

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

To, Resident Engineer EA Consulting (Pvt) Ltd Sukkur - Multan Motorway Project Section – III Reference # CED/TFL **32374** (Dr. Rizwan Azam) Reference of the request letter # CRE/EA/M.P-III/287-2018

Dated: 04-01-2019 Dated: 04-01-2019

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

Date of Test Gauge length Description 09-01-2019 8 inches

Anchor Bolt Steel Bar Tensile and Bend Test

Sr. No.	(mm) size	(mm) Dia	Area (mm <sup>2</sup> )	(kg)	(gad Load	Yield Stress	Ultimate Stress	Elongation (inch)	% Elongation	Remarks
1	32	25.50	510.71	22500	36600	432.20	703.04	1.4	17.5	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	
		·	Not	e: only one	e sample for	r tensile tes	t			
-	-	-	-		-				-	
				I	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

To, Resident Engineer NESPAK, Lahore Fabrication & Installat

Fabrication & Installation of Steel Pedestrian Bridge along Lytton Road at RD 19+377, Near Jain Mandar, Lahore

Reference # CED/TFL 32378 (Dr. Asad)	Dated: 04-01-2019
Reference of the request letter # 3772/Al-Furqan(J.M)/MSW/018/02	Dated: 26-10-2018

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

Date of Test	09-01-2019
Gauge length	8 inches
Description	J- Anchor Bolt Tensile Test

Sr. No.	Weight	Diameter/ size		A (n	rea 1m <sup>2</sup> )	Yield load	Breaking Load	Yield Stress (MPa)	Ultimate Stress (MPa)	Elongation	Elongation	Remarks
	(kg/m)	Nominal (mm)	Actual (mm)	Nominal	Actual	(kg)	(kg)	Actual	Actual	(inch)	%	I
1	6.091	30	31.43		776.0	34600	56400	437	713	1.5	18.8	
2	7.679	35	35.29		978.2	40800	66400	409	666	2.0	25.0	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
				N	ote: only	two san	nples for	r tensile t	est			
	Bend 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 NESPAK, Lahore Fabrication & Installation of Steel Pedestrian Bridge along Lytton Road at RD 19+377, Near Jain Mandar, Lahore

Reference # CED/TFL 32378 (Dr. Asad)	Dated: 04-01-2019
Reference of the request letter # 3772/Al-Furqan(J.M)/MSW/018/02	Dated: 26-10-2018

# Slippage Test Report (Page -2/2)

Date of Test	09-01-2018
Gauge length	
Description	J- Anchor Bolt Slippage Test

Sr. No.	Dia (mm)	Failure Load (kg)	Mode of Failure	Remarks
1	30	34800	Thread Failure	-
2	32	38000	Broken at Thread Portion	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-			-	-
		Note: only	two samples 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

Ref: CED/TFL/01/32384

Dated: 07-01-19

To Resident Engineer NESPAK Dualization & Improvement of Old Banu Road / Domail – Khurram Road (Project (P-1)

#### Subject: - CALIBRATION OF PRESSURE GAUGE (MARK: TFL/01/32384)

Reference to your Letter No. OBR/KKR-02/RE/AHJ/111, dated: 02/01/2019 on the subject cited above. One Pressure Gauge as received by us has been calibrated. The results are tabulated as under:

Total Range :	Zero -	210 (Psi)
Calibrated Range :	Zero -	180 (Psi)

Pressure Gauge Reading (Psi)	30	60	90	120	150	180
Calibrated Load (kg)	390	790	1190	1600	2020	2440
Calibrated Pressure (Psi)	28.02	56.75	85.48	114.93	145.10	175.27

The Ram Area of Calibration =  $198 \text{ cm}^2$ 



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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 Defence Housing Authority. Lahore Cantt (Development of Graveyard Sector-V, DHA Ph-VIII)(M/s Arfco)

Reference # CED/TFL **32388** (Dr. Rizwan Azam) Reference of the request letter # 408/241/E/Lab/400 Dated: 08-01-2019 Dated: 08-01-2019

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

Date of Test Gauge length Description 09-01-2019 8 inches Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Dian si	neter/ ze	Aı (iı	rea n <sup>2</sup> )	Yield load	Breaking Load	Yield Stress (psi)		Yield Stress (psi)		Ultimate Stress (psi)		Elongation	longation	marks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re		
1	0.370	3	0.372	0.11	0.109	3400	5600	68200	68850	112300	113400	1.00	12.5	AS eel		
2	0.376	3	0.375	0.11	0.111	3400	5700	68200	67730	114300	113600	0.80	10.0	AN Ste		
-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	-	-	-	-	-			
-	-	-	-	-	-	-	-	-	-	-	-	-	-			
			N	ote: on	ly two s	amples f	or tensile	and one	sample f	for bend	test	•		•		
							Bend T	'est								
#3	Bar Ben	d Test	Through	n 180° i	s Satisfa	ctory										

I/C Testing Laboratoires UET Lahore, Pakistan.

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To, ARE – ADP Projects NESPAK Protection of Chandar Bhan Flood Bund RD: 55+000 to 67+000

Reference # CED/TFL **32391** (Dr. M Rizwan Azam) Reference of the request letter # 3158/13/CAA/09/1256 Dated: 08-10-2018 Dated: 20-11-2018

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

Date of Test	09-01-2019
Gauge length	8 inches
Description	GI Wire Tensile Test

Sr. No.	Weight	Diar S	neter/ ize	A (n	rea 1m <sup>2</sup> )	Yield load	Breaking Load	Yield Stress (MPa)	Ultimate Stress (MPa)	Elongation	Elongation	Remarks
	(kg/m)	Nominal (Swg)	Actual (mm)	Nominal	Actual	(kg)	(kg)	Actual	Actual	(inch)	%	Ι
1	0.107	8	4.16		13.6		520		374	0.9	11.3	
2	0.109	8	4.20		13.8		560		397	0.9	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	
				N	ote: only	two san	nples for	r tensile t	est			
						Ben	d Test					

I/C Testing Laboratoires UET Lahore, Pakistan.

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To, Resident Engineer-III MM Pakistan (Pvt) Ltd PMIC (DCRIP) Balloki

Reference # CED/TFL **32392** (Dr. Rizwan Azam) Reference of the request letter # DCRIP/RE-III/BLK/014 Dated: 08-01-2019 Dated: 14-11-2018

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

09-01-2019
GI Wire Tensile Test

Sr. No.	Weight per Unit Length	Diameter of Wire	Breakin	Remarks					
	(kg/m)	(mm)	(kg)	(kN)					
1	0.107	4.20	560	5.49					
2	0.107	4.20	560	5.49					
-	-	-	-	-					
-	-	-	-	-					
-	-	-	-	-					
-	-	-	-	-					
-	-	-	-	-					
Only Two Samples for Test									

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To, Resident Engineer Mascon Associates (Pvt) Ltd Musfir Khana (Badami Bagh Bus Stand

Reference # CED/TFL 32393 (Dr. Rizwan Azam)Dated: 08-01-2019Reference of the request letter # MASC-RE/PG/18/5031Dated: 07-01-2019

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

Date of Test Gauge length Description 09-01-2019 8 inches Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

r. No.	Weight	Dian Si	neter/ ize	Aı (i	rea n²)	Yield load	Breaking Load	Yield (p	Stress si)	Ultimat (p	e Stress si)	Elongation	longation	emarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re
1	0.367	3	0.371	0.11	0.108	4200	5000	84200	85860	100200	102300	0.90	11.3	
2	0.360	3	0.367	0.11	0.106	3700	4700	74200	77160	94200	98100	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		n	N	ote: on	ly two s	amples f	or tensile	and one	sample f	or bend	test	T		
Bend Test														
#3	Bar Ben	d Test	Through	n 180° is	s Satisfa	ctory								

I/C Testing Laboratoires UET Lahore, Pakistan.

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To, Medical Superintdent Nishtar Hospital Multan Construction of Building for New MRI Machine in Nishtar Hospital Multan

Reference # CED/TFL <b>32394</b> (Dr. Rizwan Azam)
Reference of the request letter # 7196/NH

Dated: 08-01-2019 Dated: 26-12-2018

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

Date of Test Gauge length Description 09-01-2019 8 inches

Deformed Steel Bar Tensile Test as per ASTM-A615

r. No.	Weight	Dian Si (in	neter/ ze ch)	Aı (ii	rea n <sup>2</sup> )	Yield load	Breaking Load	Yield (p	Stress si)	Ultimat (p	e Stress si)	Elongation	longation	marks
S	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	H %	Re
1	0.420	3/8	0.397	0.11	0.123	4300	5500	86200	76750	110200	98200	0.90	11.3	
2	0.420	3/8	0.397	0.11	0.124	4100	5500	82200	73130	110200	98100	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	•	
-	-	-	-	-	-	-	-	-	-	-	-	-	•	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
					Not	e: only t	wo sampl	les for ter	nsile test					
							Bend T	'est						

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To, Resident Engineer PEPAC Establishment of Workers Welfare Complex (Phase-I) Adjacent to Sundar Industrial Estate, District Kasur (Package-H)(Lot 3-A)

Reference # CED/TFL <b>32395</b> (Dr. Rizwan Azam)	Dated: 08-01-2019
Reference of the request letter # RE/PEPAC/WWCK/P-H/70A	Dated: 07-01-2019

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

Date of Test09-01Gauge length8 incDescriptionDefo

09-01-2019 8 inches Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

ir. No.	Weight	Dian Si (in	neter/ ze ch)	Aı (i	rea n <sup>2</sup> )	Yield load	Breaking Load	Yield (p	Stress si)	Ultimat (p	e Stress si)	Elongation	longation	marks
S	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	<b>3 %</b>	R
1	0.363	3/8	0.368	0.11	0.107	3600	4500	72200	74400	90200	93000	1.10	13.8	
2	0.372	3/8	0.373	0.11	0.109	3600	4600	72200	72510	92200	92700	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			N	ote: on	ly two s	amples f	or tensile	and one	sample f	or bend t	test			
							Bend T	est						
3/8	" Dia Ba	ar Bend	Test Tl	nrough	180° is \$	Satisfacto	ory							

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