



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
 NESPAK
 Lahore Orange Line Metro Train Project PK-02 (Allied Work)

Reference # CED/TFL **34068** (Dr. Qasim Khan)
 Reference of the request letter # 4042/OLAW/FAM/01/03

Dated: 25-10-2019
 Dated: 18-10-2019

Tension Test Report (Page – 1/1)

Date of Test 01-11-2019
 Gauge length 2 inches
 Description Steel Plate 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
	(mm)	(mm)	(mm ²)	(kg)	(kg)	(MPa)	(MPa)	(in)		
1	8	27.60x9.20	253.92	9700	11700	374.75	452.02	0.80	40.00	
2		27.70x9.20	254.84	10000	11800	384.95	454.24	0.70	35.00	
3	24	27.60x24.30	670.68	18700	31600	273.52	462.21	1.00	50.00	
4		27.70x23.60	653.72	19000	31800	285.12	477.20	1.00	50.00	
5	12	27.60x12.30	339.48	9800	16300	283.19	471.02	0.70	35.00	
6		27.60x12.30	339.48	9600	16300	277.41	471.02	0.90	45.00	
7	40	28.40x39.90	1133.16	51000	64800	441.52	560.99	1.30	65.00	
8		28.40x39.85	1131.74	52000	64200	450.74	556.49	1.20	60.00	
Only Eight Samples for Tensile Test										
Bend Test										

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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To,
Deputy CRE
Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Reference # CED/TFL **34097** (Dr. Qasim Khan)
Reference of the request letter # LSM/RE-II/St/19/679

Dated: 30-10-2019
Dated: 29-10-2019

Tension Test Report (Page – 1/2)

Date of Test 01-11-2019
Gauge length -----
Description Galvanized Mesh Wire Tensile Test

Sr. No.	Diameter Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	3.10	3.07	
2	3.10	3.20	
3	3.10	2.82	
4	3.10	3.00	
5	3.10	3.35	
6	3.10	3.12	
7	3.10	2.97	
8	3.10	2.80	
9	3.10	2.77	
10	3.10	3.20	
11	3.10	3.32	
12	3.10	3.20	
Only Twelve Samples for Test			

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
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Zeeruk International (Pvt) Ltd
Lahore Sialkot Motorway Project

Reference # CED/TFL **34097** (Dr. Qasim Khan)
Reference of the request letter # LSM/RE-II/St/19/679

Dated: 30-10-2019
Dated: 29-10-2019

Tension Test Report (Page – 2/2)

Date of Test 01-11-2019
Gauge length -----
Description Galvanized Tension Wire Tensile Test

Sr. No.	Diameter Wire	Breaking Load	Remarks
	(mm)	(kN)	
1	3.20	5.72	
2	3.10	5.80	
3	3.10	5.52	
4	3.10	6.07	
5	3.10	6.15	
6	3.20	5.55	
7	3.20	5.60	
8	3.15	5.35	
9	3.20	6.00	
10	3.10	6.05	
11	3.20	6.25	
12	3.10	6.25	
Only Twelve Samples for Test			

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To,
 Additional Director Development
 DHA Phase-XI (Rahbar)
 Construction of MT Parking Area in Sector-I, DHA Phase-XI (Rahbar)

Reference # CED/TFL **34105** (Dr. Qasim Khan) Dated: 31-10-2019
 Reference of the request letter # MT/Parking Shed/Sec-I/1/19/3114 Dated: 30-10-2019

Tension Test Report (Page -1/1)

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

Sr. No.	Weight (lbs/ft)	Diameter/ Size (inch)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.373	3/8	0.373	0.11	0.110	3400	5200	68200	68410	104200	104700	1.00	12.5	Ittefaq Steel
2	0.372	3/8	0.373	0.11	0.109	3450	5300	69200	69550	106200	106900	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 180° is Satisfactory

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
M.E
M/S AS Enterprises
Style Textile Mill Raiwind
(AA Associates)(Afco)

Reference # CED/TFL **34108** (Dr. Qasim Khan)
Reference of the request letter # USD/ASE/16

Dated: 31-10-2019
Dated: 31-10-2019

Tension Test Report (Page -1/1)

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

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.372	10	9.48	0.12	0.109	4400	5400	80835	88640	99207	108800	0.90	11.3	
2	0.388	10	9.68	0.12	0.114	4300	5350	78998	83160	98288	103500	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Coordinator
 SamPak International (Pvt) Ltd
 MFM Mogas Project Sheikhpura & Machike
 (Aagha Steel)

Reference # CED/TFL **34110** (Dr. Qasim Khan)
 Reference of the request letter # III-20-HW/4229

Dated: 31-10-2019
 Dated: 30-10-2019

Tension Test Report (Page -1/1)

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

Sr. No.	Weight (lbs/ft)	Diameter/ Size (mm)		Area (in ²)		Yield load (kg)	Breaking Load (kg)	Yield Stress (psi)		Ultimate Stress (psi)		Elongation (inch)	% Elongation	Remarks
		Nominal	Actual	Nominal	Actual			Nominal	Actual	Nominal	Actual			
1	0.412	10	9.97	0.12	0.121	4600	5500	84510	83800	101044	100200	0.80	10.0	
2	0.409	10	9.94	0.12	0.120	4650	5500	85428	85260	101044	100900	0.80	10.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
10mm Dia Bar Bend Test Through 180° is Satisfactory														

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To,
 Project Engineer
 Penta Square Project
 DHA, Lahore
 (Retrofitting of Shoring Piles and Allied Works at Lahore City Center – Phase-V, DHA Lahore)
 (M/s Condrill (Pvt) Ltd.)

Reference # CED/TFL **34112, 113** (Dr. Ali Ahmed) Dated: 31-10-2019
 Reference of the request letter # 581/Retrofitting/Lahore City Center Dated: 31-10-2019

Tension Test Report (Page -1/1)

Date of Test 01-11-2019
 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	0.388	3	0.381	0.11	0.114	3600	5100	72200	69550	102200	98600	1.10	13.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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,
 Chief Resident Engineer, Package-1
 NESPAK
 Construction/ Improvement & Rehabilitation of at Grade Works along Lahore Orange Line
 Metro Train Corridor Package-1 (Section-I) Daroghwal Chowk to Pakistan Mint (Left Side)

Reference # CED/TFL **34115** (Dr. Qasim Khan)
 Reference of the request letter # 4042/13/FAM/steel-146

Dated: 31-10-2019
 Dated: 30-10-2019

Tension Test Report (Page -1/1)

Date of Test 01-11-2019
 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	0.381	3	0.378	0.11	0.112	4300	5400	86200	84580	108200	106300	1.10	13.8	F.F.
2	0.384	3	0.379	0.11	0.113	4350	5400	87200	85050	108200	105600	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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