

Bureau of Research, Testing and Consultation (BRTC)  
 To check authenticity of this report, please scan the QR Code.  
 Alternatively, please visit <http://brtc.mme.buet.ac.bd>.

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(04)/2019-20

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

Frog Mark/ Description	Sample No.	Bar	Actual	Unit	Average	Yield	Yield	Average Yield	Tensile	Tensile	Average	TS/YS	Elongation	Average	Bend Test
		Designation /Nominal Dia	Dia	Weight	Unit Weight										
SSRM RB 400 20	1	20	19.9	2.431	2.430	139.59	444	444	200.32	637	635	1.43	16	16	Satisfactory
	2	20	20.0	2.433		139.31	443	444	199.00	633			16		Satisfactory
	3	20	19.9	2.425		140.17	446	(64500)	199.08	633			15		Satisfactory

\* 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	Yield Strength	Tensile Strength	ASTM A615M-16 Table A1.2)		Grade	Minimum Elongation in 8 in. (200 mm) Gauge Length, per cent
			Grade	Tensile Strength		
40	40,000 (280)	60,000 (420)	280 (40,000)	420 (60,000)	ASTM A615 (A615M)	10
60	60,000 (420)	90,000 (620)	420 (60,000)	620 (90,000)	40 (280)	11
75	75,000 (520)	100,000 (690)	520 (75,000)	690 (100,000)	60 (420)	9
80	80,000 (550)	105,000 (725)	550 (80,000)	725 (105,000)	75 (520)	7
100	100,000 (690)	115,000 (790)	690 (100,000)	790 (115,000)	80 (550)	7

*Fahmida*  
 16.02.2020  
 Dr. Fahmida Gulshan  
 Professor and Head



6y/wk/rnuctx

006050

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 brc@mme@buet.ac.bd

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).

Page