

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

Jawad Qayyum Khan

Resident Engineer NESPAK PSDP Project,

Sargodha

(Construction of Flyover at 47/Pull Length 4400 RFT in Distt Sargodha)

**Reference No.:** 4376/JQK/24/6998

Dated: 10-09-2024

**SOM Lab Ref:** CED/SOM/4827(Page-1/2)

Dated: 19-09-2024

**Test:** Tensile Test, Elongation at Break, Tear Test, Hardness Test & Comp. Set Test

**Sample Type:** Elastomeric Bearing Pad (Rainbow)

**TENSILE STRENGTH AND ELONGATION TEST. (AS PER ASTM-D-412)**

S. No	Sample Size (mm)	Ultimate Load (kN)	Tensile Strength (Mpa)	Tensile Strength (kg/cm <sup>2</sup> )	Elongation at Break(%)
1	7.6 x 2.0	0.57	37.50	382.38	530.0
2	7.6 x 2.0	0.62	40.79	415.93	560.0

**TEAR STRENGTH (AS PER ASTM-D-624)**

S. No	Sample Size (mm)	Ultimate Load (kN)	Tear Strength (N/mm)
1	10.4 x 2.0	0.42	210.0
2	11.0 x 2.0	0.40	200.0

**- COMPRESSION SET TEST (AS PER ASTM-D-395)**

S. No.	Thickness of Sample (mm)	Final Thickness (mm)	Compression set (%)
1	3.00	2.87	4.33

**- HARDNESS TEST (AS PER ASTM-D-2240)**

S. No	Sample Type	Hardness <sub>avg</sub> (Shore A)
1	Elastomeric Bearing Pad	63.0

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Jawad Qayyum Khan

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(Construction of Flyover at 47/Pull Length 4400 RFT in Distt Sargodha)

**Reference No.:** 4376/JQK/24/6998

Dated: 10-09-2024

**SOM Lab Ref:** CED/SOM/4827(Page-2/2)

Dated: 19-09-2024

**Sample Type:** Steel Strip (Elastomeric Bearing Pad)

**Gauge Length:** 2 inches

**Tensile Test Results**

<b>Sr. No</b>	<b>Size of strip (mm)</b>	<b>X Section Area (mm<sup>2</sup>)</b>	<b>Yield Load (kN)</b>	<b>Ultimate Load (kN)</b>	<b>Yield Stress (MPa)</b>	<b>Ultimate Tensile Stress (MPa)</b>	<b>Elongation (inch)</b>	<b>% Elongation</b>
1	27.0 x 2.9	78.30	25.2	35.2	321.84	449.55	0.50	25.00

**Client Reference No.:** GT/LTR/240918-039  
2024

**Dated:** 18-09-

**SOM Lab Ref:** CED/SOM/4828 (Page 1/1)  
2024

**Dated:** 19-09-

**Test Type:** Splitting Tensile Strength of Wall Cores

**Test Performed by:** Dr. Syed Asad Ali Gillani

Sana Meraj,  
Civil Engineer,  
Building Standard Limited  
Lahore

This is with reference to your above-mentioned letter and SOM receipt. The samples of wall cores submitted in the Laboratory were tested to determine their splitting tensile strength and the results are provided in the Table below.

Sample No.	Sample Description/Grid	Core Dimensions, mm (Length x Diameter)	Splitting Tensile Strength, MPa
1	Lab Wall C-D/2	98.0 x 92.6	0.66
2	Lab Wall C-D/4	96.0 x 92.6	0.34
3	Lab Wall C-D/1	97.0 x 92.6	0.84
4	Cafeteria Wall A-B/2	98.0 x 92.6	0.62

Test Performed by: S. Asad Ali Gillani

Engr. Muhammad Jahangir Munir

Resident Engineer

Project Implementation Consultants (PIC)

(Construction of Employer's Colony "Residential Buildings, Office, Roads & Other Allied Facilities")

Client Ref.No.: ICON/PEDO-PESH/GKHPP/24/218

Dated: 14-09-2024

SOM Lab Ref: CED/SOM/4831 (Page 1/6)

Dated: 19-09-2024

Test Type: Tensile Test & Bend Test

Specification: ASTM A-36

Sample Type: MS Sections

Gauge Length: 2 inches

### Tensile Test & 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	Angle (3"x3"x3/8")	37.90 x 9.70	367.63	113.00	172.50	307.37	469.22	0.50	25.00
2		35.30 x 9.60	338.88	110.00	163.70	324.60	483.06	0.50	25.00
3	Angle (2.5"x2.5"x3/8")	26.40 x 9.80	258.72	84.00	119.20	324.68	460.73	0.50	25.00
4		22.40 x 9.70	217.28	69.00	99.20	317.56	456.55	0.50	25.00
5	Angle (3.5"x3.5"x3/8")	36.50 x 9.70	354.05	114.00	173.00	321.99	488.63	0.60	30.00
6		38.0 x 10.00	380.00	123.50	187.20	325.00	492.63	0.70	35.00
7	MS Angle (3"x3"x3/8") strip sample, Bend through 180 degrees satisfactorily without any crack								
8	MS Angle (2.5"x2.5"x3/8") strip sample, Bend through 180 degrees satisfactorily without any crack								
9	MS Angle (3.5"x3.5"x3/8") 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

Engr. Muhammad Jahangir Munir

Resident Engineer

Project Implementation Consultants (PIC)

(Construction of Employer's Colony "Residential Buildings, Office, Roads & Other Allied Facilities")

Client Ref.No.: ICON/PEDO-PESH/GKHPP/24/218

Dated: 14-09-2024

SOM Lab Ref: CED/SOM/4831 (Page 2/6)

Dated: 19-09-2024

Test Type: Tensile Test & Bend Test

Specification: ASTM A-36

Sample Type: MS Sections

Gauge Length: 2 inches

#### Tensile Test & 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	Angle (4"x4"x1/2")	29.80 x 12.80	381.44	134.00	198.50	351.30	520.40	0.60	30.00
2		27.70 x 12.80	354.56	113.00	178.00	318.70	502.03	0.60	30.00
3	Angle (2"x2"x1/4")	29.00 x 6.50	188.50	68.70	94.70	364.46	502.39	0.70	35.00
4		28.20 x 6.50	183.30	66.50	88.00	362.79	480.09	0.70	35.00
5	Base Plate (size 1")	37.0 x 25.10	928.70	259.70	391.70	279.64	421.77	0.65	32.50
6		36.5 x 25.10	916.15	246.00	377.70	268.51	412.27	0.70	35.00
7	MS Angle (4"x4"x1/2") strip sample, Bend through 180 degrees satisfactorily without any crack								
8	MS Angle (2"x2"x1/4") strip sample, Bend through 180 degrees satisfactorily without any crack								
9	MS Base Plate (size 1") 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

Engr. Muhammad Jahangir Munir

Resident Engineer

Project Implementation Consultants (PIC)

(Construction of Employer's Colony "Residential Buildings, Office, Roads & Other Allied Facilities")

Client Ref.No.: ICON/PEDO-PESH/GKHPP/24/218

Dated: 14-09-2024

SOM Lab Ref: CED/SOM/4831 (Page 3/6)

Dated: 19-09-2024

Test Type: Tensile Test & Bend Test

Specification: ASTM A-36

Sample Type: MS Sections

Gauge Length: 2 inches

#### Tensile Test & 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	Gusset Plate (1/2")	44.4 x 12.00	532.80	188.00	247.00	352.85	463.59	0.65	32.50
2		44.3 x 12.10	536.03	188.00	245.70	350.73	458.37	0.65	32.50
3	Gusset Plate (3/8")	26.0 x 10.20	265.20	131.20	158.70	494.72	598.42	0.60	30.00
4		27.4 x 10.20	279.48	138.20	166.70	494.49	596.46	0.70	35.00
5	Gusset Plate (3/4")	35.3 x 20.00	706.00	246.00	333.70	348.44	472.66	0.70	35.00

6		35.0 x 20.00	700.00	226.70	315.70	323.86	451.00	0.65	32.50
7	Gusset Plate (1/2") strip sample, Bend through 180 degrees satisfactorily without any crack								
8	Gusset Plate (3/8") strip sample, Bend through 180 degrees satisfactorily without any crack								
9	Gusset Plate (3/4") 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

Engr. Muhammad Jahangir Munir

Resident Engineer

Project Implementation Consultants (PIC)

(Construction of Employer's Colony "Residential Buildings, Office, Roads & Other Allied Facilities")

**Client Ref.No.:** ICON/PEDO-PESH/GKHPP/24/218

Dated: 14-09-2024

**SOM Lab Ref:** CED/SOM/4831 (Page 4/6)

Dated: 19-09-2024

**Test Type:** Unit Weight Test (Angle Iron)

#### Weight and Size Test

Sr. No.	Sample Type	Weight (g)	Length (cm)	Weight per Unit Area (Kg/m)	Length L 1 (mm)	Length L 2 (mm)	thickness (mm)
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1	Angle (3"x3"x3/8")	5610	52.0	10.78	78.8	77.5	9.8
2	Angle (2.5"x2.5"x3/8")	4166	47.0	8.86	65.0	65.5	10.1
3	Angle (3.5"x3.5"x3/8")	5579	44.5	12.53	90.0	91.5	9.8
4	Angle (4"x4"x1/2")	8927	46.0	19.40	104.6	105.5	12.9
5	Angle (2"x2"x1/4")	2195	45.8	4.79	51.3	51.7	6.5

**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

Engr. Muhammad Jahangir Munir  
Resident Engineer



Project Implementation Consultants (PIC)

(Construction of Employer's Colony "Residential Buildings, Office, Roads & Other Allied Facilities")

Client Ref.No.: ICON/PEDO-PESH/GKHPP/24/218

Dated: 14-09-2024

SOM Lab Ref: CED/SOM/4831 (Page 5/6)

Dated: 19-09-2024

Test Type: Unit Weight Test (Gusset Plates, Base Plate)

#### Weight and Size Test

Sr. No.	Sample Type	Weight (g)	Length (cm)	Width (cm)	Weight per Unit Area (Kg/m <sup>2</sup> )	Thickness (mm)
1	Gusset Plate (1/2")	2646	45.6	6.27	92.54	12.2
2	Gusset Plate (3/8")	3119	46.0	8.58	79.02	10.3
3	Gusset Plate (3/4")	3667	46.0	5.18	153.89	20.0
4	Base Plate (1")	9614	45.8	10.74	195.45	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

Engr. Muhammad Jahangir Munir

Resident Engineer

Project Implementation Consultants (PIC)

(Construction of Employer's Colony "Residential Buildings, Office, Roads & Other Allied Facilities")

Client Ref.No.: ICON/PEDO-PESH/GKHPP/24/218

Dated: 14-09-2024

SOM Lab Ref: CED/SOM/4831 (Page 6/6)

Dated: 19-09-2024

Sample Type: Nut Bolts

Test Specification: ASTM – F-606

### Tensile Test Results

Sample No.	Sample Type	Tested Diameter of Bolt (mm)	Ultimate Load (kN)	Ultimate Tensile Stress (MPa)	% Elongation	Remarks
1	Nut Bolts (1/2")	7.0	29.7	772.1	20.0	Samples Breaks at this Load
2	Nut Bolts (3/8")	8.0	29.7	591.2	15.0	Samples Breaks at this Load
3	Anchor Studs U-Shaped (3/4")	19.05	168.5	589.7	20.0	Samples Breaks at this Load

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

Waqas Ahmed Ghumman,PM  
 High-Q Constructions Lhr.(Const Of High-Q Mall at 3-A Gulberg II Lahore)

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

**Client Reference:** QC/HQ/CIVIL/235  
**SOM Lab Ref:** CED/SOM/4823 (Page-1/1)

**Dated:** 19-09-2024  
**Dated:** 19-09-2024

**Test:** Tension Test & Bend Test  
**Sample Type:** Deformed Bar

**Test Specification:** ASTM-A 615  
**Gauge Length:** 200 mm

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)				
	kg/m	mm	mm	mm <sup>2</sup>	mm <sup>2</sup>	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	4.000	25	25.48	398	510	267.50	377.70	673	525	950	741	35.0	200	17.5	
2	3.979	25	25.40	398	507	259.00	340.50	651	512	856	672	37.5	200	18.8	
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**BEND TEST:**

25mm	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)

Haroon Ibrahim, PM

Test Performed By: Dr. /Engr. Irfan Ul Hassan

Concept Engineers Lahore.(Const Of Abdul Hameed Islamic Center Jia Bagga Lahore)

Client Reference: CE-AHC-UET LHR-18-09-02

Dated: 18-09-2024

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification: ASTM-A-615

Sample Type:

SOM Lab

Ref: 4824 (Page-1/1)

Dated: 19-09-2024

ASTM-A-615

Deformed Bar (Mughal Supreme)

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	1.493	6	0.748	0.44	0.439	13.86	18.62	69490	69650	93350	93560	1.30	8.0	16.3	
2	1.480	6	0.744	0.44	0.435	13.97	18.64	70000	70810	93450	94530	1.30	8.0	16.3	
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**BEND TEST:**

# 6	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)

Mehmood Iqbal Cheema,RE

Test Performed By:

Dr. /Engr.

Nauman Khurram

Nespak-Turk Pak JV,MCH Bwn.(Estb Of General Hospital at Distt Bahawalnager)

Client Reference: 4460/13/MIAC/04/394

Dated: 11-09-2024

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref:

4825 (Page-1/2)

Dated:

19-09-2024

ASTM-A-615

Deformed Bar (Hunza 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	2.659	8	0.997	0.79	0.781	24.36	34.15	68020	68800	95340	96430	1.60	8.0	20.0	
2	2.640	8	0.994	0.79	0.776	24.03	33.69	67080	68290	94050	95750	1.40	8.0	17.5	
3	1.487	6	0.746	0.44	0.437	13.61	18.32	68210	68680	91820	92450	1.20	8.0	15.0	
4	1.481	6	0.744	0.44	0.435	13.71	18.62	68730	69510	93350	94420	1.30	8.0	16.3	
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**BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Six Samples Received and Tested
# 6	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](http://www.uet-civil.edu.pk)

Mehmood Iqbal Cheema,RE

Test Performed By:

Dr. /Engr.

Nauman Khurram

Nespak-Turk Pak JV,MCH Bwn.(Estb Of General Hospital at Distt Bahawalnager)

Client Reference: 4460/13/MIAC/04/393

Dated: 09-09-2024

Test: Tension Test & Bend Test

Gauge Length: 8 inch

Test Specification:

Sample Type:

SOM Lab

Ref:

4825 (Page-2/2)

Dated:

19-09-2024

ASTM-A-615

Deformed Bar (FF 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	2.739	8	1.012	0.79	0.805	25.08	34.30	70010	68700	95760	93980	1.60	8.0	20.0	
2	2.739	8	1.012	0.79	0.805	23.55	33.59	65740	64520	93770	92020	1.40	8.0	17.5	
3	1.462	6	0.740	0.44	0.430	14.73	19.52	73830	75550	97850	100120	1.40	8.0	17.5	
4	1.477	6	0.743	0.44	0.434	14.78	19.69	74090	75110	98720	100080	1.50	8.0	18.8	
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**BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Six Samples Received and Tested
# 6	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](http://www.uet-civil.edu.pk)

Muhammad Mubeen Khan  
Sr. Project Manager AAA Partnership Pvt. Ltd.(JDW Tower Lahore)

**Test Performed By:** Dr. /Engr. Nauman Khurram

**Client Reference:** AAA/RO/MMK/105/2024

**SOM Lab**

**Ref:** 4826(Page-1/1)

**Dated:** 19-09-2024

**Dated:** 19-09-2024

**Test:** Tension Test & Bend Test

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

**Gauge Length:** 8 inch

**Sample Type:** Deformed Bar

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	2.675	8	1.000	0.79	0.786	26.52	34.78	74050	74430	97100	97590	1.50	8.0	18.8	Beam
2	2.697	8	1.005	0.79	0.793	24.21	33.64	67590	67330	93910	93560	1.60	8.0	20.0	Beam
3	2.631	8	0.992	0.79	0.773	24.59	33.76	68640	70150	94250	96330	1.50	8.0	18.8	Piles
4	2.661	8	0.998	0.79	0.782	25.84	34.86	72140	72880	97330	98320	1.70	8.0	21.3	Piles
5	1.475	6	0.743	0.44	0.433	13.86	18.22	69490	70610	91310	92780	1.80	8.0	22.5	Piles
6	1.476	6	0.743	0.44	0.434	13.99	18.47	70100	71070	92590	93870	1.50	8.0	18.8	Piles
7	1.493	6	0.748	0.44	0.439	14.88	19.39	74600	74770	97180	97410	1.50	8.0	18.8	Beam
8	1.487	6	0.746	0.44	0.437	14.73	19.29	73830	74340	96670	97340	1.50	8.0	18.8	Beam
9	0.677	4	0.503	0.20	0.199	6.14	8.18	67670	68010	90210	90660	1.70	8.0	21.3	Beam
10	0.676	4	0.503	0.20	0.199	5.98	8.12	65990	66320	89590	90040	1.40	8.0	17.5	Beam

**BEND TEST:**

# 8	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Fifteen Samples Received and Tested
# 8	Sample bend through 180 degrees Satisfactorily without any crack	
# 6	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](http://www.uet-civil.edu.pk)

Muhammad Waseem Ch.

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

RE NESPAK Gujranwala.(Const Of Bypass From Dhonkal More to Sodhra Wazirabad)

**Client Reference:** 3699/RE/Guj-W/24/86

**SOM Lab**

**Ref:** 4829 (P-1/1)

**Dated:** 22-08-2024

**Dated:** 19-09-2024

**Test:** Tension Test & Bend Test

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

**Gauge Length:** 8 inch

**Sample Type:** Deformed Bar

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	0.650	4	0.493	0.20	0.191	6.60	8.92	72730	76160	98360	102990	1.00	8.0	12.5	
2	0.652	4	0.494	0.20	0.192	6.52	8.84	71940	74940	97460	101520	1.10	8.0	13.8	
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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)



Safdar Rashid, RE

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

NESPAK Narowal.(KBCMA College of Veterinary and Animal Science Narowal Campus)

Client Reference: 4650/311/SR/39

SOM Lab

Ref: 4830 (P-1/1)

Dated: 10-09-2024

Dated: 19-09-2024

Test: Tension Test &amp; Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Deformed Bar (Markhor 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	1.466	6	0.741	0.44	0.431	13.73	19.47	68830	70260	97590	99630	1.30	8.0	16.3	
2	1.470	6	0.742	0.44	0.432	13.83	19.52	69340	70620	97850	99660	1.20	8.0	15.0	
3	0.649	4	0.493	0.20	0.191	6.47	8.43	71380	74750	92960	97340	1.00	8.0	12.5	
4	0.660	4	0.497	0.20	0.194	6.42	8.46	70820	73010	93300	96190	1.10	8.0	13.8	
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**BEND TEST:**

# 6	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Six Samples Received and Tested
# 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](http://www.uet-civil.edu.pk)

Asif Pervaiz Butt  
RE Ritz Developers Pvt. Ltd.Lahore

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

Client Reference: Nil

Dated: 19-09-2024

Test: Tension Test & Bend Test

Gauge Length: 8 inch

SOM Lab

Ref: 4832 (Page-1/1)

Dated: 19-09-2024

Test Specification: ASTM-A-615

Sample Type: Deformed Bar (Moiz 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	1.646	6	0.785	0.44	0.484	13.43	18.78	67290	61180	94120	85560	1.50	8.0	18.8	
2	1.491	6	0.747	0.44	0.438	13.32	18.32	66780	67090	91820	92240	1.50	8.0	18.8	
3	1.528	6	0.756	0.44	0.449	13.61	18.71	68210	66850	93760	91880	1.50	8.0	18.8	
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**BEND TEST:**

# 6	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Four 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)

