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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(08)/2019-20

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

Frog Mark/ Description	Sample No.	Bar Designation / Nominal Dia	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 (GL 200 mm)	Average Elongation	Bend Test (Separate Samples)	
																mm
SSRM RB 400 25	1	25	24.88	3.815	3.822	214.00	436	434 (63000)	331.44	675	672 (97500)	1.55	20	20	Satisfactory	
	2	25	24.90	3.824		212.40	433		329.36	671			1.55		19	Satisfactory
	3	25	24.92	3.828		213.00	434		329.36	671			1.55		21	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 (A615M)	10	12, 16	20	25	28, 32, 36	40, 50, 60	Bar Designation Number					
40	40,000 (280)	60,000 (420)	280	280 (40,000)	420 (60,000)	40 (280)	11	12	12	-	-	-						
60	60,000 (420)	90,000 (620)	420	420 (60,000)	620 (90,000)	60 (420)	9	9	9	8	7	7						
75	75,000 (520)	100,000 (690)	520	520 (75,000)	690 (100,000)	75 (520)	7	7	7	7	6	6						
80	80,000 (550)	105,000 (725)	550	550 (80,000)	725 (105,000)	80 (550)	7	7	7	7	6	6						
100	100,000 (690)	115,000 (790)	690	690 (100,000)	790 (115,000)	100 (690)	7	7	7	7	6	6						

Fahmida
24.11.19
Dr. Fahmida Gulshan
Professor and Head



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