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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 05/02/2020  
BRTC Reference: 1102-06955/MME/2019-20; Date 05/02/2020  
Sample Condition: Not Sealed

Date: 16 February 2020  
MME No: 0838(06)/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 (G.L. 200 mm)	Average Elongation	Bend Test (Separate Samples)	Remark
SSRM RB 400 32	1	32	32.1	6.307	6.302	381.34	474	466 (68000)	514.33	639	637 (92500)	1.37	12	16	Satisfactory	Satisfactory
	2	32	32.1	6.308		373.83	465		515.75	641			18			
	3	32	32.1	6.289		369.70	459		508.21	632			18			

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

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)

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

Dr. Fahmida Gulshan  
Professor and Head

*Fahmida*  
16.02.2020

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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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Department of MME, Old Academic Building, 1<sup>st</sup> Floor, BUET, Dhaka 1000

+880 1741 362 504

+880 2 5516 7228-57 Ext 7629

brcmme@mme.buet.ac.bd