Sub Divisional Forest Officer **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani

Changa Manga.(Const of B/wall Under PC-I Csheme Strengthening Of Protection Regime)

Client Reference: 940/CGM **Dated :** 09-06-2023

SOM Lab Ref: CED/SOM/2513(Page-1/1) **Dated :** 27-06-2023

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

Sample Type: Deformed Bar **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^2	mm^2	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	0.997	12	12.72	113	127	54.50	72.00	482	430	637	567	32.5	200	16.3	
2	1.000	12	12.74	113	127	55.00	71.70	486	432	634	563	30.0	200	15.0	
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BEND TEST:

--	No Bend test performed

Note:-

Only Two Samples Received and Tested

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

Mirza Muhammad Shahzad,RE **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani
Nespak Lahore.(Const Of Multi-Level Grade Separation Flyover at Shahdra Morr Lahore)

Client Reference: 4537/03/MSA/09/74 **SOM Lab Ref:** 2510 (Page-1a/5)
Dated: 23-06-2023 **Dated:** 27-06-2023

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615
Gauge Length: 8 inch **Sample Type:** Deformed Bar (Mughal 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	1.475	6	0.743	0.44	0.433	14.42	18.88	72300	73470	94630	96160	1.40	8.0	17.5	A-1022
2	1.482	6	0.745	0.44	0.436	14.17	19.39	71020	71680	97180	98080	1.20	8.0	15.0	A-1023
3	1.482	6	0.745	0.44	0.436	14.63	18.96	73320	74000	95040	95910	1.30	8.0	16.3	B-3991
4	1.475	6	0.743	0.44	0.433	14.78	19.29	74090	75290	96670	98240	1.30	8.0	16.3	B-4081
5	1.478	6	0.743	0.44	0.434	14.68	19.64	73580	74600	98460	99820	1.30	8.0	16.3	B-9283
6	1.050	5	0.627	0.31	0.309	10.11	13.37	71940	72180	95150	95460	1.30	8.0	16.3	B-4059
7	1.036	5	0.622	0.31	0.304	10.11	13.40	71940	73360	95370	97250	1.10	8.0	13.8	B-4060
8	1.044	5	0.625	0.31	0.307	10.04	12.61	71440	72130	89710	90590	1.20	8.0	15.0	D-8583
9	1.043	5	0.625	0.31	0.307	10.11	13.53	71940	72650	96240	97180	1.00	8.0	12.5	D-8584
10	1.030	5	0.621	0.31	0.303	9.79	12.56	69620	71230	89350	91410	1.10	8.0	13.8	E-9360

BEND TEST:

Sr # (1-5)	Sample bend through 180 degrees Satisfactorily without any crack
Sr # (6-10)	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Twenty Samples Received and Tested

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

Mirza Muhammad Shahzad,RE **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani
Nespak Lahore.(Const Of Multi-Level Grade Separation Flyover at Shahdra Morr Lahore)

Client Reference: 4537/03/MSA/09/74 **SOM Lab Ref:** 2510 (Page-1b/5)
Dated: 23-06-2023 **Dated:** 27-06-2023

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615
Gauge Length: 8 inch **Sample Type:** Deformed Bar (Mughal 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	0.668	4	0.500	0.20	0.196	6.80	8.21	74980	76510	90490	92340	1.00	8.0	12.5	A-980
2	0.661	4	0.497	0.20	0.194	6.57	8.26	72510	74750	91050	93870	1.00	8.0	12.5	D-8371
3	0.670	4	0.501	0.20	0.197	6.98	8.53	77000	78170	94090	95520	1.20	8.0	15.0	E-9053
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BEND TEST:

Sr # (1-3)	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

Mirza Muhammad Shahzad,RE **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani
Nespak Lahore.(Const Of Multi-Level Grade Separation Flyover at Shahdra Morr Lahore)

Client Reference: 4537/03/MSA/09/78 **SOM Lab Ref:** 2510 (Page-2/5)
Dated: 26-06-2023 **Dated:** 27-06-2023

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615
Gauge Length: 8 inch **Sample Type:** Deformed Bar (Mughal 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	2.644	8	0.995	0.79	0.777	25.76	33.61	71920	73120	93830	95400	1.40	8.0	17.5	B-4088
2	2.630	8	0.992	0.79	0.773	25.75	33.61	71890	73470	93830	95890	1.40	8.0	17.5	B-4088
3	2.640	8	0.994	0.79	0.776	25.45	33.05	71060	72340	92260	93930	1.50	8.0	18.8	B-4090
4	2.619	8	0.990	0.79	0.770	26.07	34.05	72770	74660	95050	97520	1.40	8.0	17.5	B-4090
5	2.630	8	0.992	0.79	0.773	25.08	33.13	70010	71550	92490	94520	1.40	8.0	17.5	E-9294
6	2.642	8	0.994	0.79	0.776	25.10	33.00	70070	71330	92120	93780	1.50	8.0	18.8	E-9294
7	1.479	6	0.744	0.44	0.435	14.22	18.55	71280	72100	92990	94060	1.20	8.0	15.0	B-4080
8	1.477	6	0.743	0.44	0.434	14.32	18.71	71790	72780	93760	95060	1.10	8.0	13.8	E-9284
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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
# 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

Note:-

Only Thirteen Samples Received and Tested

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

Mirza Muhammad Shahzad,RE **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani
Nespak Lahore.(Const Of Multi-Level Grade Separation Flyover at Shahdra Morr Lahore)

Client Reference: 4537/03/MSA/09/75 **SOM Lab Ref:** 2510 (Page-3/5)
Dated: 24-06-2023 **Dated:** 27-06-2023

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615
Gauge Length: 8 inch **Sample Type:** Deformed Bar (Mughal 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	2.651	8	0.996	0.79	0.779	25.48	33.54	71150	72150	93630	94950	1.60	8.0	20.0	A-1032
2	2.651	8	0.996	0.79	0.779	25.59	33.46	71430	72440	93400	94720	1.50	8.0	18.8	A-1032
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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

Note:-

Only Four Samples Received and Tested

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

Mirza Muhammad Shahzad,RE **Test Performed By:** **Dr. /Engr.** Asad Ali Gillani
Nespak Lahore.(Const Of Multi-Level Grade Separation Flyover at Shahdra Morr Lahore)

Client Reference: 4537/03/MSA/09/72 **SOM Lab Ref:** 2510 (Page-4/5)
Dated: 21-06-2023 **Dated:** 27-06-2023

Test: Tension Test & Bend Test **Test Specification:** ASTM-A-615
Gauge Length: 8 inch **Sample Type:** Deformed Bar (Mughal 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	2.635	8	0.993	0.79	0.774	25.05	33.00	69920	71370	92120	94020	1.50	8.0	18.8	E-9151
2	2.617	8	0.990	0.79	0.769	25.03	32.87	69870	71770	91780	94280	1.50	8.0	18.8	E-9151
3	1.499	6	0.749	0.44	0.441	14.85	19.44	74450	74280	97440	97220	1.20	8.0	15.0	E-9272
4	1.496	6	0.748	0.44	0.440	14.90	19.42	74700	74700	97340	97340	1.20	8.0	15.0	E-9272
5	1.056	5	0.628	0.31	0.310	9.99	13.27	71070	71070	94420	94420	1.30	8.0	16.3	B-4061
6	1.059	5	0.629	0.31	0.311	10.35	13.51	73610	73380	96090	95780	1.20	8.0	15.0	B-4061
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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
# 5	Sample bend through 180 degrees Satisfactorily without any crack

Note:-

Only Nine Samples Received and Tested

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

Hafiz Muhammad Husnain
Sr.Engr (Civil) KCP (W&S) PAEC Jauharabad.

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

Client Reference: KCP(W&S)-Sec-(COR)/2022
Dated: 22-06-2023

SOM Lab Ref: 2512 (Page-1/1)
Dated: 27-06-2023

Test: Tension Test & Bend Test
Test Specification: ASTM-A-615 Deformed
Gauge Length: 8 inch
Sample Type: 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^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	1.474	6	0.743	0.44	0.433	15.67	18.98	78530	79800	95140	96680	1.40	8.0	17.5	
2	1.475	6	0.743	0.44	0.433	15.70	19.03	78690	79960	95400	96940	1.40	8.0	17.5	
3	0.672	4	0.501	0.20	0.197	6.57	8.46	72510	73610	93300	94720	1.20	8.0	15.0	
4	0.671	4	0.501	0.20	0.197	6.78	8.61	74750	75890	94990	96430	1.20	8.0	15.0	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 4	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. /Engr.** S. Asad Ali Gillani

Mirza Muhammad Shahzad,RE

Nespak Lahore.(Const Of Multi-Level Grade Separation Flyover at Shahdra Morr Lahore)

Client Reference: 4537/03/MSA/09/77 **Dated:** 26-06-2023

SOM Lab Ref: CED/SOM/2510(Page-5/5) **Dated:** 27-06-2023

Test: Tension Test **Test Specification:** ASTM-F -1554

Sample Type: J- Bolt **Gauge Length:** 50 mm

S.No.	Diameter	Area	Yield Load	Ultimate Load	Yield Stress	Ultimate. Stress	Elongation	Gauge Length	%age Elongation	Reduction of Area (%)
	mm	mm^2	kN	kN	MPa	MPa	mm	mm	%	
1	25	491	227.5	364.0	463.34	741.34	9	50	18.0	42.0
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Note:-

Only One Sample Received and Tested

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

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

Baybani Construction (Pvt) Ltd.

Dharki.

(NG Fertilizer Project K-1531 F)(FFC Mirpur Mathelo)

Client Reference: Nil **Dated:** 26-06-2023

SOM Lab Ref: CED/SOM/2511(Page-1/1) **Dated:** 27-06-2023

Test: Tension Test **Test Specification:** ASTM-A -36

Sample Type: Plain Bar **Gauge Length:** 8 inches

S.No.	Weight	Diameter	Area	Yield Load	Ultimate Load	Yield Stress	Ultimate. Stress	Elongation	Gauge Length	%age Elongation	Reduction of Area (%)
	Lb/ft	inch	mm^2	kN	kN	Psi	Psi	inch	inch	%	
1	2.734	1”	0.803	203.7	324.7	57030	90910	1.80	8.0	22.5	40.4
2	2.738	1”	0.805	203.2	325.0	56750	90770	1.90	8.0	23.8	41.0
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Note:-

Only Two Samples Received and Tested

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