



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

To,
 Deputy Director (Engg)
 LDA, Lahore
 (Construction of 200 Bus Stop Shelters Including Bus Information and Scheduling System in
 Lahore, P-II)

Reference # CED/TFL **1692** (Dr. M Rizwan Riaz)
 Reference of the request letter # DD(Engg.)/LDA/38

Dated: 19-07-2022
 Dated: 15-07-2022

Tension Test Report (Page – 1/2)

Date of Test 29-07-2022
 Gauge length 2 inches
 Description Structure Steel / MS Pipe Square Type Steel Strip Tensile Test

Sr. No.	Designation		Size of Strip	X Section Area	Yield load	Breaking Load	Yield Stress	Ultimate Stress	Elongation	% Elongation	Remarks
	(inch)										
1	MS Pipe Square	1	11.70x1.50	17.55	600	740	335	414	0.45	22.50	
2	MS Pipe Square	1.5	19.50x1.10	21.45	960	1280	439	585	0.20	10.00	
3	MS Pipe Square	2	20.00x1.10	22.00	920	1360	410	606	0.20	10.00	
4	MS Pipe Square	3	20.00x1.50	30.00	1080	1600	353	523	0.20	10.00	
5	MS Pipe Square	4	19.60x2.95	57.82	1900	2560	322	434	0.60	30.00	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	
Only Five Samples for Tensile Test											
Bend Test											

I/C Testing Laboratoires
UET Lahore, Pakistan.

Note:

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LDA, Lahore
(Construction of 200 Bus Stop Shelters Including Bus Information and Scheduling System in
Lahore, P-II)

Reference # CED/TFL **1692** (Dr. M Rizwan Riaz)
Reference of the request letter # DD(Engg.)/LDA/38

Dated: 19-07-2022
Dated: 15-07-2022

Weight & Size Test Report (Page – 2/2)

Date of Test 29-07-2022
Description Structure Steel / MS Pipe Square Type Weight and Size Test

Sr. No.	Designation		Weight	Length	Weight per Unit Length	Outer Dimension		Thickness	Remark
						X	Y		
	(inch)		(g)	(mm)	(kg/m)	(mm)	(mm)	(mm)	
1	MS Pipe Square Type	1.0	114	100.7	1.13	25.35	26.35	1.60	
2	MS Pipe Square Type	1.5	131	101.30	1.29	38.50	38.00	1.20	
3	MS Pipe Square Type	2	162	100.80	1.61	46.40	45.90	1.15	
4	MS Pipe Square Type	3	371	101.20	3.67	75.45	75.00	1.55	
5	MS Pipe Square Type	4	905	102.00	8.87	101.80	100.00	2.95	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	
Only Five Samples for Test									

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To,
M/S The Cooperative Engineers Town Society Ltd
Lahore
(Construction of Zanab Masjid Sub Block D in Sector "A" of The Cooperative Engineers Town Society Lahore)
Reference # CED/TFL 1724 (Dr. M Rizwan Riaz) Dated: 28-07-2022
Reference of the request letter # 10122/TCETS/208 Dated: 22-04-2022

Tension Test Report (Page -1/1)

Date of Test 29-07-2022
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	0.372	3	0.373	0.11	0.109	3400	5000	68200	68460	100200	100700	1.10	13.8	Moiz Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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,
 Project Manager
 Usman Ibrahim Construction
 Construction of HIGH-Q Mall at 3-A, Gulberg II, Lahore

Reference # CED/TFL 1727 (Dr. M Rizwan Riaz)
 Reference of the request letter # QC/HQ/CIVIL/10

Dated: 28-07-2022
 Dated: 27-07-2022

Tension Test Report (Page -1/1)

Date of Test 29-07-2022
 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	4.213	32	31.89	1.25	1.238	44800	61800	79013	79740	108995	110000	1.20	15.0	
2	4.217	32	31.91	1.25	1.239	45800	61400	80777	81450	108290	109200	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Note: only two samples for tensile and one sample for bend test														
Bend Test														
32mm 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
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To,
M/S Salma Brothers (Private) Limited
Lahore

Reference # CED/TFL **1730** (Dr. M Rizwan Riaz)
Reference of the request letter # Nil

Dated: 28-07-2022
Dated: 28-07-2022

Tension Test Report (Page -1/1)

Date of Test 29-07-2022
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	0.374	3	0.374	0.11	0.110	3200	5000	64200	64170	100200	100300	1.10	13.8	Model Home Steel
-	0.375	3	0.374	0.11	0.110	3300	5100	66200	66050	102200	102100	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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Test Floor Laboratory
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To,
 Project Director
 Overseas Construction Co. (Pvt) Ltd.
 Gulberg City Centre, Lahore

Reference # CED/TFL 1731 (Dr. M Rizwan Riaz)
 Reference of the request letter # Nil

Dated: 28-07-2022
 Dated: 27-07-2022

Tension Test Report (Page -1/1)

Date of Test 29-07-2022
 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	0.391	3	0.383	0.11	0.115	3400	4800	68200	65190	96200	92100	0.90	11.3	
2	0.375	3	0.374	0.11	0.110	3500	4800	70200	70060	96200	96100	1.10	13.8	
3	4.211	10	1.255	1.27	1.238	27600	42400	47900	49150	73600	75500	1.40	17.5	
4	4.179	10	1.251	1.27	1.228	27600	42200	47900	49530	73300	75800	1.30	16.3	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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
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Pakistan. Ph: 92-42-99029202

To,
Resident Engineer-2
ACES,
Civil Infrastructure Development Works DHA Multan

Reference # CED/TFL 1732 (Dr. M Rizwan Riaz)
Reference of the request letter # ACES-DHAM-NLC-376

Dated: 28-07-2022
Dated: 27-07-2022

Tension Test Report (Page -1/1)

Date of Test 29-07-2022
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	9.98	0.12	0.121	3700	5200	67975	67330	95533	94700	1.20	15.0	SJ Steel
2	0.413	10	9.98	0.12	0.121	3800	5200	69812	69070	95533	94600	1.40	17.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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,
 Resident Engineer
 Associated Consulting Engineers ACE Limited
 Secretariat Office Building Multan & Allied Work

Reference # CED/TFL **1734** (Dr. M Rizwan Riaz)
 Reference of the request letter # ACE/RE/CSM/2022/284

Dated: 29-07-2022
 Dated: 27-07-2022

Tension Test Report (Page -1/1)

Date of Test 29-07-2022
 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	0.362	3	0.368	0.11	0.106	3100	4500	62200	64190	90200	93200	1.10	13.8	Union Steel
2	0.362	3	0.368	0.11	0.106	3200	4600	64200	66360	92200	95400	1.20	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
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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To,
 Chief Engineer
 Zaitoon
 New Lahore City, Lahore

Reference # CED/TFL 1735 (Dr. M Rizwan Riaz)
 Reference of the request letter # NLC/CE/054

Dated: 29-07-2022
 Dated: 28-07-2022

Tension Test Report (Page -1/1)

Date of Test 29-07-2022
 Gauge length 8 inches
 Description Deformed Steel Bar Tensile and Bend Test as per ASTM-A615

Sr. No.	Weight	Diameter/ Size		Area (in ²)		Yield load	Breaking Load	Yield Stress (psi)		Ultimate Stress (psi)		Elongation	% Elongation	Remarks	
	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)			
1	0.375	3	0.375	0.11	0.110	4300	5400	86200	86010	108200	108100	1.00	12.5	Supreme Mughal Steel	
2	0.373	3	0.374	0.11	0.110	4200	5500	84200	84340	110200	110500	0.80	10.0		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-		
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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To,
 Chief Engineer
 Zaitoon
 New Lahore City, Lahore
 Construction of O.H.W.T (Zaitoon City)
 (Arif Construction Company Lahore)

Reference # CED/TFL **1736** (Dr. M Rizwan Riaz)

Dated: 29-07-2022

Reference of the request letter # NLC/CE/0123

Dated: 26-07-2022

Tension Test Report (Page -1/1)

Date of Test 29-07-2022

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	0.379	3	0.376	0.11	0.111	3300	5500	66200	65350	110200	109000	0.90	11.3	Ittefaq Steel
2	0.357	3	0.365	0.11	0.105	3300	5300	66200	69390	106200	111500	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														

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