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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 04/03/2020  
 BRTC Reference: 1102-09488/MME/2019-20; Date 04/03/2020  
 Sample Condition: Not Sealed

Date: 09 March 2020  
 MME No: 0956(06)/2019-20

TEST OF DEFORMED M.S. REBAR

Frog Mark/ Description	Sample No.	Bar	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)
		Designation / Nominal Dia													
SSRM RB 400 32	1	32	31.95	6.294	6.292	379.06	471	470 (68000)	519.14	645	643 (93500)	1.37	18	17	Satisfactory
		32	31.95	6.293		379.70	472		516.94	643		1.36	17		Satisfactory
	2	32	31.95	6.293	6.292	376.70	468	470 (68000)	515.75	641	643 (93500)	1.37	17	17	Satisfactory
		32	31.94	6.289		376.70	468		515.75	641		1.37	17		Satisfactory
	3	32	31.94	6.289	6.292	376.70	468	470 (68000)	515.75	641	643 (93500)	1.37	17	17	Satisfactory
		32	31.94	6.289		376.70	468		515.75	641		1.37	17		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	0.617	0.888	1.578	2.466	3.853	4.834	6.313	7.990	9.865	16.410	22.200
Nominal Weight, kg/m	10	12	16	20	25	28	32	36	40	50	60	

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

Grade	Yield Strength	Tensile Strength	Grade	Yield Strength	Tensile Strength	Grade	Yield Strength	Tensile Strength
40	40,000 (290)	60,000 (420)	420	420 (60,000)	620 (90,000)	40 (280)	11	12
60	60,000 (420)	90,000 (620)	520	520 (75,000)	690 (100,000)	60 (420)	9	9
75	75,000 (520)	100,000 (690)	550	550 (80,000)	725 (105,000)	75 (520)	7	7
80	80,000 (550)	105,000 (725)	690	690 (100,000)	790 (115,000)	80 (550)	7	7
100	100,000 (690)	115,000 (790)				100 (690)	7	7

Minimum Elongation in 8 in. (200 mm) Gauge Length, per cent

Grade	ASTM A615	ASTM A615M	Grade	ASTM A615	ASTM A615M	Grade	ASTM A615	ASTM A615M
40	10	12	40	10	12	40	10	12
60	9	9	60	9	9	60	9	9
75	7	7	75	7	7	75	7	7
80	7	7	80	7	7	80	7	7
100	7	7	100	7	7	100	7	7

Dr. Fahmida Gulshan  
 Professor and Head

Falwidia 09.03.2020



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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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