



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
 ZKB - Reliable Jv
 Punjab Intermediate Cities Improvement Investment Program - Sialkot (Lot - 01)

Reference # CED/TFL **36217** (Dr. Usman Akmal) Dated: 12-03-2021
 Reference of the request letter # NesPak/SAH/ZKB-Reliable/UET/008 Dated: 12-03-2021

Tension Test Report (Page -1/1)

Date of Test 18-03-2021
 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	0.365	3	0.370	0.11	0.107	3000	4600	60200	61590	92200	94500	1.20	15.0	Ittchad Steel
2	0.365	3	0.370	0.11	0.107	3100	4600	62200	63670	92200	94500	1.40	17.5	
3	4.185	10	1.251	1.27	1.230	34000	52600	59100	60930	91300	94300	1.50	18.8	
4	4.197	10	1.253	1.27	1.234	34000	52400	59100	60750	91000	93700	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only four samples for tensile and two samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#10 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

- 1- You can See your reports On Internet in the following web site
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To,
 Project Director
 Divisional Public School & College, Sahiwal
 (Construction of Building for Boys School at Ravi Campus, SPS&IC Sahiwal)

Reference # CED/TFL **36226** (Dr. Usman Akmal)
 Reference of the request letter # Estt/45/4935

Dated: 16-03-2021
 Dated: 10-03-2021

Tension Test Report (Page -1/1)

Date of Test 18-03-2021
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile 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	0.364	3/8	0.369	0.11	0.107	3900	5000	78200	80400	100200	103100	0.80	10.0	
2	0.365	3/8	0.370	0.11	0.107	3500	4500	70200	71900	90200	92500	1.00	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile test														
Bend Test														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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STRUCTURAL ENGINEERING DIVISION
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To,
 Engineer in Charge
 Punjab Model Bazaars Management Company
 Establishment of Model Bazaar at District Pakpattan

Reference # CED/TFL **36227** (Dr. Usman Akmal) Dated: 16-03-2021
 Reference of the request letter # CS/MB/2/PKPTN/NMB/CONS/NOC/03/15 Dated: 15-03-2021

Tension Test Report (Page -1/1)

Date of Test 18-03-2021
 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	0.378	3	0.376	0.11	0.111	3400	4400	68200	67400	88200	87300	1.50	18.8	
2	0.374	3	0.374	0.11	0.110	3300	4300	66200	66110	86200	86200	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														

I/C Testing Laboratories
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,
M/S CM Engineering (Pvt) Ltd
Lahore
(CMPAK Project Site ID: 52559, 52615, 52980, 52978, 52870, 52943, 52950, 52941, 52917)

Reference # CED/TFL **36228** (Dr. Usman Akmal)
Reference of the request letter # CME/Steel/CMPAK/349

Dated: 16-03-2021
Dated: 10-03-2021

Tension Test Report (Page -1/2)

Date of Test 18-03-2021
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	0.375	10	9.52	0.12	0.110	3100	4700	56952	61950	86347	94000	1.20	15.0	
2	0.375	10	9.51	0.12	0.110	3000	4700	55115	60020	86347	94100	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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.

Note:

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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
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To,
M/S CM Engineering (Pvt) Ltd
Lahore
(CMPAK Project Site ID: 43016, 43080, 43083, 43352, 43372, 43373, 43379, 43381, 43384, 43393, 43394, 43377, 43385, 42994, 42875, 43236, 43076)
Reference # CED/TFL **36228** (Dr. Usman Akmal) Dated: 16-03-2021
Reference of the request letter # CME/Steel/CMPAK/348 Dated: 08-03-2021

Tension Test Report (Page -2/2)

Date of Test 18-03-2021
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	0.370	10	9.45	0.12	0.109	3100	4700	56952	62840	86347	95300	1.20	15.0	
2	0.365	10	9.38	0.12	0.107	3000	4600	55115	61690	84510	94600	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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STRUCTURAL ENGINEERING DIVISION
Test Floor Laboratory
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To,
 Assistant Director (M)
 Sewerage Sub Division
 WASA (MDA) Multan
 (Construction of New / Replacement of Old Sewerage Lines in Uc # 16, PP-215 Sub Division
 Mumtazabad Sewerage Division Central WASA Multan)
 Reference # CED/TFL **36229** (Dr. Usman Akmal) Dated: 17-03-2021
 Reference of the request letter # 98/AD(M)/WASA Dated: 15-06-2020

Tension Test Report (Page -1/1)

Date of Test 18-03-2021
 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	0.103	3/16	0.196	-----	0.030	1040	1280	-----	76080	-----	93700	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only one sample for tensile and one sample for bend test														
Bend Test														
3/16" Dia Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratoires
UET Lahore, Pakistan.

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To,
 Resident Engineer
 AZ Engineering Associates
 Dualization of Road from GT Road (Samma) to Gujrat Dinga Road I/C Gujrat Flyover Length = 31 kms in District Gujrat (Group No. III, km no. 17.53 to 31.03 Excluding 2 No. Small Bridges with Approaches)
 Reference # CED/TFL **36231** (Dr. Usman Akmal) Dated: 17-03-2021
 Reference of the request letter # RE AZEA/GT-92 Dated: 28-01-2021

Tension Test Report (Page -1/1)

Date of Test 18-03-2021
 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	0.371	3	0.373	0.11	0.109	3000	4100	60200	60640	82200	82900	1.50	18.8	
2	0.370	3	0.372	0.11	0.109	2900	4000	58200	58770	80200	81100	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: only two samples for tensile and one sample for bend test

Bend Test

#3 Bar Bend Test Through 180° is Satisfactory

I/C Testing Laboratoires
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To,
M/S SA-RA Group
Lahore
(Procurement of Plant, Design, Supply, Installation, Testing and Commission of 220 kV Double
Circuit Transmission Line on Rail Conductor from D.I Khan to Zhob)(Approx. 220km)

Reference # CED/TFL **36233** (Dr. Usman Akmal)
Reference of the request letter # MIG/2021/230

Dated: 17-03-2021
Dated: 16-03-2021

Tension Test Report (Page -1/1)

Date of Test 18-03-2021
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	0.409	3	0.391	0.11	0.120	4100	5300	82200	75240	106200	97300	1.20	15.0	SJ Steel
2	0.362	3	0.368	0.11	0.106	3700	4800	74200	76720	96200	99600	1.20	15.0	
3	0.391	3	0.382	0.11	0.115	3900	5300	78200	74830	106200	101700	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only three samples for tensile and three samples for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														
#3 Bar Bend Test Through 180° is Satisfactory														

Witness by Sohaib Ali (Sub-Engineer NESPAK)

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To,
 Engineer in Charge
 Punjab Model Bazaars Management Company
 Establishment of Model Bazaar at District Bhakher

Reference # CED/TFL **36236** (Dr. Usman Akmal) Dated: 17-03-2021
 Reference of the request letter # CS/MB/2/PKPTN/NMB/CONS/NOC/03/15 Dated: 17-03-2021

Tension Test Report (Page -1/1)

Date of Test 18-03-2021
 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	0.387	3	0.381	0.11	0.114	3700	5100	74200	71670	102200	98800	0.80	10.0	
2	0.386	3	0.380	0.11	0.113	4000	5300	80200	77800	106200	103100	0.90	11.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
#3 Bar Bend Test Through 180° is Satisfactory														

I/C Testing Laboratories
UET Lahore, Pakistan.

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