-25

Reference # CED/TFL **33155** (Dr. M Rizwan Riaz)
 Reference of the request letter # KQC/Add/RE/267

Dated: 26-04-2019
 Dated: 22-04-2019

Tension Test Report (Page – 1/2)

Date of Test 03-05-2019
 Gauge length 2 inches
 Description W Beam Guardrail & Guardrail Post Strip Tensile and Bend Test as per AASHTOO M-180 & M-183

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	W Beam Guardrail	2.28x0.30	0.68	2600	3500	3801.17	5116.96	0.50	25.00	
2	W Beam Guardrail	2.28x0.30	0.68	2500	3400	3654.97	4970.76	0.50	25.00	
3	Guardrail Post	2.40x0.60	1.44	5300	8000	3680.56	5555.56	0.60	30.00	
4	Guardrail Post	2.40x0.60	1.44	5500	8000	3819.44	5555.56	0.60	30.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Four Samples for Tensile and Two Samples for Bend Test										
Bend Test										
Strip Taken from W Beam Guardrail Bend Test Through 180° is Satisfactory										
Strip Taken from W Beam Guardrail Bend Test Through 180° is Satisfactory										

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
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KQC Road Project N-25

Reference # CED/TFL **33155** (Dr. M Rizwan Riaz)
Reference of the request letter # KQC/Add/RE/267

Dated: 26-04-2019
Dated: 22-04-2019

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

Date of Test 03-05-2019
Gauge length -----
Description Guardrail Post Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	Thickness	Remark
		(g)	(cm)	(kg/m)	(mm)	
1	Guardrail Post	8165	62.8	13.00	6.00	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
Only One Sample for Test						

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Ref: CED/TFL/04/33165

Dated: 30-04-19

To
Resident Engineer -II & III
Zeeruk International (Pvt) Ltd
Lahore - Sialkot Motorway
(Rainbow)

Subject: - TEST RESULT REPORT FOR BEARING DEVICE (PAD)

Reference to your letter no. LSM/RE-II/St/19/208, Dated: 29/04/2019 on the above mentioned subject. One Elastomeric Bearing Rubber Pad (EBRP) has been received by us. The same was tested and results are given below.

Laboratory : **TEST FLOOR LAB**
Machine : **SHIMADZU**
Sample No. : **1/1**
Dimensions of EBRP : **498 x 450 x 77.84 mm**

TEST RESULTS - SHORT DURATION

Load Duration : **5+5 minutes**
Test Load : **125 TONS**
Bulging Pattern : **Uniform Buldging.**
Laminated Parallelism : **Parallel**
Cracks : **No crack is observed**

I/C Testing Laboratoires
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To,
M/S Khaiwa Khan & Brothers
Islamabad
(MCB Bank Mandi Bahuddin Branch, Islamabad)(MCB Bank)(Shahid Ihsan & Associates)

Reference # CED/TFL **33170** (Dr. Qasim Khan)
Reference of the request letter # Nil

Dated: 02-05-2019
Dated: 02-05-2019

Tension Test Report (Page -1/1)

Date of Test 03-05-2019
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	0.389	3/8	0.382	0.11	0.114	3000	5000	60200	57840	100200	96400	1.30	16.3	
2	0.415	3/8	0.394	0.11	0.122	3400	5200	68200	61480	104200	94100	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.

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To,
DCRE/ RE-1
Zeeruk International (Pvt) Ltd
Lahore – Sialkot Motorway
(Steel Complex)

Reference # CED/TFL **33171** (Dr. Qasim Khan)
Reference of the request letter # LSM/RE-1/2019/768

Dated: 02-05-2019
Dated: 02-05-2019

Tension Test Report (Page – 1/3)

Date of Test 03-05-2019
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	18000	176.58	19400	190.31	199	>3.50	xx
2	12.70 (1/2")	775.0	776.0	17600	172.66	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
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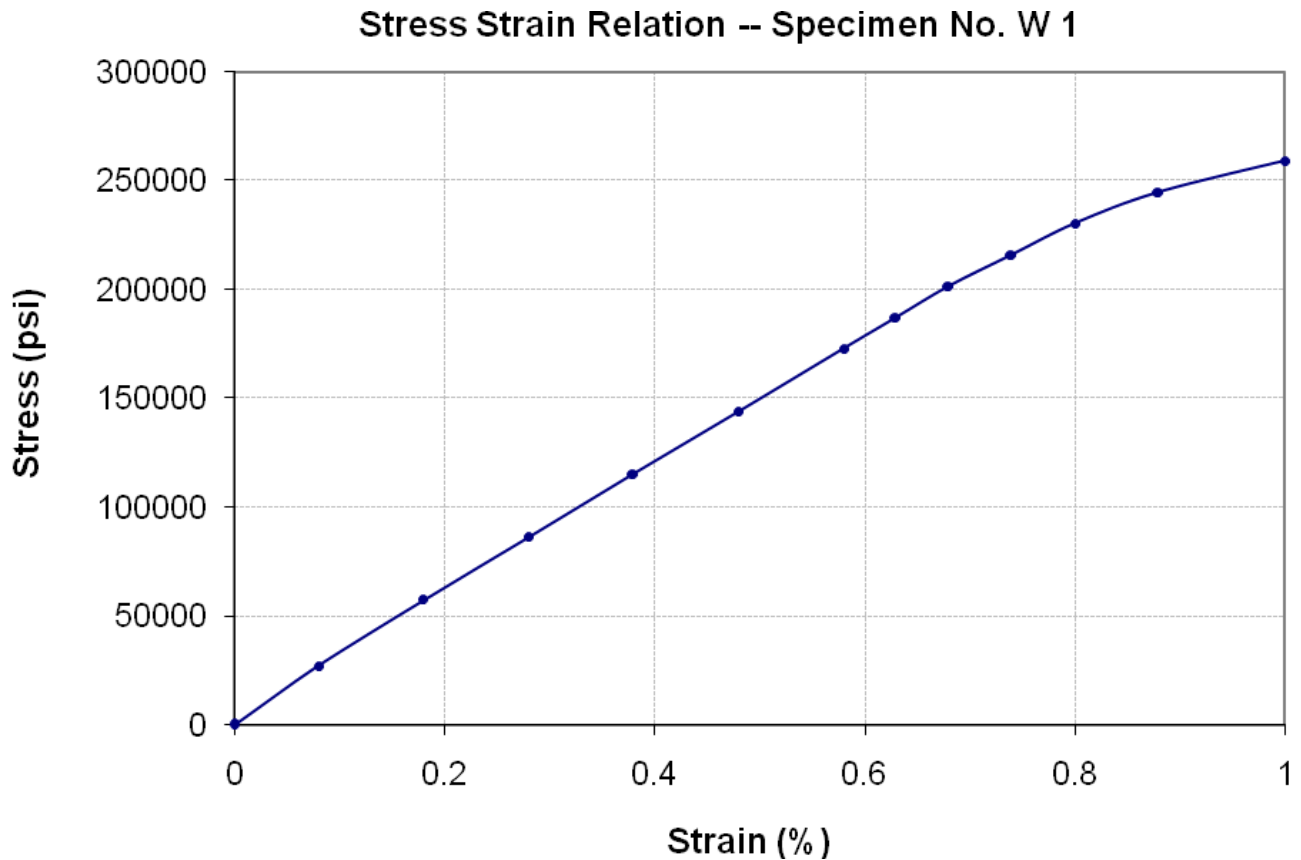
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To,
DCRE/ RE-1
Zeeruk International (Pvt) Ltd
Lahore – Sialkot Motorway
(Steel Complex)

Reference # CED/TFL **33171** (Dr. Qasim Khan)
Reference of the request letter # LSM/RE-1/2019/768

Dated: 02-05-2019
Dated: 02-05-2019

Graph (Page – 2/3)



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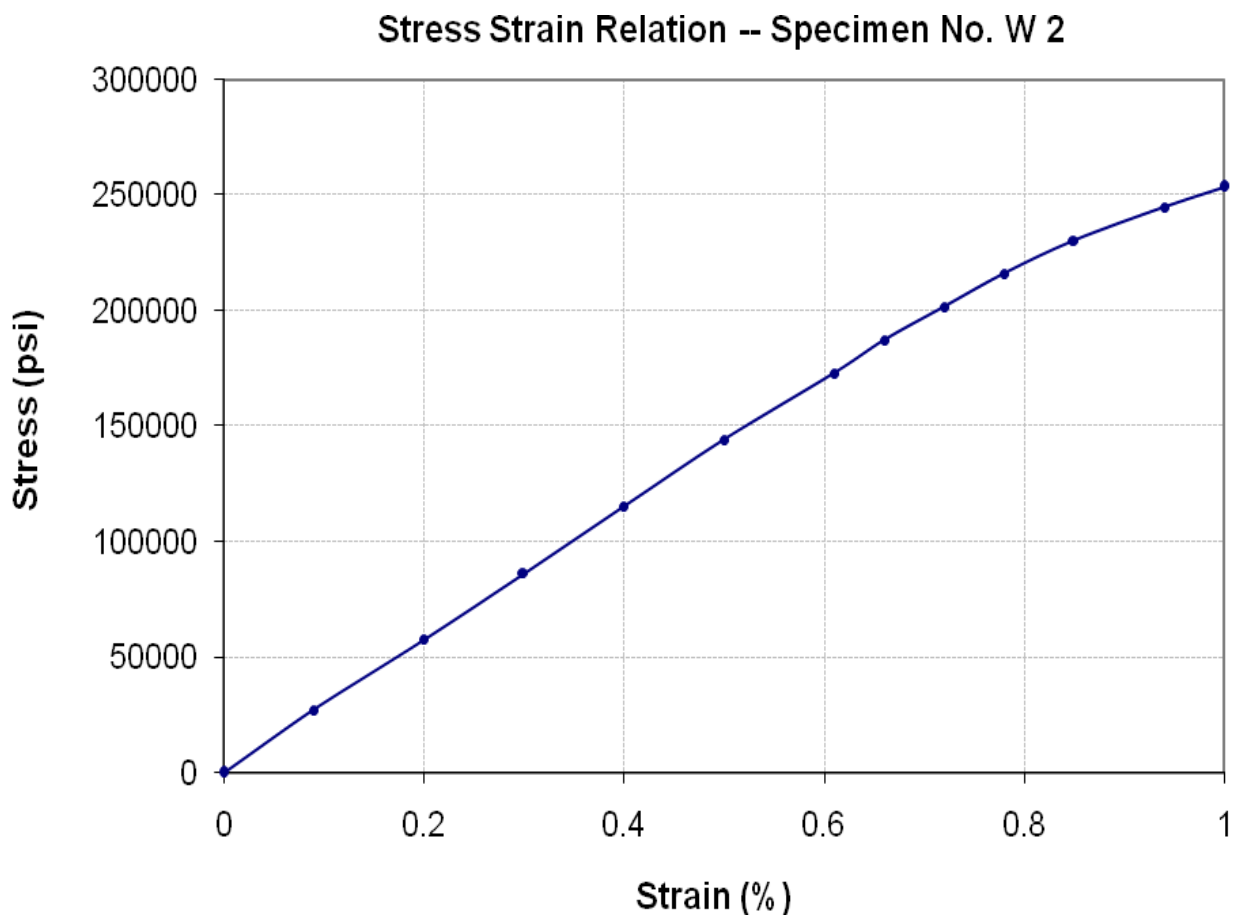
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To,
Resident Engineer –II
Zeeruk International (Pvt) Ltd
Lahore – Sialkot Motorway

Reference # CED/TFL **32844** (Dr. Asif Hameed)
Reference of the request letter # LSM/RE-II/St/19/099

Dated: 15-03-2019
Dated: 15-03-2019

Graph (Page – 3/3)



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To,
M/S Defence Housing Authority.
Lahore Cantt
(External Elec System, Block-L, DHA Ph-VIII)(M/s NLC)

Reference # CED/TFL **33172** (Dr. Qasim Khan)
Reference of the request letter # 408/241/E/Lab/550/06

Dated: 02-05-2019
Dated: 02-05-2019

Tension Test Report (Page -1/1)

Date of Test 03-05-2019
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	0.380	0.11	0.113	3300	5200	66200	64200	104200	101200	1.10	13.8	Saeed Kasur
2	0.370	3	0.372	0.11	0.109	3300	5000	66200	66790	100200	101200	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														

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UET Lahore, Pakistan.

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To,
Manager Marketing
Orrkon Piping Solutions
Lahore

Reference # CED/TFL **33175** (Dr. Qasim Khan)
Reference of the request letter # OPS/MKT/0848

Dated: 03-05-2019
Dated: 02-05-2019

Thickness Test Report (Page – 1/1)

Date of Test 03-05-2019
Gauge length -----
Description GI Cable Tray Thickness Test

Sr. No.	Designation	Thickness	Remark
	(mm)	(mm)	
1	300x100x2	1.96	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
Only One Sample for Test			

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