

Test Performed by: S. Asad Ali Gillani

Mumza Ali  
Incharge QA/QC  
HI-TEK Manufacturing (Pvt) Ltd.Lahore  
(PARCO PEARL GAS PVT LTD)

Client Reference No.: HT/Req/MT/1032  
SOM Lab Ref: CED/SOM/3947 (Page 1/2)

Dated: 16-04-2024

Dated: 17-04-2024

Test Type: Tensile Test

Specification: ASTM A-36

Sample Type: Steel Sheet (3mm), (Material SG 295)

Gauge Length: 2 inches

### Tensile Test Results

Sr. No.	Sample Type	Size of strip (mm)	X Section Area (mm <sup>2</sup> )	Yield Load (kN)	Ultimate Load (kN)	Yield Stress (MPa)	Ultimate Tensile Stress (MPa)	Elongation (inch)	% Elongation
1	Steel Sheet (3mm)	21.7x3.0	65.10	22.0	31.70	337.94	486.94	0.5	25.0
2	Steel Sheet (3mm)	21.6x3.0	64.80	21.7	32.0	334.88	439.83	0.5	25.0

Note: Please always confirm the results on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Test Performed by: S. Asad Ali Gillani

Mumza Ali  
Incharge QA/QC  
HI-TEK Manufacturing (Pvt) Ltd. Lahore.

Client Reference No.: HT/Req/MT/1031

Dated: 16-04-2024

SOM Lab Ref: CED/SOM/3947 (Page 2/2)

Dated: 17-04-2024

Test Type: Tensile Test

Specification: ASTM A-36

Sample Type: Steel Plate (12mm), (Material S 516)

Gauge Length: 2 inches

#### Tensile Test Results

Sr. No.	Sample Type	Size of strip (mm)	X Section Area (mm <sup>2</sup> )	Yield Load (kN)	Ultimate Load (kN)	Yield Stress (MPa)	Ultimate Tensile Stress (MPa)	Elongation (inch)	% Elongation
1	Steel Plate (12mm)	21.7x12.7	275.59	121.0	152.0	439.06	550.54	0.8	40.0

Note: Please always confirm the results on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Test Performed by: S. Asad Ali Gillani

Muhammad Umar

Dy. Director (Maint.), NHA Lahore.

(Repair/Maintenance & Re-Painting of Existing Pedestrian Overhead Bridge On N-5)

Client Reference No.: HS-PN-21-05-05/DD(M)/NHA/LHR/23/891

Dated: 26-07-2023

SOM Lab Ref: CED/SOM/3948 (Page 1/3)

Dated: 17-04-2024

Test Type: Tensile Test & Bend Test

Specification: ASTM A-36

Sample Type: MS Sections

Gauge Length: 2 inches

### Tensile & Bend Test Results

Sr. No	Sample Type	Size of strip (mm)	X Section Area (mm <sup>2</sup> )	Yield Load (kN)	Ultimate Load (kN)	Yield Stress (MPa)	Ultimate Tensile Stress (MPa)	Elongation (inch)	% Elongation
1	Box Pipe	26.9 x 5.00	134.50	46.20	56.70	343.49	421.56	0.60	30.00
2	Chequered Plate	29.2 x 4.90	143.08	43.50	54.50	304.03	380.91	0.70	35.00
3	Angle (50x50x5mm)	27.8 x 6.50	180.70	79.00	101.20	437.19	560.04	0.50	25.00
4	Channel	28.3 x 6.50	183.95	72.00	105.20	391.41	571.89	0.60	30.00
5	Angle (100x100x10mm)	29.4 x 10.1	296.94	106.00	152.00	356.97	511.89	0.80	40.00
6	Box Pipe strip sample Bend through 180 degrees satisfactorily without any crack								
7	Chequered Plate strip sample Bend through 180 degrees satisfactorily without any crack								
8	Angle (50x50x5mm) strip sample Bend through 180 degrees satisfactorily without any crack								
9	Channel strip sample Bend through 180 degrees satisfactorily without any crack								
10	Angle (100x100x10mm) strip sample Bend through 180 degrees satisfactorily without any crack								

Test Performed by: S. Asad Ali Gillani

Muhammad Umar

Dy. Director (Maint.), NHA Lahore.

(Repair/Maintenance & Re-Painting of Existing Pedestrian Overhead Bridge On N-5)

Client Reference No.: HS-PN-21-05-05/DD(M)/NHA/LHR/23/891

Dated: 26-07-2023

SOM Lab Ref: CED/SOM/3948 (Page 2/3)

Dated: 17-04-2024

Test Type: Tensile Test & Bend Test

Specification: ASTM A-36

Sample Type: MS Sections

Gauge Length: 8 inches

### Tensile & Bend Test Results

Sr. No	Sample Type	Size of strip (mm)	X Section Area (mm <sup>2</sup> )	Yield Load (kN)	Ultimate Load (kN)	Yield Stress (MPa)	Ultimate Tensile Stress (MPa)	Elongation (inch)	% Elongation
1	Square Bar (18mm)	19.0 x 19.40	368.60	122.70	180.70	332.88	490.23	2.00	25.0
2	Square Bar (16mm)	15.8 x 15.70	248.06	140.20	188.70	565.19	760.70	0.40	5.00
3	Square Bar (12mm)	12.4 x 12.40	153.76	82.20	107.00	534.60	695.89	0.70	8.75
4	Square Bar (18mm) strip sample Bend through 180 degrees satisfactorily without any crack								
5	Square Bar (16mm) strip sample Bend through 180 degrees satisfactorily without any crack								
6	Square Bar (12mm) strip sample Bend through 180 degrees satisfactorily without any crack								

Note: Please always confirm the results on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

**Test Performed by:** S. Asad Ali Gillani

Muhammad Umar

Dy. Director (Maint.), NHA Lahore.

(Repair/Maintenance & Re-Painting of Existing Pedestrian Overhead Bridge On N-5)

**Client Reference No.:** HS-PN-21-05-05/DD(M)/NHA/LHR/23/891

Dated: 26-07-2023

**SOM Lab Ref:** CED/SOM/3948 (Page 3/3)

Dated: 17-04-2024

**Test Type:** Size/Thickness Test

**Size/Thickness Test**

<b>Sr. No.</b>	<b>Sample Type</b>	<b>Size/Thickness (mm)</b>
1	Box Pipe	5.0
2	Chequered Plate	4.9
3	Angle (50x50x5mm)	6.5
4	Channel	6.5
5	Angle (100x100x10mm)	10.1
6	Square Bar (18mm)	19.0 x 19.4
7	Square Bar (16mm)	15.8 x 15.7
8	Square Bar (12mm)	12.4 x 12.4

**Note:** Please always confirm the results on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)

Test Performed by: Dr. S. Asad Ali Gillani

Engr Shahzad Khurram Khan,  
CRE Osmani & Compny.AIIC,Fsd.  
(Const Of Sewer & W/Supply Networks at Main Arterial Chiniot Sahianwala)

Client Reference No. CRE/AIIC-06/Lab/770

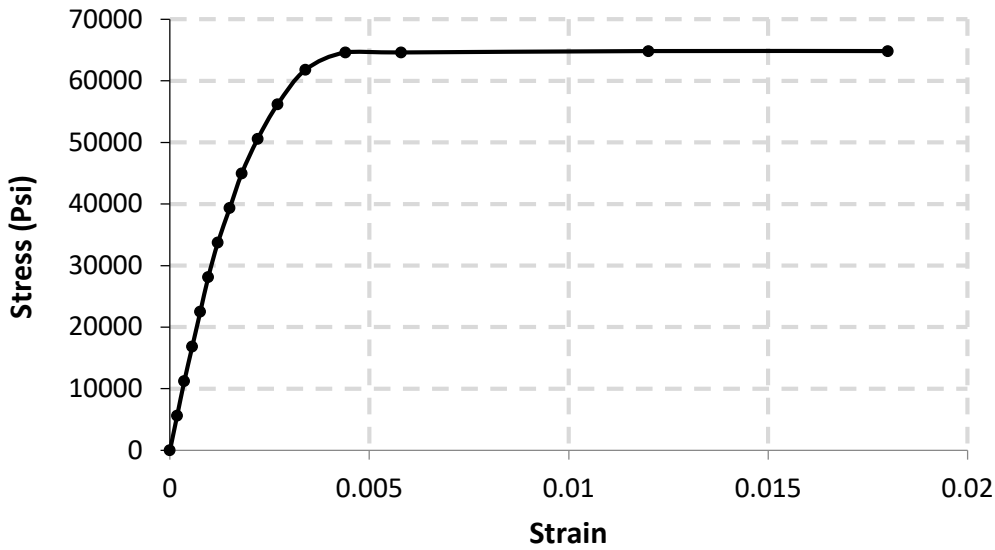
Dated: 04-04-2024

SOM Lab Ref: CED/SOM/3950 (Page – 2/2)

Dated: 17-04-2024

Sample # 1\* Graph

Stress-Strain Plot (Bar Size #4)



Muhammad Arfat,RE

Test Performed By:

Dr. /Engr.

Asad Ali Gillani

ACE-Arts (Consultants) UAEET Sambrial,Sialkot.(Estb Of UAEET Sambrial,Sialkot)

Client Reference: ER/UAEET/ACE/ME/2024/12

SOM Lab

Ref:

3949 (Page-1/1)

Dated: 08-04-2024

Dated:

17-04-2024

Test: Tension Test & Bend Test

Test Specification:

ASTM-A-615

Deformed Bar (Pak

Gauge Length: 8 inch

Sample Type:

Steel)

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.885	8	1.039	0.79	0.848	29.87	36.44	83380	77680	101740	94780	1.40	8.0	17.5	
2	2.874	8	1.037	0.79	0.845	30.31	36.72	84610	79100	102510	95830	1.30	8.0	16.3	
3	2.542	8	0.975	0.79	0.747	21.51	29.15	60050	63510	81390	86080	1.40	8.0	17.5	
4	2.547	8	0.977	0.79	0.749	22.88	30.40	63890	67390	84860	89510	1.50	8.0	18.8	
5	1.533	6	0.758	0.44	0.451	14.24	18.98	71380	69640	95140	92820	1.40	8.0	17.5	
6	1.523	6	0.755	0.44	0.448	13.93	18.67	69850	68600	93610	91940	1.20	8.0	15.0	
7	0.694	4	0.510	0.20	0.204	7.36	9.09	81160	79570	100270	98300	1.30	8.0	16.3	
8	0.707	4	0.515	0.20	0.208	7.44	9.02	82060	78900	99480	95660	1.10	8.0	13.8	
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Witnessed By: M.Umair (ME ACE Arts Consultants)

**BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Twelve Samples Received and Tested
# 8	Sample bend through 180 degrees Satisfactorily without any crack	
# 6	Sample bend through 180 degrees Satisfactorily without any crack	
# 4	Sample bend through 180 degrees Satisfactorily without any crack	

Note: Please always confirm the results of above report on web www.uet-civil.edu.pk

Engr Shahzad Khurram Khan

**Test Performed By:** Dr. /Engr. Asad Ali Gillani

CRE Osmani & Compny.AIIC,Fsd.(Const Of Sewer & W/Supply Networks at Main Arterial Chiniot)

**Client Reference:** CRE/AIIC-06/Lab/770

**SOM Lab**

**Ref:** 3950 (Page-1/2)

**Dated:** 04-04-2024

**Dated:** 17-04-2024

**Test:** Tension Test & Bend Test

**Test Specification:** ASTM-A-615

**Gauge Length:** 8 inch

**Sample Type:** Deformed Bar (Ittehad Steel)

S.No.	Weight	Dia.		Area		Yield Load	Ultimate Load	Yield Stress		Ult. Stress		Elongation	Gauge Length	%age Elongation	Remarks
		Nominal	Calculated	Nominal	Calculated			(according to nominal area)	(according to measured area)	(according to nominal area)	(according to measured area)				
	lb/ft	#	in	in <sup>2</sup>	in <sup>2</sup>	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	0.670	4	0.501	0.20	0.197	6.09	8.92	67110	68130	98360	99860	1.00	8.0	12.5	*
2	0.668	4	0.500	0.20	0.196	5.88	8.92	64860	66190	98360	100370	1.00	8.0	12.5	
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**BEND TEST:**

# 4	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Three Samples Received and Tested

Note: Please always confirm the results of above report on web [www.uet-civil.edu.pk](http://www.uet-civil.edu.pk)