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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
 Shabriar 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(02)/2019-20

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

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	Average	Bend Test (Separate Samples)
		Designation / Nominal Dia											mm	kg/m	
SSRM RB 400 12	1	12	11.9	0.872	0.872	50.62	447	451	70.48	623	622	1.38	16	17	Satisfactory
	2	12	11.9	0.873		51.33	454	(65500)	70.66	625	(90500)		18		Satisfactory
	3	12	12.0	0.873		51.05	451	(65500)	70.00	619	(90500)		16		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	Grade	Yield Strength	Tensile Strength	Minimum Elongation in 8 in. (200 mm) Gauge Length, per cent										
						ASTM A615					ASTM A615M					Bar Designation Number
40	40,000 (280)	60,000 (420)	280	280 (40,000)	420 (60,000)	10	12	12	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	8	7	7	7	7	7	7
75	75,000 (520)	100,000 (690)	520	520 (75,000)	690 (100,000)	7	7	7	7	7	6	6	6	6	6	6
80	80,000 (550)	105,000 (725)	550	550 (80,000)	725 (105,000)	7	7	7	7	7	6	6	6	6	6	6
100	100,000 (690)	115,000 (790)	690	690 (100,000)	790 (115,000)	7	7	7	7	7	6	6	6	6	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).

006048

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