STRUCTURAL ENGINEERING DIVISION

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

To,
M/S Elite Metal Tek Pvt Ltd
Lahore

Reference # CED/TFL **32396** (Dr. Qasim Khan) Dated: 08-01-2019
Reference of the request letter # Nil Dated: 08-01-2019

Tension Test Report (Page – 1/1)

Date of Test 11-01-2019
Gauge length 2 inches
Description Welded Plate Tensile and Bend Test

Sr. No.	Designation	Size of Strip	X Section Area	Breaking Load	Ultimate Stress	Elongation	% Elongation	Remarks	Remarks
	--------	(mm)	(mm^2)	(kg)	(MPa)	(inch)			
1	**Welded Plate**	**23.90x12.20**	**291.58**	**23900**	**804.10**	**0.30**	**15.00**	**Failure at the location other than weld**	(EMT-TS-001)
-		-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
Only one sample for tensile and one sample for bend test									
Bend Test									
Strip taken from Welded Plate (EMT-BT-001) (Side) Bend Test Through 180º is Failed (Broken near weld Portion)									

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Note:
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STRUCTURAL ENGINEERING DIVISION

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Pakistan. Ph: 92-42-99029202

To,
Sub Divisional Officer (AUQAF)
Data Dabar , Lahore
(Construction of Commercial Palaza Attached with Badshai Masjid Lahore

Reference # CED/TFL **32403** (Dr. Qasim Khan) Dated: 10-01-2019
Reference of the request letter # SDO/A/DD/128 Dated: 02-01-2019

Tension Test Report (Page -1/1)

Date of Test 11-01-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend 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	0.363	3/8	0.369	0.11	0.107	2800	4300	56200	57860	86200	88900	1.40	17.5	
2	0.367	3/8	0.371	0.11	0.108	2850	4400	57200	58150	88200	89800	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180º is Satisfactory														

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UET Lahore, Pakistan.

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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,
M/S Al-Habib Construction Company (Pvt) Ltd
Johar Town, Lahore
(U900 Karachi & Lahore Project – Site ID: N-CI-1700)

Reference # CED/TFL **32404** (Dr. Qasim Khan) Dated: 10-01-2019
Reference of the request letter # Nil Dated: 08-01-2019

Tension Test Report (Page -1/1)

Date of Test 11-01-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size (mm)		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	0.370	10	9.45	0.11	0.109	3100	4800	62200	62870	96200	97400	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180º is Satisfactory														

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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,
Resident Engineer
RENARDET S.A ((M-4), Package-3A)
Construction of Faisalabad-Khanewal Motorway (M-4) Project, Package-IIIA

Reference # CED/TFL **32405** (Dr. Qasim Khan) Dated: 10-01-2019
Reference of the request letter # RE/M-4/3A/2019/267 Dated: 03-01-2019

Tension Test Report (Page – 1/1)

Date of Test 11-01-2019
Gauge length -------
Description Chain Link Fence Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	**3.10**	**400**	**3.92**	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only One Sample for Test				

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
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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,
Assistant Director (Tech)
Anti-Corruption Establishment
Sargodha Region, Sargodha
(Up-Gradation of BHU Chak No. 60/NB to RHC Ghousia Mahria Colony Khyzerabad District Sargodha)
Reference # CED/TFL **32408** (Dr. Qasim Khan) Dated: 10-01-2019
Reference of the request letter # ACE-SR-2018/269 Dated: 07-01-2019

Tension Test Report (Page -1/1)

Date of Test 11-01-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend 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	0.373	3/8	0.373	0.11	0.110	3200	4800	64200	64380	96200	96600	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180º is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:
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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,
Project Manager
ACE (Pvt) Ltd
Construction of Daanish School at Mankera District Bhakkar (Package-4)(FF Steel)

Reference # CED/TFL **32409** (Dr. Qasim Khan) Dated: 10-01-2019
Reference of the request letter # Arts/DSM/160/6572 Dated: 13-12-2018

Tension Test Report (Page -1/1)

Date of Test 11-01-2019
Gauge length 8 inches
Description Deformed Steel Bar Tensile and Bend 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	0.377	3/8	0.376	0.11	0.111	3550	4800	71200	70600	96200	95500	1.40	17.5	
2	0.374	3/8	0.374	0.11	0.110	3900	4900	78200	78210	98200	98300	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
3/8" Dia Bar Bend Test Through 180º is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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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,
Resident Engineer
RENARDET S.A ((M-4), Package-II)
Construction of Faisalabad-Khanewal Motorway (M-4) Project, Package-II, Jamani-Shorkot, Section 2B (99+500 – 101+500 L/S)

Reference # CED/TFL **32410** (Dr. Qasim Khan) Dated: 10-01-2019
Reference of the request letter # RE/M-4/2B/2019/506 Dated: 08-01-2019

Tension Test Report (Page – 1/1)

Date of Test 11-01-2019
Gauge length -------
Description Chain Link Fence Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	**3.20**	**500**	**4.91**	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only One Sample for Test				

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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,
Resident Engineer
RENARDET S.A ((M-4), Package-II)
Construction of Faisalabad-Khanewal Motorway (M-4) Project, Package-II, Jamani-Shorkot, Section 2B (101+500 – 103+600 L/S)

Reference # CED/TFL **32411** (Dr. Qasim Khan) Dated: 10-01-2019
Reference of the request letter # RE/M-4/2B/2019/507 Dated: 08-01-2019

Tension Test Report (Page – 1/1)

Date of Test 11-01-2019
Gauge length -------
Description Chain Link Fence Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	**3.20**	**500**	**4.91**	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only One Sample for Test				

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UET Lahore, Pakistan.

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

To,
Resident Engineer
RENARDET S.A ((M-4), Package-II)
Construction of Faisalabad-Khanewal Motorway (M-4) Project, Package-II, Jamani-Shorkot, Section 2B (94+200 – 96+200 R/S)

Reference # CED/TFL **32412** (Dr. Qasim Khan) Dated: 10-01-2019
Reference of the request letter # RE/M-4/2B/2019/508 Dated: 08-01-2019

Tension Test Report (Page – 1/1)

Date of Test 11-01-2019
Gauge length -------
Description Chain Link Fence Wire Tensile Test as per AASHTO-M-181

Sr. No.	Diameter of Wire	Breaking Load		Remarks
	(mm)	(kg)	(kN)	
1	**3.20**	**500**	**4.91**	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
-	-	-	-	
Only One Sample for Test				

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UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION

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To,
Resident Engineer
MAK-Consultant
Construction of RCC Bridge PAF-IAST, Mang, Haripur

Reference # CED/TFL **32417** (Dr. Qasim Khan) Dated: 11-01-2019
Reference of the request letter # PAF-IAST/MAK/171 Dated: 06-12-2018

Tension Test Report (Page – 1/2)

Date of Test 11-01-2019
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**	**774.0**	**17700**	**173.64**	**19400**	**190.31**	**199**	**>3.50**	**xx**
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
Only one sample 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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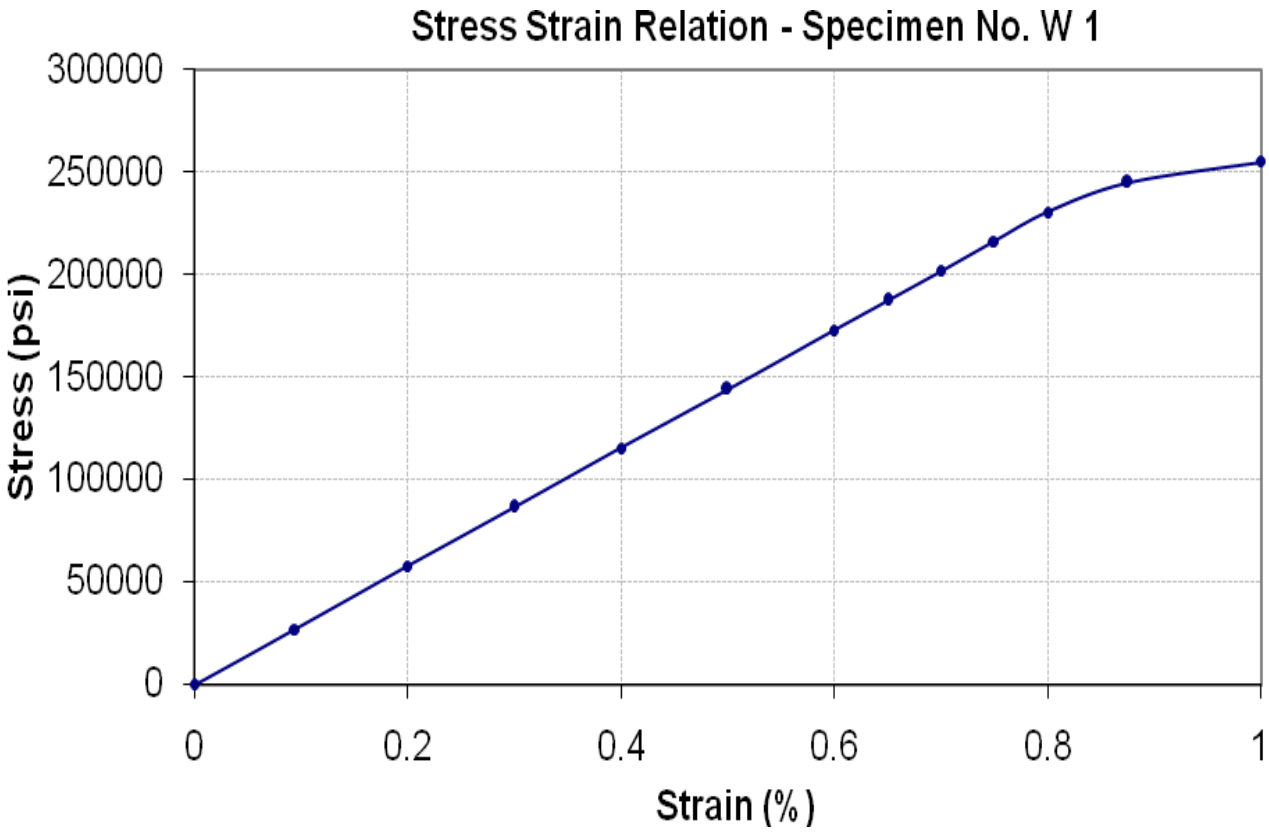
To,
Resident Engineer
MAK-Consultant
Construction of RCC Bridge PAF-IAST, Mang, Haripur

Reference # CED/TFL **32417** (Dr. Qasim Khan) Dated: 11-01-2019
Reference of the request letter # PAF-IAST/MAK/171 Dated: 06-12-2018

Graph (Page – 2/2)



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