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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(11)/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												
SSRM RB 400 12	1	12	12.08	0.899	0.893	49.27	436	440 (64000)	80.00	707	716 (104000)	1.62	15	15	Satisfactory
	2	12	12.02	0.890		49.70	439		80.34	710		1.62	14		Satisfactory
	3	12	12.02	0.890		50.29	445		82.64	731		1.64	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	ASTM A615			ASTM A615M			Minimum Elongation in 8 in. (200 mm) Gauge Length, per cent							
	Yield Strength psi (MPa)	Tensile Strength psi (MPa)	Grade MPa (psi)	Yield Strength psi (MPa)	Tensile Strength psi (MPa)	Grade MPa (psi)	Bar Designation Number							
40	40,000 (280)	60,000 (420)	280 (40,000)	420 (60,000)	420 (60,000)	10	12, 16	20	25	28, 32, 36	40, 50, 60			
60	60,000 (420)	90,000 (620)	420 (60,000)	620 (90,000)	620 (90,000)	11	12	12	-	-	-			
75	75,000 (520)	100,000 (690)	520 (75,000)	690 (100,000)	690 (100,000)	9	9	9	8	7	7			
80	80,000 (550)	105,000 (725)	550 (80,000)	725 (105,000)	725 (105,000)	7	7	7	7	6	6			
100	100,000 (690)	115,000 (790)	690 (100,000)	790 (115,000)	790 (115,000)	7	7	7	7	6	6			

*Fahmida*  
 Dr. Fahmida Gulshan  
 Professor and Head  
 29.11.19



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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 🌐 brtc.mme@buet.ac.bd