



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 (Maint)
 National Highway Authority
 Rawalpindi
 (Steel Pedestrian Overhead Bridge at km 1533+000-1534+000 on N-5)

Reference # CED/TFL **33000** (Dr. M Rizwan Riaz) Dated: 04-04-2019
 Reference of the request letter # H H-DY.Dir (Maint)-RWP/NHA/18/85254 Dated: 17-03-2019

Tension Test Report (Page – 1/1)

Date of Test 08-04-2019
 Gauge length 2 inches
 Description H-Beam & Angle 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 ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	H-Beam	150x150mm	29.20x12.50	365.00	15000	20400	403.15	548.28	0.55	27.50	
2	Angle	4"x4"	29.50x10.20	300.90	10500	16900	342.32	550.98	0.65	32.50	
3	Angle	3"x3"	29.50x8.80	259.60	8500	13700	321.21	517.71	0.65	32.50	
-	-		-	-	-	-	-	-	-	-	
-	-		-	-	-	-	-	-	-	-	
-	-		-	-	-	-	-	-	-	-	
Only Three Samples for Tensile and Three Samples for Bend Test											
Bend Test											
Strip Taken from H-Beam (150x150mm) Bend Test Through 180° is Satisfactory											
Strip Taken from Angle (4"x4") Bend Test Through 180° is Satisfactory											
Strip Taken from Angle (3"x3") Bend Test Through 180° is Satisfactory											

I/C Testing Laboratories
UET Lahore, Pakistan.

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To,
 Sub Divisional Officer
 Highway Sub Division
 Jampur

(Construction of Pile Foundation Bridge over Link No. III Canal on Jampur Dajal Road Length= 110 Rft in District Rajanpur)

Reference # CED/TFL **33007** (Dr. M Rizwan Riaz)

Dated: 05-04-2019

Reference of the request letter # 201/J

Dated: 22-03-2019

Tension Test Report (Page -1/1)

Date of Test 08-04-2019

Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.370	3	0.372	0.11	0.109	3200	5100	64200	64890	102200	103500	1.20	15.0	
2	0.371	3	0.372	0.11	0.109	3200	5100	64200	64750	102200	103200	1.30	16.3	
3	4.337	10	1.274	1.27	1.275	36800	55800	63900	63630	96900	96500	1.70	21.3	
4	4.330	10	1.273	1.27	1.273	37000	56000	64300	64080	97200	97000	1.80	22.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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To,
 Resident Engineer
 AZ Engineering Associates
 Construction of Road at Kot Ladheywala Warraich Rigid Pavement Dual Carriageway
 Gujranwala to Hafizabad Road L = 2.00 km (Group-II)

Reference # CED/TFL **33008** (Dr. M Rizwan Riaz)
 Reference of the request letter # AZEA/REKMK/748

Dated: 05-04-2019
 Dated: 01-03-2019

Tension Test Report (Page -1/1)

Date of Test 08-04-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.414	3	0.394	0.11	0.122	3600	5300	72200	65160	106200	96000	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
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Department of Civil Engineering
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To,
 Deputy Director (Tech:)
 O/o Chief Engineer (South Punjab)
 Public Health Engineering Department
 Lahore
 (Water Supply Scheme Taunsa District Dera Ghazi Khan)
 Reference # CED/TFL **33009** (Dr. M Rizwan Riaz)
 Reference of the request letter # 752/WS(I)

Dated: 05-04-2019

Dated: 04-04-2019

Tension Test Report (Page -1/1)

Date of Test 08-04-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test

Sr. No.	Weight	Diameter/ Size (inch)		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.068	5/32	0.160	-----	0.020	600	900	-----	65720	-----	98600	0.70	8.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend Test														

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To,
Resident Engineer
RENARDET S.A ((M-4), Package-3A)
Construction of Faisalabad-Khanewal Motorway (M-4) Project, Package-III A (Nizami)(M/s
GRC)

Reference # CED/TFL **33010** (Dr. M Rizwan Riaz)
Reference of the request letter # RE/M-4/3A/2019/345

Dated: 05-04-2019
Dated: 05-04-2019

Tension Test Report (Page – 1/1)

Date of Test 08-04-2019
Gauge length -----
Description Chain Link Fabric Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	3.20	640	6.28	
2	3.20	560	5.49	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only Two Samples for Test				

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To,
 Senior Research Officer-I
 Building Research Station
 Lahore
 (S.J Steel)

Reference # CED/TFL **33011** (Dr. M Rizwan Riaz)
 Reference of the request letter # 154-R/801

Dated: 05-04-2019
 Dated: 03-04-2019

Tension Test Report (Page -1/1)

Date of Test 08-04-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.370	3	0.372	0.11	0.109	3100	4800	62200	62830	96200	97300	1.20	15.0	
2	0.374	3	0.374	0.11	0.110	3100	4900	62200	62150	98200	98300	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														

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To,
 Resident Engineer (Civil)
 Mangla DAM Oranization
 WAPDA Mangla
 (Providing/Installation of Lightning Poles at 17500 ft Long Embankment (FY/2018-19)
 Reference # CED/TFL **33014** (Dr. M Rizwan Riaz) Dated: 05-04-2019
 Reference of the request letter # RE/MDO/APS/A-68/SPL/2018-19/8197-8200 Dated: 03-04-2019

Tension Test Report (Page -1/1)

Date of Test 08-04-2019
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (inch)		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)		
1	0.374	10	9.51	0.11	0.110	2700	4200	54100	54110	84200	84200	1.30	16.3	
2	0.371	10	9.47	0.11	0.109	2600	4000	52100	52500	80200	80800	1.30	16.3	
3	0.370	10	9.45	0.11	0.109	2700	4200	54100	54760	84200	85200	1.40	17.5	
4	0.372	10	9.48	0.11	0.109	2600	4000	52100	52420	80200	80700	1.40	17.5	
5	0.370	10	9.45	0.11	0.109	2600	4100	52100	52730	82200	83200	1.50	18.8	
6	0.368	10	9.43	0.11	0.108	2600	4000	52100	52980	80200	81500	1.70	21.3	
7	0.368	10	9.43	0.11	0.108	2600	4000	52100	52980	80200	81500	1.50	18.8	
8	0.370	10	9.45	0.11	0.109	2600	4000	52100	52660	80200	81100	1.30	16.3	
Note: only eight samples for tensile test														
Bend Test														

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