

Abdul Ghafar  
Project Manager Liberty Builders, Lahore

Test Performed By: Dr. /Engr. M Yousaf

Client Reference: ST/UET/ 20210305

SOM Lab 3966(Page-1/1)

Dated: 05-03-2021

Dated: 05-03-2021

Test: Tension Test

Test Specification: ASTM-A-615  
Deformed Bar( SJ-Steel)

Gauge Length: 8 inch

Sample Type:

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	1.516	6	0.754	0.44	0.446	15.16	20.85	75980	74960	104490	103080	1.40	8.0	17.5	
2	1.479	6	0.744	0.44	0.435	15.14	20.82	75880	76750	104340	105540	1.30	8.0	16.3	
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**BEND TEST:**

--	No Bend test performed	<b>Note:-</b>  Only Two Samples Received and Tested

Brigadier Muhammad Akhtar  
(Retd.)

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

Project Director, New Metro City, Kharian Sarai Alamgir

Client Reference: PD/NMC/20/240

SOM Lab 3968(Page-

Ref: 1/1)

Dated: 05-03-2021

Dated: 05-03-2021

Test: Tension Test & Bend Test

Test Specification: ASTM-A-615

Gauge Length: 8 inch

Sample Type: Deformed Bar (Nomee 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	1.040	5	0.624	0.31	0.306	11.67	13.88	83040	84120	98780	100070	1.30	8.0	16.3	
2	1.042	5	0.624	0.31	0.306	11.37	13.66	80860	81920	97180	98450	1.30	8.0	16.3	
3	0.676	4	0.503	0.20	0.199	8.05	9.25	88800	89250	101960	102470	1.30	8.0	16.3	
4	0.687	4	0.507	0.20	0.202	7.95	9.40	87680	86810	103640	102620	1.20	8.0	15.0	
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**BEND TEST:**

# 5	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)

Safdar Hussain  
Resident Engineer, ACE, Danish School Mankera Residency

Test Performed By: Dr. /Engr. S. Asad Ali Gillali

Client Reference: ACE/RE-PDS/MNK/BHK/21/385

SOM Lab Ref: 3967(Page-1/1)

Dated: 28-02-2021

Dated: 05-03-2021

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	1.508	6	0.751	0.44	0.443	11.18	16.36	56050	55670	82010	81450	0.70	8.0	8.8	
2	1.442	6	0.735	0.44	0.424	13.20	20.23	66170	68670	101420	105250	0.80	8.0	10.0	
3	1.067	5	0.632	0.31	0.314	10.93	13.02	77750	76760	92610	91430	1.10	8.0	13.8	
4	1.059	5	0.629	0.31	0.311	10.86	13.00	77240	76990	92470	92170	1.10	8.0	13.8	
5	0.595	4	0.472	0.20	0.175	5.96	7.10	65760	75160	78350	89540	1.10	8.0	13.8	
6	0.587	4	0.469	0.20	0.173	5.76	6.95	63510	73430	76660	88630	1.20	8.0	15.0	
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**BEND TEST:**

# 6	Sample bend through 180 degrees Satisfactorily without any crack	<b>Note:-</b>  Only Nine Samples Received and Tested
# 5	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)

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

Saeedullah Jan

Resident Engineer

NESPAK (Pvt) Ltd.

Construction of High Level Bridge over Racy Nullah Tehsil Jand District Attock

**Client Reference No.:** 3126/RE/ADP/SUJ/03/38

Dated: 09-02-2021

**SOM Lab Ref:** CED/SOM/3970(Page-1/1)

Dated: 05-03-2021

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

**Sample Type:** Testing of Bearing Pad (20" x 16" x 3")

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

S. No	Sample Size (mm x mm)	Tensile Strength at (kN)	Tensile Strength (MPa)	% age Elongation
1	6.5 x 3.9	0.72	28.40	530.0

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

S. No	Sample Size (mm)	Ultimate Load (kN)	Tear Strength (N/mm)
1	12.5 x 3.9	0.27	69.23

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

S. No.	Thickness of Sample (mm)	Final Thickness (mm)	Compression set (%)
1	3.9	3.85	2.50

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

S. No	Sample Type	Hardness (Shore A)
1	Elastomeric Bearing Pad	60.66

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

*Ajaz Ahmad Gondal*

*Acting Chief Resident Engineer,(TPBC)*

*Trimmu Punjnad Barrages Consultants*

*Construction of Additional Bridges and Colony works at Trimmu Barrages*

*Contract No. TPBIP/NCB-01*

**Client Reference No.:** TPBC/CRE/NCB-01/5066

Dated: 03-03-2021

**SOM Lab Ref:** CED/SOM/3972(Page-1/1)

Dated: 05-03-2021

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

Hardness Test

**Sample Type:** Testing of Elastomeric Bearing Pad )

Description	Unit	Before Aging	After aging @100°C.	Standard ASTM
Tensile Strength	Kgs/cm	212.44	169.9	D-412
Elongation at Break	%	470	440	D-412
Hardness (Shore A)	Point	60.16	64.33	D-2240

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

S. No	Sample Size (mm)	Ultimate Load (kN)	Tear Strength (N/mm)
1	12.0 x 4.0	0.32	80.0

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

S. No.	Thickness of Sample (mm)	Final Thickness (mm)	Compression set (%)
1	12.5	12.40	1.66

