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

EA Consulting (Pvt.) Ltd. Sukkur- Multan Motorway Project Section -III,

Client Reference: **CRE/EA/M.P-III/287-2019** **Dated:** **15-04-2019**

SOM Lab Ref: **CED/SOM/680 (Page-1/1)** **Dated:** **18-04-2019**

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

Sample Type: **Bolt (25mm)** **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	3.988	25	25.43	491	508	271.70	408.50	554	535	832	805	17.5	50	35.0	
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BEND TEST:

--	No Bend test performed

Note:-

Only One Sample Received and Tested

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

DGM Civil (Line-III) **Test Performed By:** **Dr. /Engr.** **Nauman Khurram**

MLCF Iskandarabad, Distt, Mianwali (Civil Works of 7300 TPD New Line-III, MLCFL)

Client Reference: **MLCFL/LINE-III/CIVIL/2019/17** **Dated:** **01-04-2019**

SOM Lab Ref: **CED/SOM/681(Page-1/2)** **Dated:** **18-04-2019**

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

Sample Type: **Deformed Bar(Ittefaq 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	1.560	16	15.92	201	199	102.00	135.00	507	513	671	679	25.0	200	12.5	
2	1.563	16	15.92	201	199	102.50	136.00	510	515	676	684	25.0	200	12.5	
3	0.907	12	12.13	113	116	53.00	79.70	469	459	705	690	30.0	200	15.0	
4	0.906	12	12.12	113	115	53.00	79.70	469	460	705	691	32.5	200	16.3	
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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 Six Samples Received and Tested

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

DGM Civil (Line-III) **Test Performed By:** **Dr. /Engr.** **Nauman Khurram**

MLCF Iskandarabad, Distt, Mianwali (Civil Works of 7300 TPD New Line-III, MLCFL)

Client Reference: **MLCFL/LINE-III/CIVIL/2019/17** **Dated:** **01-04-2019**

SOM Lab Ref: **CED/SOM/681(Page-2/2)** **Dated:** **18-04-2019**

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

Sample Type: **Deformed Bar(Bilal 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	1.568	16	15.96	201	200	100.50	127.00	500	503	632	635	32.5	200	16.3	
2	1.559	16	15.90	201	199	100.70	127.50	501	508	634	643	32.5	200	16.3	
3	0.833	12	11.62	113	106	61.00	74.50	539	575	659	703	22.5	200	11.3	
4	0.853	12	11.76	113	109	61.20	75.50	541	564	668	695	27.5	200	13.8	
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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 Six Samples Received and Tested

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

Abdul Ghafar
Project Manager Liberty Builders, Lahore

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

Client Reference: **CONC - 20190418**
Dated: **18-04-2019**

SOM Lab Ref: **678-679(Page-1/1)**
Dated: **18-04-2019**

Test: **Tension Test & Bend Test**
Test Specification: **ASTM-A-615 Deformed Bar(AF, 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	0.645	4	0.492	0.20	0.190	6.68	8.89	73630	77500	98020	103180	0.90	8.0	11.3	
2	0.657	4	0.496	0.20	0.193	7.05	8.58	77790	80610	94650	98080	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

Ali Ahmed **Test Performed By:** Dr. /Engr. M Yousaf

Zikria Construction Compant, Lahore

Client Reference: nil **SOM Lab Ref:** 682-783(Page-1/1)

Dated: 18-04-2019 **Dated:** 18-04-2019

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	2.585	8	0.984	0.79	0.760	27.57	35.37	76980	80020	98750	102650	1.30	8.0	16.3	
2	2.568	8	0.980	0.79	0.755	27.52	35.29	76840	80400	98520	103090	1.50	8.0	18.8	
3	1.469	6	0.742	0.44	0.432	14.63	19.22	73320	74680	96320	98100	1.50	8.0	18.8	
4	1.470	6	0.742	0.44	0.432	14.58	19.06	73070	74420	95550	97320	1.40	8.0	17.5	
5	0.595	4	0.472	0.20	0.175	5.81	8.28	64080	73230	91280	104320	1.20	8.0	15.0	
6	0.592	4	0.471	0.20	0.174	5.79	8.26	63850	73390	91050	104660	1.20	8.0	15.0	
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Witnessed By: Ghulam Murtaza

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

Eng. Shahzad Munir **Test Performed By:** **Dr. /Engr. M Yousaf**

Resident Engineer, G 3 Engineering Consultants (Pvt) Ltd. Lahore

Client Reference: **G3/224/RE-5** **SOM Lab Ref:** **684-(Page-1/1)**

Dated: **18-04-2019** **Dated:** **18-04-2019**

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	2.682	8	1.002	0.79	0.788	22.22	33.25	62040	62200	92830	93070	1.20	8.0	15.0	
2	2.661	8	0.998	0.79	0.782	21.02	30.91	58680	59280	86290	87170	1.30	8.0	16.3	
3	2.638	8	0.993	0.79	0.775	21.76	32.44	60760	61940	90550	92310	1.40	8.0	17.5	
4	2.677	8	1.001	0.79	0.787	22.32	34.00	62330	62560	94910	95270	1.10	8.0	13.8	
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Witnessed By: **Zain Ashfaq**

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

Abdullah Khadim
Resident Engineer, DAR Engineering

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

Client Reference: **DB-78/DAR/RE/ME/2019/0192**
Dated: **18-02-2019**

SOM Lab Ref: **685(Page-1/1)**
Dated: **18-02-2019**

Test: **Tension Test & Bend Test**
Test Specification: **ASTM-A-615 Deformed Bar(Kamran 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	1.465	6	0.741	0.44	0.431	12.79	17.81	64130	65470	89260	91130	1.40	8.0	17.5	P-773
2	1.462	6	0.740	0.44	0.430	12.46	17.33	62440	63890	86860	88880	1.30	8.0	16.3	P-773
3	0.656	4	0.496	0.20	0.193	6.22	8.84	68570	71060	97460	100990	1.40	8.0	17.5	A-07
4	0.668	4	0.500	0.20	0.196	6.29	8.99	69360	70770	99150	101170	1.00	8.0	12.5	A-07
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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