



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
 Techno Consultant International (Pvt) Ltd
 CPEC Package-1

Reference # CED/TFL **35737** (Dr. Usman Akmal) Dated: 10-12-2020
 Reference of the request letter # RE/CPEC/DIK/2020/738 Dated: 25-11-2020

Tension Test Report (Page – 1/1)

Date of Test 17-12-2020
 Gauge length 2 inches
 Description Metal Beam Guard Rail & Steel Post Strip Tensile 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	Metal Beam Guard Rail	1.80x0.30	0.54	2100	2700	3889	5000	0.60	30.00	
2		1.80x0.30	0.54	2200	2750	4074	5093	0.65	32.50	
3	Vertical Steel Post	1.70x0.60	1.02	3800	5100	3725	5000	0.80	40.00	
4		1.70x0.60	1.02	3600	5200	3529	5098	0.70	35.00	
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Only Four Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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To,
 Resident Engineer
 Dar Engineering
 Punjab Agriculture Food and Durg Authority's Science Enclave, Lahore Pakistan

Reference # CED/TFL **35754** (Dr. Usman Akmal) Dated: 11-12-2020
 Reference of the request letter # DB-78/DAR/RE/ME/2020/0246 Dated: 09-12-2020

Tension Test Report (Page – 1/2)

Date of Test 17-12-2020
 Gauge length 2 inches
 Description MS Steel Tube Steel Strip Tensile Test as per ASTM A36

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
1	MS Steel Tube	3"x2"x16	21.80x1.50	32.70	1100	1400	330.00	420.00	0.65	32.50	
2			21.80x1.50	32.70	1120	1400	336.00	420.00	0.70	35.00	
3	MS Steel Tube	4"x2"x16	20.80x1.50	31.20	1000	1360	314.42	427.62	0.70	35.00	
4			20.80x1.50	31.20	1120	1400	352.15	440.19	0.65	32.50	
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-	-	-	-	-	-	-	-	-	-	-	
Only Four Samples for Tensile Test											
Bend Test											

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UET Lahore, Pakistan.

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To,
 Resident Engineer
 Dar Engineering
 Punjab Agriculture Food and Durg Authority's Science Enclave, Lahore Pakistan

Reference # CED/TFL **35754** (Dr. Usman Akmal)
 Reference of the request letter # DB-78/DAR/RE/ME/2020/0248

Dated: 11-12-2020
 Dated: 10-12-2020

Tension Test Report (Page – 2/2)

Date of Test 17-12-2020
 Gauge length 2 inches
 Description M.S Seamless Pipe Strip Tensile Test

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)		(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	M.S Seamless Pipe	14	26.00x10.50	273.00	8000	12700	287.47	456.36	0.70	35.00	
2			26.00x10.50	273.00	7900	13100	283.88	470.74	0.65	32.50	
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-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
Only Two Samples for Tensile Test											
Bend Test											

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To,
 Principal Architect
 Z.H. Kazmi & Associates
 MCB Pattoki Branch Okara (0199)

Reference # CED/TFL **35773** (Dr. Usman Akmal)
 Reference of the request letter # Nil

Dated: 16-12-2020
 Dated: 16-12-2020

Tension Test Report (Page -1/1)

Date of Test 17-12-2020
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend 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	0.380	3	0.377	0.11	0.112	3500	4600	70200	68990	92200	90700	1.30	16.3	
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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
UET Lahore, Pakistan.

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To,
 Manager C / R & M
 Engineering Cell Multan
 Allied Bank Limited
 ABL Construction Project Shah Rukn-e-Alam Branch (0249)

Reference # CED/TFL **35774** (Dr. Usman Akmal) Dated: 16-12-2020
 Reference of the request letter # GHQ/S-II/FNGG-CELL-MTN/MA/2020/476 Dated: 14-12-2020

Tension Test Report (Page -1/1)

Date of Test 17-12-2020
 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	0.363	3	0.369	0.11	0.107	3300	5100	66200	68170	102200	105400	1.40	17.5	
2	0.369	3	0.372	0.11	0.108	3400	5100	68200	69090	102200	103700	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample 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,
 Project Coordinator
 Banu Mukhtar Contracting (Pvt) Ltd
 Novatex Pvt (Ltd) Fsd.

Reference # CED/TFL **35775** (Dr. Usman Akmal)
 Reference of the request letter # BML/300841/003

Dated: 16-12-2020
 Dated: 16-12-2020

Tension Test Report (Page -1/1)

Date of Test 17-12-2020
 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	0.374	3	0.374	0.11	0.110	3400	5100	68200	68120	102200	102200	1.40	17.5	
2	0.376	3	0.375	0.11	0.110	3500	5100	70200	69840	102200	101800	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,
 Estate Engineer
 Sundar Industrial Estate
 Raiwind Road, Lahore

Reference # CED/TFL **35776** (Dr. Usman Akmal)
 Reference of the request letter # BOM/SIE/BCD 6091

Dated: 16-12-2020
 Dated: 15-12-2020

Tension Test Report (Page -1/1)

Date of Test 17-12-2020
 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	0.346	3	0.360	0.11	0.102	2800	4200	56200	60630	84200	91000	1.20	15.0	
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,
 Sub Divisional Officer
 Public Health Engg: Sub Division
 Gojra

(Const: of Top Slab of OHR 1,00,000 Gallons at Zone “E” Urban Water Supply Scheme Gojra
 (Phase-II) Tehsil Gojra Distt: Toba Tek Singh)(M/s Ch: Mushtaq Ahmed)

Reference # CED/TFL 35777 (Dr. Usman Akmal)

Dated: 16-12-2020

Reference of the request letter # 105/G

Dated: 15-12-2020

Tension Test Report (Page -1/1)

Date of Test 17-12-2020

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	0.426	3	0.399	0.11	0.125	2700	3500	54100	47580	70200	61700	1.50	18.8	
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

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To,
M/S Defence Housing Authority.
Lahore Cantt
(Const of Security Accn, Sector-S, DHA Ph-II (M/s Hashmi Brothers))

Reference # CED/TFL **35778** (Dr. Usman Akmal)
Reference of the request letter # 408/241/E/Lab/1062/01

Dated: 16-12-2020
Dated: 16-12-2020

Tension Test Report (Page -1/1)

Date of Test 17-12-2020
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	0.376	3	0.375	0.11	0.110	3300	5000	66200	65870	100200	99800	1.30	16.3	Ittefaq Steel
2	0.372	3	0.373	0.11	0.109	3300	4900	66200	66490	98200	98800	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														

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To,
 Acting Chief Resident Engineer
 Trimmu Panjnad Barrages Consultants
 For Trimmu and Panjnad Barrages Improvement Project

Reference # CED/TFL **35779** (Dr. Usman Akmal)
 Reference of the request letter # TPBC/CRE/NCB-01/5004

Dated: 17-12-2020
 Dated: 15-12-2020

Tension Test Report (Page -1/1)

Date of Test 17-12-2020
 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	0.374	3	0.374	0.11	0.110	3300	5000	66200	66090	100200	100200	1.40	17.5	Ittefaq Steel
2	0.377	3	0.376	0.11	0.111	3400	5100	68200	67610	102200	101500	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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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