M. Imran Akhtar **Test Performed By:** **Dr. /Engr. Nauman Khurram**

Construction Manager, CM Engineering (Pvt) Ltd. Lahore(Site ID: 42561)

Client Reference: CME/Steel/CM Pak/327 **SOM Lab Ref:** 1015-

Dated: 18-05-2019 **Dated:** 26-06-2019

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

Guage Length: 200 mm **Sample Type:** M S 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)				
	kg/m	mm	mm	mm^2	mm^2	kN	kN	MPa	MPa	MPa	MPa	mm	mm	%	
1	2.257	20	19.15	314	288	128.70	193.50	410	447	616	672	27.5	200	13.8	
2	2.234	20	19.04	314	285	127.70	192.70	407	449	614	677	35.0	200	17.5	
3	1.104	12	13.38	113	141	72.50	91.20	642	516	807	649	40.0	200	20.0	
4	1.106	12	13.39	113	141	75.20	92.50	665	534	819	657	32.5	200	16.3	
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BEND TEST:

20mm	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

Faisal Mubarik Shabbir Khan(Retd.) **Test Performed By:** **Dr. /Engr. Nauman Khurram**

TBt, TI (M), Lieutenant Colonel, Additional Director Development, DHA Phaes-XI (Rehbar) Lahore

Client Reference: **700/3/Girls School/Ph-XI/Projs/1982** **SOM Lab Ref:** **1013(Page-1/1)**

Dated: **25-06-2019** **Dated:** **26-06-2019**

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

Gauge Length: **8 inch** **Sample Type:** **Deformed Bar (Ittefaq 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	2.779	8	1.020	0.79	0.817	22.63	34.81	63180	61090	97190	93970	1.20	8.0	15.0	
2	2.759	8	1.016	0.79	0.811	22.60	34.71	63090	61460	96900	94390	1.40	8.0	17.5	
3	1.521	6	0.754	0.44	0.447	13.05	18.91	65400	64380	94780	93300	1.50	8.0	18.8	
4	1.523	6	0.755	0.44	0.448	12.81	18.60	64230	63080	93250	91580	1.50	8.0	18.8	
5	0.665	4	0.498	0.20	0.195	6.09	9.14	67110	68830	100830	103420	1.00	8.0	12.5	
6	0.664	4	0.498	0.20	0.195	5.98	9.17	65990	67680	101170	103760	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

Sub Divisional Officer
Highway Sub Division Shahpur

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

Client Reference: **214/SP**
Dated: **13-06-2019**

SOM Lab Ref: **1014(Page-1/1)**
Dated: **26-06-2019**

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	1.471	6	0.742	0.44	0.432	13.76	19.34	68980	70260	96930	98720	1.30	8.0	16.3	
2	1.497	6	0.748	0.44	0.440	13.97	19.34	70000	70000	96930	96930	1.30	8.0	16.3	
3	0.640	4	0.489	0.20	0.188	5.81	7.85	64080	68170	86560	92080	1.40	8.0	17.5	
4	0.665	4	0.498	0.20	0.195	6.03	7.97	66550	68250	87910	90160	1.50	8.0	18.8	
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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

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

Junior Research Officer-I, Building Research Station, Lahore

Client Reference: **154-R/1447** **SOM Lab Ref:** **1016(Page-1/1)**

Dated: **03-06-2019** **Dated:** **26-06-2019**

Test: **Tension Test & Bend Test** **Test Specification:** **ASTM-BS-4449**

Gauge Length: **2.5, 4, 5 inch** **Sample Type:** **Deformed G-60 (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	2.599	8	0.986	0.79	0.764	27.68	35.09	77270	79890	97950	101290	1.10	5.0	22.0	
2	2.576	8	0.982	0.79	0.757	27.27	34.66	76130	79450	96760	100980	1.00	5.0	20.0	
3	1.461	6	0.739	0.44	0.429	14.19	18.81	71130	72950	94270	96690	0.80	4.0	20.0	
4	1.472	6	0.743	0.44	0.433	14.22	19.08	71280	72430	95650	97200	0.90	4.0	22.5	
5	0.657	4	0.496	0.20	0.193	6.93	8.69	76440	79210	95770	99250	0.50	2.5	20.0	
6	0.654	4	0.494	0.20	0.192	6.83	8.69	75320	78450	95770	99760	0.50	2.5	20.0	
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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

Maj Adnan khalid® **Test Performed By:** **Dr. /Engr.** **Nauman Khurram**

Dy Dir MTL, Infra Development Works, Sector - E, DHA Phase IX - (M/S Inland)

Client Reference: **408/241/E/Lab/621/57** **SOM Lab Ref:** **1017(Page-1/1)**

Dated: **26-06-2019** **Dated:** **26-06-2019**

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

Gauge Length: **8 inch** **Sample Type:** **Deformed Bar (City 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	2.589	8	0.984	0.79	0.761	23.01	36.51	64230	66680	101940	105820	1.40	8.0	17.5	
2	2.583	8	0.983	0.79	0.759	23.09	37.33	64460	67090	104210	108470	1.10	8.0	13.8	
3	1.471	6	0.742	0.44	0.432	14.73	19.69	73830	75200	98720	100540	1.10	8.0	13.8	
4	1.471	6	0.742	0.44	0.432	14.42	19.67	72300	73640	98610	100440	1.00	8.0	12.5	
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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

Maj Adnan khalid® **Test Performed By:** **Dr. /Engr.** **S. Asad Ali Gillani**

Dy Dir MTL, Const. of Mosque at Sector - D, DHA PH-VI - (M/S Warraich Constr)

Client Reference: **408/241/E/Lab/620/035** **SOM Lab Ref:** **1018(Page-1/1)**

Dated: **26-06-2019** **Dated:** **26-06-2019**

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

Gauge Length: **8 inch** **Sample Type:** **Deformed Bar (Saeed Kasur)**

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	2.700	8	1.005	0.79	0.793	22.31	36.54	62300	62060	102020	101640	1.30	8.0	16.3	
2	2.593	8	0.985	0.79	0.762	22.22	35.55	62040	64320	99230	102880	1.40	8.0	17.5	
3	1.491	6	0.747	0.44	0.438	13.05	21.58	65400	65700	108170	108660	1.20	8.0	15.0	
4	1.499	6	0.749	0.44	0.441	13.15	21.78	65910	65770	109190	108940	1.10	8.0	13.8	
5	0.663	4	0.498	0.20	0.195	6.09	9.45	67110	68830	104200	106880	1.10	8.0	13.8	
6	0.656	4	0.496	0.20	0.193	6.01	9.50	66320	68730	104770	108570	1.00	8.0	12.5	
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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