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Department of Materials and Metallurgical Engineering (MME)
Bangladesh University of Engineering and Technology (BUET)

Client: Mr. Md. Golam Mowla
QC Manager
Shahriar Steel Mills Limited
Konapara, Jatrabari
Dhaka 1362

Client's Reference: Nil; Date 05/11/2019
BRTC Reference: 1101-99456/MME/2019-20; Date 05/11/2019
Sample Condition: Not Sealed

Date: 24 November 2019
MME No: **0473(10)**/2019-20

TEST OF DEFORMED M.S. REBAR (ASTM A615M-16)

Frog Mark/ Description	Sample No.	Bar Designation / Nominal Dia	Actual Dia	Unit Weight	Average Unit Weight	Yield Load	Yield Strength	Average Yield Strength	Tensile Load	Tensile Strength	Average Tensile Strength	TS/YS Ratio	Elongation (GL 200 mm)	Average Elongation	Bend Test (Separate Samples)
		mm	mm	kg/m	kg/m	kN	MPa	MPa (psi)	kN	MPa	MPa (psi)		%	%	Remark
SSRM RB 400 16	1	16	16.08	1.594	**1.592**	84.20	419	**424 (61500)**	132.40	659	**660 (95500)**	1.57	17	**17**	Satisfactory
	2	16	16.07	1.592		86.00	428		132.74	660		1.54	18		Satisfactory
	3	16	16.06	1.590		85.50	425		132.80	660		1.55	17		Satisfactory

* TS/YS ratio is not required as per ASTM A615M.
* Strength values are calculated based on nominal area.

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Weight Requirements for Steel Rebar (As Per ASTM A615/A615M—16 Table A1.1)

Bar Designation Number/Nominal Dia., mm	10	12	16	20	25	28	32	36	40	50	60
Nominal Weight, kg/m	0.617	0.888	1.578	2.466	3.853	4.834	6.313	7.990	9.865	15.410	22.200

* Measured unit weight shall not be less than 94% of the nominal weight.

Minimum Tensile Requirements for Steel Rebar (As Per ASTM A615/A615M—16 Table A1.2)

ASTM A615			ASTM A615M			Minimum Elongation in 8 in. (200 mm) Gauge Length, per cent						
Grade	Yield Strength	Tensile Strength	Grade	Yield Strength	Tensile Strength	Grade	Bar Designation Number					
	psi (MPa)	psi (MPa)		MPa (psi)	MPa (psi)	ASTM A615 (A615M)	10	12, 16	20	25	28, 32, 36	40, 50, 60
40	40,000 (280)	60,000 (420)	**280**	280 (40,000)	420 (60,000)	**40 (280)**	11	12	12	-	-	-
60	60,000 (420)	90,000 (620)	**420**	420 (60,000)	620 (90,000)	**60 (420)**	9	9	9	8	7	7
75	75,000 (520)	100,000 (690)	**520**	520 (75,000)	690 (100,000)	**75 (520)**	7	7	7	7	6	6
80	80,000 (550)	105,000 (725)	**550**	550 (80,000)	725 (105,000)	**80 (550)**	7	7	7	7	6	6
100	100,000 (690)	115,000 (790)	**690**	690 (100,000)	790 (115,000)	**100 (690)**	7	7	7	7	6	6

Fahmida 24.11.19
Dr. Fahmida Gulshan
Professor and Head

Please note: *The client supplied the sample(s) and the result given herewith corresponds to the sample(s) tested only. Department of MME, BUET takes no responsibility regarding the misidentification, if any, of the sample(s).*

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