Resident Engineer/Team Leader **Test Performed By:** **Dr. /Engr.** **Nauman Khurram**

Prime Engineering Consultancy, Kallurkot Brdge Project

Client Reference: **KK-DIK-BR-PJ//2019/022** **Dated:** **22-06-2019**

SOM Lab Ref: **CED/SOM/1007(Page-1/1)** **Dated:** **25-06-2019**

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

Sample Type: **Deformed Bar(Nomee Steel)** **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	1.558	16	15.88	201	198	96.00	136.50	477	485	679	690	35.0	200	17.5	
2	0.896	12	12.06	113	114	54.50	81.50	482	478	721	714	30.0	200	15.0	
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BEND TEST:

16MM	Sample bend through 180 degrees Satisfactorily without any crack
12MM	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

Engr M Naveed Sadiq
Resident Engineer, Orbit Housing, Lahore

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

Client Reference: **Nil**
Dated: **25-06-2019**

SOM Lab Ref: **1009(Page-1/2)**
Dated: **25-06-2019**

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	0.642	4	0.491	0.20	0.189	7.46	9.07	82290	87070	100050	105870	1.00	8.0	12.5	
2	0.672	4	0.501	0.20	0.197	6.47	8.00	71380	72470	88240	89590	1.10	8.0	13.8	
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BEND TEST:

# 4	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

Engr M Naveed Sadiq
Resident Engineer, Orbit Housing, Lahore

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

Client Reference: **Nil**
Dated: **25-06-2019**

SOM Lab Ref: **1009(Page-2/2)**
Dated: **25-06-2019**

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	2.683	8	1.002	0.79	0.788	27.88	35.78	77830	78030	99890	100140	1.30	8.0	16.3	
2	2.635	8	0.993	0.79	0.774	27.06	32.06	75560	77120	89500	91350	1.20	8.0	15.0	
3	1.620	6	0.778	0.44	0.476	17.35	22.09	86970	80390	110720	102350	1.10	8.0	13.8	
4	1.619	6	0.778	0.44	0.476	16.77	21.30	84050	77700	106790	98710	1.10	8.0	13.8	
5	0.676	4	0.503	0.20	0.199	6.52	8.53	71940	72310	94090	94560	1.10	8.0	13.8	
6	0.673	4	0.502	0.20	0.198	6.65	8.56	73290	74030	94420	95380	1.10	8.0	13.8	
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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

Major ® Pervez Akhtar **Test Performed By:** **Dr. /Engr.** **S. Asad Ali Gillani**

Ess Ess Associates Engineering Consultants, Rawalpindi

Client Reference: **nil** **SOM Lab Ref:** **1010(Page-1/1)**

Dated: **25-06-2019** **Dated:** **25-06-2019**

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	1.512	6	0.752	0.44	0.444	14.55	19.39	72910	72260	97180	96310	1.10	8.0	13.8	
2	1.515	6	0.753	0.44	0.445	14.34	19.57	71890	71090	98100	97000	1.20	8.0	15.0	
3	1.040	5	0.624	0.31	0.306	9.28	12.61	66000	66860	89710	90880	1.00	8.0	12.5	
4	1.051	5	0.627	0.31	0.309	10.09	13.35	71800	72030	95000	95310	1.10	8.0	13.8	
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BEND TEST:

# 6	Sample bend through 180 degrees Satisfactorily without any crack
# 5	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

Ch Jamil Ahmad
Chief Engineer, University of Okara

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

Client Reference: **Engg Cell/UO/389**
Dated: **19-06-2019**

SOM Lab Ref: **1011(Page-1/1)**
Dated: **25-06-2019**

Test: **Tension 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	0.663	4	0.498	0.20	0.195	7.10	8.99	78350	80360	99150	101690	0.70	8.0	8.8	
2	0.670	4	0.501	0.20	0.197	7.34	9.35	80940	82170	103080	104650	0.80	8.0	10.0	
3	0.668	4	0.500	0.20	0.196	4.79	7.08	52840	53910	78130	79720	1.30	8.0	16.3	
4	0.673	4	0.502	0.20	0.198	4.76	6.88	52500	53030	75880	76640	1.20	8.0	15.0	
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BEND TEST:

--	No Bend test performed

Note:-

Only Four Samples Received and Tested

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

Ch Abdul Ghafoor **Test Performed By:** **Dr. /Engr.** **Nauman Khurram**

Resident Engineer, PEPAC, W. W. C. Adjacent to Sundar Ind. Estate, District Kasur (Package-Q)

Client Reference: **RE/PEPAC/WWC/KSR/2019/82** **SOM Lab Ref:** **1012(Page-1/1)**

Dated: **17-06-2019** **Dated:** **25-06-2019**

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	1.467	6	0.741	0.44	0.431	13.20	18.57	66170	67550	93100	95040	1.00	8.0	12.5	
2	1.472	6	0.743	0.44	0.433	13.81	19.49	69240	70360	97690	99270	1.30	8.0	16.3	
3	1.036	5	0.622	0.31	0.304	10.45	13.76	74340	75800	97910	99840	1.00	8.0	12.5	
4	1.072	5	0.633	0.31	0.315	11.03	14.42	78470	77230	102620	100990	1.10	8.0	13.8	
5	0.629	4	0.485	0.20	0.185	5.93	7.61	65420	70730	83970	90780	1.40	8.0	17.5	
6	0.664	4	0.498	0.20	0.195	6.27	8.07	69130	70910	89030	91310	1.30	8.0	16.3	
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BEND TEST:

# 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 Nine Samples Received and Tested

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