NINERHO LE CONTROL DE CONTROL DE

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 ASM Steel Building Lahore

Reference # CED/TFL <u>37086 (Dr. Usman Akmal)</u>

Reference of the request letter # Nil

Dated: 22-09-2021

Dated: 22-09-2021

Tension Test Report (Page - 1/2)

Date of Test 30-09-2021 Gauge length 2 inches

Description MS Plate Steel Strip Tensile Test

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)	o	
1	5	28.00x5.10	142.80	9600	14300	659	982	0.40	20.00	
2	3	28.10x5.10	143.31	9700	14900	664	1020	0.35	17.50	
-	_	-	-	-	-	-	-	-	-	
-	_	-	-	-	-	-	-	-	-	
-	_	-	-	-	-	-	-	-	-	
-		-	-	-	-	-	-	-	-	
-	_	-	-	-	-	-	-	-	-	
-		-	-	-	-	-	-	-	-	
		(Only Two	Samples	for Tensi	le Test				
				Bend '	Test					-

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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To, M/S ASM Steel Building Lahore

Reference # CED/TFL <u>37086 (Dr. Usman Akmal)</u>

Reference of the request letter # Nil

Dated: 22-09-2021

Dated: 22-09-2021

Tension Test Report (Page - 2/2)

Date of Test 30-09-2021 Gauge length 2 inches

Description MS Plate Steel Strip Tensile Test

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	4	27.70x3.95	109.42	3200	5000	287	448	0.70	35.00	
2	7	27.70x3.90	108.03	3300	5000	300	454	0.70	35.00	
3	5	27.80x5.10	141.78	6800	13300	471	920	0.40	20.00	
4	3	27.80x5.10	141.78	6500	13300	450	920	0.40	20.00	
5	4	27.90x5.90	164.61	4600	7900	274	471	0.70	35.00	
6	6	27.90x5.85	163.22	4500	7900	270	475	0.70	35.00	
7	8	28.20x7.90	222.78	6600	10000	291	440	0.70	35.00	
8	8	28.00x7.90	221.20	7100	10200	315	452	0.70	35.00	
9	10	27.80x9.90	275.22	8300	12900	296	460	0.70	35.00	
10	10	27.90x9.90	276.21	8300	12900	295	458	0.70	35.00	
			Only Ten	Samples	for Tensi	le Test				
				Bend '	Test				1	

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
- 2. The above results pertain to sample /samples supplied to this laboratory.
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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 Engineering Consultancy Services Punjab (Pvt) Limited Construction of Flyover at Madni Chowk, Multan

Reference # CED/TFL <u>37107 (Dr. Usman Akmal)</u>

Reference of the request letter # ECSP/MDA/MCF/14

Dated: 27-09-2021

Tension Test Report (Page -1/1)

Date of Test 30-09-2021 Gauge length 8 inches

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

Sr. No.	Weight	Si	neter/ ize um)		rea 1 ²)	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 %	R
1	4.324	32	32.31	1.25	1.271	40600	55000	71605	70410	97002	95400	1.40	17.5	
2	4.324	32	32.31	1.25	1.271	42200	56000	74427	73180	98766	97200	1.80	22.5	
-	-	-	_	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Note: only two samples for tensile and one sample for bend test									test			1
							Bend T	est est						
32r	nm Dia	Bar Be	nd Test	Throug	h 180° i	s Satisfac	ctory							

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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To, M/S Gharibwal Cement Limited Gulberg-II, Lahore (C-001)

Reference # CED/TFL **37116** (Dr. Usman Akmal)

Reference of the request letter # GCL/Admin./UET/Tests/30-4

Dated: 28-09-2021

Dated: 28-09-2021

Tension Test Report (Page -1/2)

Date of Test 30-09-2021 Gauge length 8 inches

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

Sr. No.	Weight	Si	neter/ ze m)		rea 1 ²)	Yield load	Breaking Load		Stress si)		te Stress si)	Elongation	% Elongation	Remarks
	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	H %	R
1	0.405	10	9.89	0.12	0.119	3600	5400	66138	66620	99207	100000	1.30	16.3	
2	0.406	10	9.90	0.12	0.119	3600	5400	66138	66470	99207	99700	1.50	18.8	
3	4.273	32	32.12	1.25	1.256	39600	54800	69842	69500	96650	96200	1.80	22.5	
4	4.290	32	32.18	1.25	1.261	39600	54600	69842	69220	96297	95500	2.00	25.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			No	te: only	four s	amples f	or tensile	and two	samples	for bend	test			
							Bend T	est						
101	nm Dia	Bar Bei	nd Test	Throug	h 180° i	s Satisfac	ctory							
321	nm Dia	Bar Bei	nd Test	Throug	h 180° i	s Satisfac	ctory							

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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To, M/S Gharibwal Cement Limited Gulberg-II, Lahore (C-001)

Reference # CED/TFL <u>37116 (Dr. Usman Akmal)</u>

Reference of the request letter # GCL/Admin./UET/Tests/30-5

Dated: 28-09-2021

Tension Test Report (Page -2/2)

Date of Test 30-09-2021 Gauge length 8 inches

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

Sr. No.	Weight	Si	neter/ ze m)		rea 1 ²)	Yield load	Breaking Load		Stress si)		e Stress si)	Elongation	% Elongation	Remarks
8	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	H %	R
1	0.414	10	9.99	0.12	0.122	3900	5100	71650	70700	93696	92500	1.50	18.8	
2	0.418	10	10.05	0.12	0.123	3900	5200	71650	69910	95533	93300	1.40	17.5	
3	4.246	32	32.02	1.25	1.248	40400	55800	71253	71340	98413	98600	1.50	18.8	
4	4.227	32	31.95	1.25	1.243	40200	55200	70900	71310	97355	98000	1.50	18.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			No	te: only	four s	amples fo	or tensile	and two	samples	for bend	test			
		-					Bend T	est		-		-	-	
10r	nm Dia	Bar Bei	nd Test	Throug	h 180° i	s Satisfac	etory							
32r	nm Dia 1	Bar Bei	nd Test	Throug	h 180° i	s Satisfac	ctory							

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

To, **SQN LDR** GE (Air) Rafiqui

Construction of Standard Egress Facilities for JF-17 Wapon System at PAF Base Rafiqui

Reference # CED/TFL **37117** (Dr. Usman Akmal) Reference of the request letter #6404/79/E-6

Tension Test Report (Page -1/1)

Date of Test 30-09-2021 Gauge length 8 inches

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

Sr. No.	Weight	Si	neter/ ze ch)		rea 1 ²)	Yield load	Breaking Load		Stress si)		e Stress si)	Elongation	Elongation	Grade
<i>S</i> 2	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	₩ E	•
1	0.379	3/8	0.377	0.11	0.112	3600	4700	72200	71130	94200	92900	1.60	20.0	40
2	0.379	3/8	0.377	0.11	0.111	3600	4700	72200	71270	94200	93100	1.40	17.5	60
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			No	te: onl	y two sa	imples fo	r tensile	and two	samples	for bend	test	1		I
3/8	" Dia Ba	ır Bend	Test Th	rough	180° is S	Satisfacto	Bend T	est						

3/8" Dia Bar Bend Test Through 180° is Satisfactory

I/C Testing Laboratoires **UET Lahore, Pakistan.**

Dated: 28-09-2021

Dated: 23-09-2021

- 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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To, Resident Engineer MM Pakistan (Pvt) Ltd

Kachhi Canal Project Contract No. KC-6B(2R) Construction of Main Canal and Its Distribution System (Earthwork, Structures and Lining of Main Canal and Distributaries)(from RD 1193+000 to RD 1252+000)

Reference # CED/TFL <u>37119 (Dr. Usman Akmal)</u>

Reference of the request letter # KCP/RE/KC-6(2R)/14

Dated: 29-09-2021

Dated: 25-09-2021

Tension Test Report (Page -1/1)

Date of Test 30-09-2021 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)	3 %	Re
1	0.381	3	0.378	0.11	0.112	3400	4400	68200	66880	88200	86600	1.00	12.5	
2	0.382	3	0.378	0.11	0.112	3400	4300	68200	66790	86200	84500	1.00	12.5	Pak Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	Pak
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Note: only two samples for tensile and one sample for bend test									ı			
110	D D	1.00	E1 1	1000:	G .: 0		Bend T	est						
#3	Bar Ben	d Test	Through	180° is	s Satısfa	ctory								

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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples

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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,
Office Manager
Petrocon (Pvt) Ltd
(Executing Tank Optimization Project at Shell Pakistan Machike Depot.)

Reference # CED/TFL <u>37120 (Dr. Usman Akmal)</u>

Reference of the request letter # 100/UET-P316/TEST

Dated: 29-09-2021

Tension Test Report (Page -1/1)

Date of Test 30-09-2021 Gauge length 8 inches

Description Deformed Steel Bar Tensile Test as per ASTM-A615

Sr. No.	Weight	Si	neter/ ize ch)	Aı (iı	rea n²)	Yield load	Breaking Load		Stress si)		te Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re
1	0.414	3/8	0.394	0.11	0.122	3800	4900	76200	68800	98200	88800	1.10	13.8	
-	-	-	-	-	-	-	_	-	-	-	-	-	-	
-	ı	ı	-	1	-	-	-	-	-	-	-	-	-	
-	ı	ı	1	ı	-	-	-	-	-	-	-	-	•	
-	1	ı	ı	1	-	-	-	-	-	-	-	-	-	
-	ı	ı	-	1	-	-	-	-	-	-	-	-	-	
			I		No	te: only o	ne samp	le for ten	sile test	1	T	1	ı	
							Bend T	est						

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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To, Resident Engineer - 2 ACES

Civil Infrastructure Development Works Sector-H (Part - 02), DHA Multan

Reference # CED/TFL <u>37122 (Dr. Usman Akmal)</u>

Reference of the request letter # ACES-DHAM-SEC-H-844

Dated: 29-09-2021

Tension Test Report (Page -1/1)

Date of Test 30-09-2021 Gauge length 8 inches

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

Sr. No.	Weight	Si	neter/ ize nm)		rea n²)	Yield load	Breaking Load		Stress esi)		te Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal	Actual	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	% E	Re
1	0.417	10	10.04	0.12	0.123	3700	4900	67975	66500	90021	88100	1.00	12.5	T
2	0.422	10	10.09	0.12	0.124	3700	4800	67975	65770	88184	85400	1.20	15.0	Mughal Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			N	ote: on	ly two s	amples f	or tensile	and one	sample f	or bend	test	ı	T	
							Bend T	est						
101	nm Dia	Bar Be	nd Test	Throug	<u>th 180° i</u>	s Satisfac	ctory							

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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples



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

To, Pr. Engineer (Civil), SWP Pakistan Atomic Energy Commission D.G. Khan

Reference # CED/TFL **37123** (Dr. Usman Akmal) Dated: 29-09-2021 Reference of the request letter # SWP/W(1814)/2018 – SWP/W(1916)/2013Dated: 14-09-2021

Tension Test Report (Page -1/1)

Date of Test 30-09-2021 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)	Ultimat (p	e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	3 %	Re
1	0.388	3	0.381	0.11	0.114	3900	5100	78200	75380	102200	98600	1.00	12.5	
2	0.374	3	0.374	0.11	0.110	3000	4300	60200	60090	86200	86200	1.90	23.8	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			N	ote: on	ly two s	amples f	or tensile	and one	sample f	or bend t	test			
							Bend T	<u>'est</u>						
#3	Bar Ben	d Test	Through	180° is	s Satisfa	ctory								

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

To,
Resident Engineer
ACES
Rumanza Golf Course, DHA Multan
(RGC)(UEPL)

Reference # CED/TFL <u>37124 (Dr. Usman Akmal)</u>

Reference of the request letter # ACES-DHAM-RGC-M&F-014

Dated: 29-09-2021

Dated: 30-08-2021

Tension Test Report (Page -1/1)

Date of Test 30-09-2021 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)	Ultimat (p	e Stress si)	Elongation	% Elongation	Remarks
S	(lbs/ft)	Nominal (#)	Actual (inch)	Nominal	Actual	(kg)	(kg)	Nominal	Actual	Nominal	Actual	(inch)	∃%	Re
1	0.393	3	0.383	0.11	0.115	4400	5000	88200	84000	100200	95500	0.80	10.0	al
2	0.392	3	0.383	0.11	0.115	4100	4800	82200	78460	96200	91900	0.90	11.3	Mughal Steel
-	-	-	-	-	-	-	-	-	-	-	-	-	-	N
-	-	-	-	-	-	-	-	-	-	_	-	-	-	
-	-	-	-	-	-	-	-	-	-	_	-	-	-	
-	-	-	-	-	-	-	-	-	-	_	-	-	-	
		Note: only two samples for tensile and one sample for bend test												
	<u> </u>	1		4000:	~		Bend T	est						
#3	Bar Ben	d Test	Through	180° is	s Satisfa	ctory								

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

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
- 2. The above results pertain to sample /samples supplied to this laboratory.
- 3- Sealed sample / Unsealed sample / Marked sample/Signed Samples