

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

To, Resident Engineer NESPAK M. Garh – D.G Khan Road

Reference # CED/TFL **33778** (Dr. Usman Akmal) Dated: 03-09-2019 Reference of the request letter # 3949/HA/01/298 Dated: 28-08-2019

**Tension Test Report** (Page -1/2)

Date of Test 12-09-2019 Gauge length 2 inches

Description W-Section & Vertical Post 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		
		(cm)	(cm <sup>2</sup> )	(kg)	(kg)	(kg/cm <sup>2</sup> )	(kg/cm <sup>2</sup> )	(in)	%			
1	W Cootion	2.30x0.28	0.64	2600	3200	4037.27	4968.94	0.60	30.00			
2	W-Section	2.30x0.28	0.64	2500	3200	3881.99	4968.94	0.60	30.00			
3	Vantical Dagt	2.49x0.70	1.74	6200	9400	3557.09	5393.00	0.60	30.00			
4	Vertical Post	2.49x0.70	1.74	6400	9400	3671.83	5393.00	0.70	35.00			
-		-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	-			
		Only Four	Samples	for Tensile	and Two	Samples fo	r Bend Test		<u> </u>			
	Bend Test											

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.

- 1- You can See your reports On Internet in the following web site http://www.uet.edu.pk/faculties/facultiesinfo/civil/index.html?RID=testing\_reports
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To, Resident Engineer NESPAK M. Garh – D.G Khan Road

Reference # CED/TFL **33778** (Dr. Usman Akmal) Dated: 03-09-2019 Reference of the request letter # 3949/HA/01/298 Dated: 28-08-2019

Weight &Size Test Report (Page – 2/2)

Date of Test 12-09-2019

Gauge length -----

Description Vertical Post Weight and Size Test

Sr. No.	Designation	Weight	Length	Weight per Unit Length	Depth d	Thickness	Remark
		(g)	(mm)	(kg/m)	(mm)	(mm)	
1	Vertical Post	995	79.00	12.59	120.00	7.20	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
-	-	-	-	-	-	-	
		(	Only One S	Sample fo	r Test		

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,
Resident Engineer
EGC (Pvt) Ltd
KQC Road Project N-25
Additional work under USAID for Kalat-Quette-Chaman N-25 Toll Plaza

Reference # CED/TFL **33796** (Dr. Ali Ahmed)

Reference of the request letter # RE/KQC-N-25/Add/331

Dated: 05-09-2019

Dated: 03-09-2019

**Tension Test Report** (Page -1/1)

Date of Test 12-09-2019

Gauge length -----

Description Chain Link Fabric Wire Tensile Test

Sr. No.	Diameter Wire (mm)	Breaking Load (kN)	Remarks
1	3.00	3.50	
2	3.00	3.50	
3	3.00	3.50	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
-	-	-	
	Only Three Sar	nples for Test	

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

To, Resident Engineer NESPAK

China – Pakistan Economic Corridor (CPEC), Western Route Hakla (on M1) – Yarak (D.I. Khan) Motorway, Package-3 (Trap to Kot Belian)(Jamal Pipe Industries)(FABCO)

Reference # CED/TFL **33802** (Dr. USman Akmal) Dated: 06-09-2019 Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1156 Dated: 05-09-2019

**Tension Test Report** (Page -1/1)

Date of Test 12-09-2019 Gauge length 2 inches

Description W-Beam of Metal Guard Rail 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		
		(cm)	(cm <sup>2</sup> )	(kg)	(kg)	(kg/cm <sup>2</sup> )	(kg/cm <sup>2</sup> )	(in)	0			
1	W Poom	2.67x0.28	0.75	3800	5000	5082.93	6688.07	0.50	25.00			
2	W-Beam	2.67x0.28	0.75	4000	4900	5350.45	6554.31	0.50	25.00			
-		-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	-			
-		-	-	-	-	-	-	•	-			
-	-	-	-	-	-	-	-	-	-			
		Only Two Sa	mples fo	r Tensile a	nd One S	Sample for l	Bend Test					
	Bend Test											
Strip	Strip Taken from W-Beam Bend Test Through 180° 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 NESPAK

China – Pakistan Economic Corridor (CPEC), Western Route Hakla (on M1) – Yarak (D.I. Khan) Motorway, Package-3 (Trap to Kot Belian)(Victory Pipe)(P&P)

Reference # CED/TFL **33803** (Dr. USman Akmal) Dated: 06-09-2019 Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1157 Dated: 05-09-2019

**Tension Test Report** (Page -1/2)

Date of Test 12-09-2019 Gauge length 2 inches

Description Sign Post Tubular Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	<b>Breaking Load</b>	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
		(mm)	(mm <sup>2</sup> )	(kg)	(kg)	(MPa)	(MPa)	(in)	0`	
1	Gantries	27.10x3.40	92.14	3600	4200	383.29	447.17	0.60	30.00	
2	Gantries	27.10x3.40	92.14	3400	4200	361.99	447.17	0.60	30.00	
-	_	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	_	-	-	-	-	-	-	-	-	
-		-	-	-	-	-	-	-	-	
			Only Tw	yo Samples	for Tens	sile Test	T	T	1	1
				Bend '	Test					

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, Resident Engineer NESPAK

China – Pakistan Economic Corridor (CPEC), Western Route Hakla (on M1) – Yarak (D.I. Khan) Motorway, Package-3 (Trap to Kot Belian)(Victory Pipe)(P&P)

Reference # CED/TFL **33803** (Dr. USman Akmal) Dated: 06-09-2019 Reference of the request letter # CPEC/NESPAK/CS/RE/PKG3/19/1157 Dated: 05-09-2019

**Tension Test Report** (Page - 2/2)

Date of Test 12-09-2019 Gauge length 2 inches

Description Sign Board Panel Strip Tensile Test

Sr. No.	Designation	(mm) Size of Strip	X Section Area	(X Yield load	A Breaking C Load	(MPa)	Ultimate Stress	(ui) Elongation	% Elongation	Remarks
1		27.20x3.00	81.60	10.69	12.50	131.00	153.19	0.30	15.00	
2	Sign Board	27.20x3.00	81.60	11.00	12.50	134.80	153.19	0.30	15.00	
-		-	-	-	-	-	-	-	-	
-	•	-	-	-	-	-	-	-	-	
-		-	-	-	-	-	-	-	-	
-	•	-	-	-	-	-	-	-	-	
		Τ	Only Tw	vo Samples	for Tens	sile Test		T		
				Bend '	Test					

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

o, DCRE Zeeruk International (Pvt) Ltd Lahore Sialkot Motorway Project

Reference # CED/TFL **33804** (Dr. Usman Akmal) Dated: 06-09-2019 Reference of the request letter # LSM/RE-II/St/19/484 Dated: 05-09-2019

**Tension Test Report** (Page - 1/1)

Date of Test 12-09-2019 Gauge length 2 inches

Description Galvanized Steel Beam & Steel Post Steel Strip Tensile Test

Sr. No.	Designation	Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks		
		(cm)	(cm <sup>2</sup> )	(kg)	(kg)	(kg/cm <sup>2</sup> )	(kg/cm <sup>2</sup> )	(in)				
1	Steel Beam	2.44x0.29	0.71	2500	4300	3533.07	6076.88	0.40	20.00			
2	Steel Beam	2.44x0.29	0.71	2700	4400	3815.72	6218.20	0.50	25.00			
3	Steel Post	2.49x0.70	1.74	6600	9300	3786.57	5335.63	0.70	35.00			
4	Steel Post	2.49x0.70	1.74	6500	9300	3729.20	5335.63	0.80	40.00			
-	-	-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	-			
-	•	-	-	-	-	-	-	•	-			
	Only Four Samples for Tensile Test											
	Bend Test											

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, General Manager Operations Model Steel Enterprises (Pvt) Ltd Lahore

Reference # CED/TFL **33807** (Dr. Usman Akmal)

Reference of the request letter # Nil

Dated: 11-09-2019

Dated: 11-09-2019

**Tension Test Report** (Page -1/1)

Date of Test 12-09-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight	Si	neter/ ize nm)	Aı (iı	rea n²)	Yield load	Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal Actual		Nominal	Actual	(inch)	3 %	Re
1	0.366	3/8	0.370	0.11	0.108	3000	4700	60200	61400	94200	96200	1.20	15.0	
2	0.370	3/8	0.372	0.11	0.109	3100	4600	62200	62840	92200	93300	1.10	13.8	
-	-	-		•	-	-	-	-	-	-	-	-	•	
-	-	-	-	•	-	-	-	•	-	-	-	-	•	
-	-	-	-	•	-	-	-	•	-	-	-	-	•	
-		-	-	-	-	-	-	-	-	-	-	-	-	
			T		Not	e: only t	wo sampl	es for ter	nsile test	T	T	ı		
							Bend T	est						

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,
Executive Engineer
Highway Division Muzaffargarh
Rural Accessiblity Programme for 2018-19 – Package-02 District Muzaffargarh

Reference # CED/TFL **33808** (Dr. Usman Akmal)

Reference of the request letter # 15

Dated: 11-09-2019

Dated: 10-08-2019

**Tension Test Report** (Page -1/1)

Date of Test 12-09-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diam si:	neter/ ze		rea n²)	Yield load	Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	3 %	R
1	0.386	3	0.380	0.11	0.114	2700	3600	54100	52410	72200	69900	1.50	18.8	
2	0.394	3	0.384	0.11	0.116	2500	3700	50100	47540	74200	70400	1.50	18.8	
-	•	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	-	-	-	-	-	-	-	-	-	-	-	-	-	
-		-	-	-	-	-	-	-	-	-	-	-	-	
		Note: only two samples for tensile and one sample for bend test												
							Bend T	est						
#3	Bar Ben	d Test	Γhrough	180° is	s Satisfa	ctory								

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 Albakio International Lahore

Reference # CED/TFL **33809** (Dr. Usman Akmal)

Reference of the request letter # Nil

Dated: 11-09-2019

Dated: 05-09-2019

**Tension Test Report** (Page -1/1)

Date of Test 12-09-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Si	neter/ ze m)		rea n²)	Yield load	Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal			Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	R
1	0.390	10	9.70	0.12	0.115	4600	5800	84510	88520	106556	111700	0.80	10.0	
2	0.382	10	9.60	0.12	0.112	4500	5700	82673	88370	104719	112000	0.80	10.0	
-		-	-	-	-	•	-	-	-	-	-	1		
-	•	-	-	-	-	•	-	-	-	-	-	-	•	
-	•	-	-	•	-	•	•	•	•	-	•	-	ı	
-	-	-	-	-	-	-	-	-	-	-	-	-		
			N	ote: on	ly two s	amples f	or tensile	and one	sample f	or bend 1	test	1		
							Bend T	'est						

10mm Dia Bar Bend Test Through 180° is Satisfactory

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, Assistant Engineer B & W Department, U.E.T, Lahore Construction Sites in UET Lahore

Reference # CED/TFL **33810** (Dr. Usman Akmal)

Reference of the request letter # B&W/AEN/1109

Dated: 11-09-2019

Dated: 11-09-2019

**Tension Test Report** (Page -1/1)

Date of Test 12-09-2019 Gauge length 8 inches

Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight		neter/ ze		rea n²)	Yield load	Breaking Load		Stress si)		te Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	R
1	0.369	3	0.372	0.11	0.108	3500	5000	70200	71160	100200	101700	1.10	13.8	
2	0.362	3	0.368	0.11	0.106	3400	4800	68200	70490	96200	99600	0.90	11.3	
-		-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			Note: only two samples for tensile and one sample for bend test											
							Bend T	'est						
#3	Bar Ben	d Test	Through	180° is	s Satisfa	ctory								

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.

Assistant Resident Engineer Prime Engineering Consultancy Kallurkot Bridge Project

Construction of 4 Lane Bridge over River Indus Connecting Kallur Kot with D.I Khan

(Nomee Steel)

Reference # CED/TFL **33811** (Dr. Waseem Abbas)

Reference of the request letter # KK-DIK—BR-PJ/2019/052

Dated: 12-09-2019

Dated: 11-09-2019

### **Tension Test Report** (Page -1/1)

Date of Test 12-09-2019 Gauge length 8 inches

Deformed Steel Bar Tensile Test as ner	Weight	Si	neter/ ize nm)		rea n²)	Yield load	Breaking Load		Stress si)	Ultimat (p	e Stress si)	Elongation	% Elongation	Remarks
Deta	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re
1	4.228	32	31.95	1.25			54200	71605	72010	95591	96200	1.30	16.3	
2	4.249	32	32.03	1.25			54800	73016	73070	96650	96800	1.50	18.8	
3	4.250	32	32.03	1.25	1.249	40600	54000	71605	71630	95239	95300	1.50	18.8	
4	4.226	32	31.94	1.25	1.242	40400	53600	71253	71690	94533	95200	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			1		Not	e: only fo	our samp	les for te	nsile test	Γ	Γ	1		
							D 17	<u> </u>						
							Bend T	est						

I/C Testing Laboratoires UET Lahore, Pakistan.

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