



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

To,
 Chief Resident Engineer
 Osmani & Co. (Pvt) Ltd
 Swat Motorway Project

Reference # CED/TFL **33855** (Dr. M Rizwan Riaz)
 Reference of the request letter # 326/CRE/QAT/SMP/2019

Dated: 18-09-2019
 Dated: 16-09-2019

Tension Test Report (Page – 1/2)

Date of Test 23-09-2019
 Gauge length 2 inches
 Description W-Section & Post Strip Tensile and Bend Test as per AASHTOO A-180

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	W-Section	2.44x0.28	0.68	2700	3700	3951.99	5415.69	0.60	30.00	
2	W-Section	2.45x0.28	0.69	2700	3700	3935.86	5393.59	0.60	30.00	
3	Post	2.06x0.71	1.46	5300	7400	3623.68	5059.48	0.80	40.00	
4	Post	2.06x0.71	1.46	5200	7300	3555.31	4991.11	0.80	40.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Four Samples for Tensile and Two Samples for Bend Test										
Bend Test										
Strip Taken from W-Section Bend Test Through 180° is Satisfactory										
Strip Taken from Post Bend Test Through 180° is Satisfactory										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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Test Floor Laboratory
Department of Civil Engineering
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To,
Chief Resident Engineer
Osmani & Co. (Pvt) Ltd
Swat Motorway Project

Reference # CED/TFL **33855** (Dr. M Rizwan Riaz)
Reference of the request letter # 326/CRE/QAT/SMP/2019

Dated: 18-09-2019
Dated: 16-09-2019

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

Date of Test 23-09-2019
Gauge length -----
Description W-Section & Post Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	Thickness	Remark
		(g)	(mm)	(kg/m)	(mm)	
1	W-Section	3214	308.00	10.44	2.80	
2	Post	1149	99.70	11.52	7.10	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
Only Two Samples for Test						

I/C Testing Laboratories
UET Lahore, Pakistan.

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To,
 Chief Resident Engineer, SMP
 Osmani & Company (Pvt) Ltd
 Swat Motorway Project

Reference # CED/TFL **33856** (Dr. M Rizwan Riaz)
 Reference of the request letter # 325/CRE/QATSMP/2019

Dated: 18-09-2019
 Dated: 16-09-2019

Tension Test Report (Page – 1/2)

Date of Test 23-09-2019
 Gauge length 2 inches
 Description Guard Rail End Section Strip Tensile and Bend Test as per ASHTOO
 M-180

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	End Section	2.42x0.28	0.68	2800	3800	4132.23	5608.03	0.60	30.00	
2		2.42x0.28	0.68	3000	3700	4427.39	5460.45	0.50	25.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile and One Sample for Bend Test										
Bend Test										
Strip Taken from End Section Bend Test Through 180° is Satisfactory										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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To,
Chief Resident Engineer, SMP
Osmani & Company (Pvt) Ltd
Swat Motorway Project

Reference # CED/TFL **33856** (Dr. M Rizwan Riaz)
Reference of the request letter # 325/CRE/QATSMP/2019

Dated: 18-09-2019
Dated: 16-09-2019

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

Date of Test 23-09-2019
Gauge length -----
Description Guard Rail End Section Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	Thickness	Remark
		(g)	(mm)	(kg/m)	(mm)	
1	End Section	1552	157.10	9.88	2.80	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
-	-	-	-	-	-	
Only One Sample for Test						

I/C Testing Laboratories
UET Lahore, Pakistan.

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Test Floor Laboratory
Department of Civil Engineering
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To,
Chief Resident Engineer
Osmani & Company (Pvt) Ltd
Swat Motorway Project

Reference # CED/TFL **33857** (Dr. M Rizwan Riaz)
Reference of the request letter # 328/CRE/QAT/SMP/2019

Dated: 18-09-2019
Dated: 16-09-2019

Tension Test Report (Page – 1/1)

Date of Test 23-09-2019
Gauge length -----
Description Tension Wire & Chain Link Mesh Wire Fence Tensile Test as per
AASHTO-M-181

Sr. No.	Diameter of Single Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	3.10	360	3.53	Tension Wire
2	3.10	360	3.53	
3	3.10	320	3.14	
4	3.10	360	3.53	Chain Link Wire Mesh Fence
5	3.10	320	3.14	
6	3.10	360	3.53	
Only Six Samples for Test				

I/C Testing Laboratories
UET Lahore, Pakistan.

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To,
 Chief Resident Engineer
 Osmani & Co. (Pvt) Ltd
 Swat Motorway Project
 (NJB Upper Reflector)

Reference # CED/TFL **33859** (Dr. M Rizwan Riaz)
 Reference of the request letter # 330/CRE/QAT/SMP/2019

Dated: 18-09-2019
 Dated: 16-09-2019

Tension Test Report (Page – 1/1)

Date of Test 23-09-2019
 Gauge length 2 inches
 Description GI Sheet Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	GI Sheet	24.50x2.00	49.00	1500	2300	300.31	460.47	0.70	35.00	
2	GI Sheet	24.50x2.00	49.00	1600	2200	320.33	440.45	0.70	35.00	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Pakistan. Ph: 92-42-99029202

To,
 Dy. Chief Engineer (Civil)
 Pakistan Atomic Energy Commission
 Chashma Barage, District Mianwali
 (Construction of Nurses Hostel)

Reference # CED/TFL **33866** (Dr. M Rizwan Riaz)
 Reference of the request letter # DIR-KSF(1095)/2019/2799

Dated: 20-09-2019
 Dated: 04-09-2019

Tension Test Report (Page -1/1)

Date of Test 23-09-2019
 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	0.365	3	0.370	0.11	0.107	3100	5000	62200	63640	100200	102700	1.00	12.5	
2	0.369	3	0.371	0.11	0.108	3000	5000	60200	61030	100200	101800	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.

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To,
M/S Defence Housing Authority.
Lahore Cantt
(Const. f Mosque Sector-D, DHA Ph-VI)(M/s Warraich Constr)

Reference # CED/TFL **33867** (Dr. M Rizwan Riaz)
Reference of the request letter # 408/241/E/Lab/709/62

Dated: 20-09-2019
Dated: 20-09-2019

Tension Test Report (Page -1/1)

Date of Test 23-09-2019
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	0.374	3	0.374	0.11	0.110	3400	5200	68200	68090	104200	104200	1.00	12.5	Saeed Kasur
2	0.378	3	0.376	0.11	0.111	3500	5200	70200	69510	104200	103300	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.

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Test Floor Laboratory
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Pakistan. Ph: 92-42-99029202

To,
 Acting Project Director
 Air University Multan Campus
 Construction of Academic Block-I
 (Ittefaq Steel)

Reference # CED/TFL **33868** (Dr. M Rizwan Riaz)
 Reference of the request letter # MUX/AUMC/AB1/2018/112

Dated: 20-09-2019
 Dated: 19-09-2019

Tension Test Report (Page -1/1)

Date of Test 23-09-2019
 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	0.371	3	0.372	0.11	0.109	3100	4600	62200	62710	92200	93100	1.40	17.5	
2	0.365	3	0.370	0.11	0.107	3100	4500	62200	63610	90200	92400	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.

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To,
 Resident Engineer
 NESPAK
 Rural Accessibility Programme Phase-I 2018-19 Highway Circle No. 01 & 02, Faisalabad
 (Highway Division, Jhang)(Nomee Steel)

Reference # CED/TFL **33870** (Dr. M Rizwan Riaz) Dated: 20-09-2019
 Reference of the request letter # 3872/RAP/103/AR/01/116 Dated: 04-09-2019

Tension Test Report (Page -1/1)

Date of Test 23-09-2019
 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	0.378	3	0.376	0.11	0.111	2700	4300	54100	53500	86200	85200	1.60	20.0	
2	0.376	3	0.375	0.11	0.111	2800	4300	56200	55800	86200	85700	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

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Test Floor Laboratory
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To,
DCRE/RE-1
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Reference # CED/TFL **33873** (Dr. M Rizwan Riaz)
Reference of the request letter # LSMP/RE-1/2019/1081

Dated: 23-09-2019
Dated: 23-09-2019

Tension Test Report (Page – 1/1)

Date of Test 23-09-2019
Gauge length -----
Description Mesh Wire Tensile Test

Sr. No.	Diameter Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	3.10	3.20	
2	3.10	3.20	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
Only Two Samples for Test			

Witness by M Shafait Munir (AME Zeeruk) & Karamat Ali (ME FWO)

I/C Testing Laboratoires
UET Lahore, Pakistan.

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

To,
M/S Matrix Management (Pvt) Ltd
Model Town, Lahore

Reference # CED/TFL **33874** (Dr. M Rizwan Riaz)
Reference of the request letter # FFL/MMPL-4/2019/01

Dated: 23-09-2019
Dated: 20-09-2019

Tension Test Report (Page -1/1)

Date of Test 23-09-2019

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	0.419	3	0.396	0.11	0.123	4000	5100	80200	71540	102200	91300	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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Department of Civil Engineering
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To,
 Resident Engineer
 RENARDET S.A ((M-4), Package-II & III)
 Construction of Faisalabad – Khanewal Motorway (M-4) Project Package-III, Dinpur-Khanewal,
 Section-3B (D & L International)(M/s Xinjiang Beixin Road & Bridge Group Co, Ltd)

Reference # CED/TFL **33876** (Dr. M Rizwan Riaz)
 Reference of the request letter # RE/M-4/3B/2019/490

Dated: 23-09-2019
 Dated: 18-09-2019

Tension Test Report (Page – 1/1)

Date of Test 23-09-2019
 Gauge length 2 inches
 Description W-Section 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
1	W-Section	2.71x0.28	0.76	3000	3800	3953.61	5007.91	0.60	30.00	
2		2.71x0.28	0.76	3100	3900	4085.40	5139.69	0.50	25.00	
3	W-Section	2.70x0.28	0.76	3100	3900	4100.53	5158.73	0.50	25.00	
4		2.71x0.28	0.76	3100	3900	4085.40	5139.69	0.50	25.00	
-	-	-	-	-	-	-	-	-	-	
-		-	-	-	-	-	-	-	-	-

Only Four Samples for Tensile and Four Samples for Bend Test

Bend Test

Strip Taken from W-Section Bend Test Through 180° is Satisfactory

Strip Taken from W-Section Bend Test Through 180° is Satisfactory

Strip Taken from W-Section Bend Test Through 180° is Satisfactory

Strip Taken from W-Section Bend Test Through 180° is Satisfactory

I/C Testing Laboratoires
UET Lahore, Pakistan.

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