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

PM Union Developers Lhr.(const. Of Union Luxury Apartments,Etihad Town Lahore.)

Client Reference: **UA/SO/2023/043** **SOM Lab Ref:** **2418 (Page-1/1)**

Dated: **12-06-2023** **Dated:** **12-06-2023**

Test: **Tension Test & Bend Test** **Test Specification:** **ASTM-A-615**

Gauge Length: **8 inch** **Sample Type:** **Deformed Bar (Afco 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^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.536	6	0.758	0.44	0.451	15.49	20.39	77670	75770	102190	99700	1.20	8.0	15.0	
2	1.532	6	0.757	0.44	0.450	17.09	21.12	85690	83780	105870	103520	1.20	8.0	15.0	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack	**Note:-**
		Only Three Samples Received and Tested

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

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

CM Nippon Health Services (Pvt) Ltd. Sheikhupura.

Client Reference: **NHS/NMS/14** **SOM Lab Ref:** **2419 (Page-1/1)**

Dated: **12-06-2023** **Dated:** **12-06-2023**

Test: **Tension Test & Bend Test** **Test Specification:** **ASTM-A-615**

Gauge Length: **8 inch** **Sample Type:** **Deformed Bar (Kamran 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^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.633	8	0.993	0.79	0.774	26.55	35.12	74140	75670	98040	100070	1.20	8.0	15.0	
2	2.641	8	0.994	0.79	0.776	26.20	34.88	73140	74460	97380	99140	1.20	8.0	15.0	
3	2.646	8	0.995	0.79	0.778	26.63	35.22	74330	75480	98320	99840	1.30	8.0	16.3	
4	2.663	8	0.998	0.79	0.783	26.30	34.86	73420	74080	97330	98200	1.50	8.0	18.8	
5	0.671	4	0.501	0.20	0.197	6.32	8.46	69700	70760	93300	94720	1.00	8.0	12.5	
6	0.670	4	0.501	0.20	0.197	6.34	8.48	69920	70990	93530	94950	1.10	8.0	13.8	
7	0.668	4	0.500	0.20	0.196	5.98	8.12	65990	67330	89590	91420	1.10	8.0	13.8	
8	0.673	4	0.502	0.20	0.198	5.98	8.12	65990	66650	89590	90500	1.00	8.0	12.5	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack
# 8	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack
# 4	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Twelve Samples Received and Tested

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

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

AWM/Signal For PD/Signal Shops Pak: Rlys; HeadOffice,Lahore.

Client Reference: **802-S/PD(HQ) 2022-23** **SOM Lab Ref:** **2420 (Page-1/2)**

Dated: **12-06-2023** **Dated:** **12-06-2023**

Test: **Tension Test & Bend Test** **Test Specification:** **ASTM-A-615**

Gauge Length: **8 inch** **Sample Type:** **Plain Bar/Iron Rod**

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^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.659	8	0.997	0.79	0.781	21.89	34.71	61100	61810	96900	98020	1.60	8.0	20.0	
2	2.696	8	1.004	0.79	0.792	22.58	35.60	63040	62880	99380	99130	1.60	8.0	20.0	
3	2.683	8	1.002	0.79	0.788	33.74	47.27	94200	94440	131960	132290	1.50	8.0	18.8	
4	2.721	8	1.009	0.79	0.800	33.13	46.76	92490	91330	130540	128900	1.40	8.0	17.5	
5	1.509	6	0.751	0.44	0.443	13.56	17.45	67960	67500	87480	86880	1.20	8.0	15.0	
6	1.514	6	0.753	0.44	0.445	14.48	18.45	72560	71740	92480	91440	1.10	8.0	13.8	
7	1.042	5	0.624	0.31	0.306	10.35	11.90	73610	74570	84630	85740	1.00	8.0	12.5	
8	1.043	5	0.625	0.31	0.307	10.45	11.98	74340	75060	85210	86050	1.00	8.0	12.5	
9	0.661	4	0.497	0.20	0.194	6.83	8.10	75320	77650	89370	92130	1.00	8.0	12.5	
10	0.665	4	0.498	0.20	0.195	6.83	8.41	75320	77250	92740	95120	1.00	8.0	12.5	

BEND TEST:

--	No Bend test performed

Note:-

Only Ten Samples Received and Tested

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

M.Ali Haider Ch. **Test Performed By:** **Dr. /Engr. S Asad Ali Gillani**

PE Prosperity Consultants Lhr.(EPC/Turkey Basis Of 132/11.5KV Gird Station # 1 DHA Gujranwala)

Client Reference: **DHA GUJ/Grid/564** **SOM Lab Ref:** **2421 (Page-1/1)**

Dated: **09-06-2023** **Dated:** **12-06-2023**

Test: **Tension Test & Bend 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^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.638	8	0.993	0.79	0.775	26.20	33.13	73140	74550	92490	94280	1.40	8.0	17.5	
2	2.641	8	0.994	0.79	0.776	26.25	33.38	73280	74600	93200	94880	1.20	8.0	15.0	
3	1.487	6	0.746	0.44	0.437	14.85	19.85	74450	74960	99480	100170	1.20	8.0	15.0	
4	1.480	6	0.744	0.44	0.435	14.58	19.75	73070	73910	98970	100110	1.30	8.0	16.3	
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BEND TEST:

# 8	Sample bend through 180 degrees Satisfactorily without any crack
# 6	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Six Samples Received and Tested

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

Test Performed by: Dr. S. Asad Ali Gillani

NESPAK
RE Swabi-Jehangira Road Dualization
(Dualization Of Swabi-Jehangira Road left Over Portion 11Km I/C Bridge on River Indus) (Pkg-I)

Reference No.: 4266/103/PKHA/SC/MNK/101/72 Dated: 09-06-2023
SOM Lab Ref: CED/SOM/2417(Page-1/1) Dated: 12-06-2023

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

Sample Type: Elastomeric Bearing Pad (Raibow)

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^2)	Elongation at Break(%)
1	5.8 x 2.3	0.55	41.22	420.41	520.0
2	5.8 x 2.3	0.50	37.48	382.19	510.0

TEAR STRENGTH (AS PER ASTM-D-624)

S. No	Sample Size (mm)	Ultimate Load (kN)	Tear Strength (N/mm)
1	7.4 x 2.4	0.40	166.66
2	7.6 x 2.4	0.42	175.0

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

S. No.	Thickness of Sample (mm)	Final Thickness (mm)	Compression set (%)
1	2.95	2.82	4.40

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

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

Test Performed by: .S. Asad Ali Gillani

Muhammad Nadeem
AWM/Signal For PD/Signal Shops Pak: Rlys;
Head Office, Lahore.

Client Reference No.: 802-S/PD(HQ) 2022-23 **Dated: 12-06-2023**
SOM Lab Ref: CED/SOM/2420 (Page 2/2) **Dated: 12-06-2023**

Sample Type: Plain Bar/Iron Rod
Test Type: Hardness Test

Hardness Test Details:

Machine used: Avery Rockwell Hardness Testing Machine
(Minor Load: 10 Kgf Major Load: 140.0 kgf Scale: C)

Hardness Test Results

Sample No.	Sample Type	Hardness
1	Iron Rod 1”	HR – 31.33– C

Machine used: Avery Rockwell Hardness Testing Machine
(Minor Load: 10 Kgf Major Load: 90.0 kgf Scale: B)

Sample No.	Sample Type	Hardness
1	Iron Rod 1”	HR – 84.5– B
2	Iron Rod 3/4”	HR – 89.3– B
3	Iron Rod 5/8”	HR – 87.7– B
4	Iron Rod 1/2”	HR – 92.16– B

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

Test Performed by: Dr. Asad Ghalani

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

Client Reference No.: ER/UAEET/ACE/2023/14 **Dated: 12-06-2023**
SOM Lab Ref: CED/SOM/2422 (Page 1/1) **Dated: 12-06-2023**
Test: Tensile Test
Sample Type: HT Wire.
Test Specification: ASTM-A – 82 (AF Steel) **Gauge Length: 2 Inches**

Tension Test Results

Sr. No.	Weight	Dia	Area	Yield Load	Ultimate Load	Yield Stress	Ultimate stress	Elongation
	lb/ft	(#)	($inch^2$)	kN	kN	(MPa)	(Mpa)	%
1	0.211	2	27.00	18.00	23.50	667	871	5.0
2	0.208	2	26.48	18.20	24.00	688	907	7.5

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