Irfan Siddique
Building Standards, Lahore

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

Client Reference: GT/LTR/191112-065 **Dated:** 12-11-2019
SOM Lab Ref: CED/SOM/1728(Page-1-2) **Dated:** 12-11-2019
Test: Tension Test **Test Specification:** ASTM-A 615
Sample Type: Tor Bar **Gauge Length:** 75, 62 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	1.440	16	15.26	201	183	81.70	107.50	406	447	535	588	17.5	75	23.3	
2	1.438	16	15.27	201	183	77.20	100.70	384	422	501	550	15.0	75	20.0	
3	1.406	16	15.10	201	179	82.00	108.20	408	458	538	605	15.0	75	20.0	
4	1.435	16	15.26	201	183	80.50	101.20	400	441	503	554	17.5	75	23.3	
5	1.419	16	15.17	201	181	83.20	104.00	414	461	517	576	15.0	75	20.0	
6	1.462	16	15.40	201	186	79.70	102.70	396	429	511	552	17.5	75	23.3	
7	0.924	12	12.24	113	118	43.70	59.00	386	372	522	502	15.0	63	24.0	
8	0.878	12	11.94	113	112	47.70	62.50	422	427	553	559	17.5	63	28.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

--	No Bend test performed

Note:-

Only Eight Samples Received and Tested

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

Irfan Siddique
Building Standards, Lahore

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

Client Reference: GT/LTR/191112-066 **Dated:** 12-11-2019
SOM Lab Ref: CED/SOM/1728(Page-2-2) **Dated:** 12-11-2019
Test: Tension Test **Test Specification:** ASTM-A 615
Sample Type: Deformed & Tor Bar **Gauge Length:** 200,75, 62 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	3.500	25	23.83	491	446	167.50	252.20	341	376	514	566	30.0	200	15.0	Deformed
2	3.996	25	25.46	491	509	173.50	260.20	353	341	530	512	30.0	200	15.0	Deformed
3	1.862	20	17.38	314	237	94.20	134.00	300	398	427	565	27.5	200	13.8	Deformed
4	2.196	20	18.87	314	280	96.50	132.70	307	345	422	475	25.0	100	25.0	Tor Bar
5	2.165	20	18.74	314	276	114.00	167.20	363	414	532	607	32.5	200	16.3	Deformed
6	1.829	16	17.23	201	233	81.20	128.70	404	349	640	553	32.5	200	16.3	Deformed
7	1.752	16	16.86	201	223	91.20	146.00	454	409	726	655	22.5	200	11.3	Deformed
8	0.835	12	11.64	113	106	47.50	66.50	420	447	588	626	25.0	200	12.5	Deformed
9	0.834	12	11.63	113	106	51.50	73.70	455	485	652	694	25.0	200	12.5	Deformed
10	0.927	12	12.26	113	118	47.20	61.50	417	400	544	521	12.5	63	20.0	Tor Bar

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

Abid Rauf
Resident Engineer, NESPAK (Pvt) Ltd. Lahore

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

Client Reference: 3872/RAP/103/AR/01/205
Dated: 05-11-2019

SOM Lab Ref: 1722(Page-1/1)
Dated: 12-11-2019

Test: Tension Test & Bend Test
Gauge Length: 8 inch

Test Specification: ASTM-A-615
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	1.482	6	0.745	0.44	0.436	15.70	20.49	78690	79410	102700	103640	1.20	8.0	15.0	
2	1.489	6	0.747	0.44	0.438	15.97	19.67	80070	80430	98610	99060	1.10	8.0	13.8	
3	0.694	4	0.510	0.20	0.204	8.77	10.40	96670	94780	114660	112410	1.00	8.0	12.5	
4	0.673	4	0.502	0.20	0.198	7.51	9.14	82850	83680	100830	101850	1.00	8.0	12.5	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

BEND TEST:

# 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
# 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

Syed Munir Hussain
Al-Mustafa Contractor (Pvt) Ltd Lahore

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

Client Reference: AMC/UETL/502-19
Dated: 12-11-2019

SOM Lab Ref: 1723(Page-1/1)
Dated: 12-11-2019

Test: Tension Test & Bend Test
Gauge Length: 8 inch

Test Specification: ASTM-A-615
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^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.706	8	1.006	0.79	0.795	30.38	37.84	84810	84270	105640	104970	1.00	8.0	12.5	
2	2.751	8	1.014	0.79	0.808	30.53	38.02	85230	83330	106150	103780	1.00	8.0	12.5	
3	1.542	6	0.759	0.44	0.453	17.58	21.66	88140	85610	108580	105460	1.20	8.0	15.0	
4	1.544	6	0.760	0.44	0.454	17.69	21.22	88650	85920	106380	103100	1.20	8.0	15.0	
5	1.020	5	0.618	0.31	0.300	9.58	12.90	68170	70450	91740	94800	1.30	8.0	16.3	
6	1.015	5	0.616	0.31	0.298	9.55	13.02	67960	70690	92610	96340	1.10	8.0	13.8	
7	0.681	4	0.505	0.20	0.200	6.88	10.50	75880	75880	115780	115780	1.40	8.0	17.5	
8	0.679	4	0.505	0.20	0.200	6.73	10.40	74190	74190	114660	114660	1.20	8.0	15.0	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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
# 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

Qasim Fareed
Sargodha

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

Client Reference: Nil
Dated: 12-11-2019

SOM Lab Ref: 1724(Page-1/1)
Dated: 12-11-2019

Test: Tension Test & Bend Test
Gauge Length: 8 inch

Test Specification: ASTM-A-615
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^2	in^2	Tons	Tons	psi	psi	psi	psi	in	in	%	
1	2.545	8	0.976	0.79	0.748	20.54	33.23	57350	60570	92770	97980	1.20	8.0	15.0	
2	2.516	8	0.970	0.79	0.739	20.56	33.03	57400	61360	92210	98570	1.30	8.0	16.3	
3	1.502	6	0.749	0.44	0.441	16.79	22.14	84160	83960	110980	110730	1.20	8.0	15.0	
4	1.501	6	0.749	0.44	0.441	16.72	22.09	83800	83610	110720	110470	1.10	8.0	13.8	
5	0.657	4	0.496	0.20	0.193	7.03	9.19	77560	80380	101390	105070	1.20	8.0	15.0	
6	0.662	4	0.498	0.20	0.195	7.10	9.28	78350	80360	102290	104920	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
# 4	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