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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
 Shahrar 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(01)/2019-20

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

Frog Mark/ Description	Sample No.	Bar	Actual	Unit	Average	Yield	Yield	Average	Tensile	Tensile	Average	TS/YS Ratio	Elongation	Average	Bend Test (Separate Samples)
		Designation / Nominal Dia	Dia	Weight	Unit Weight	Yield Load	Strength	Yield Strength	Yield Strength	Load	Strength		Tensile Strength	%	
SSRM RB 400 10	1	10	9.9	0.598	33.89	431	432 (63000)	50.24	639	633 (92000)	1.47	14	15	Satisfactory	
	2	10	9.9	0.597	33.73	429		49.77	633			15		Satisfactory	
	3	10	9.9	0.596	34.12	434	49.12	625	14	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	Yield Strength MPa (psi)	Tensile Strength MPa (psi)	Grade	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	8	7			
75	75,000 (520)	100,000 (690)	520	520 (75,000)	690 (100,000)	9	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).