

Client: Mr. Md. Golam Mowla
QC Manager
Shahriar 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(07)/2019-20

TEST OF DEFORMED M.S. REBAR (BDS ISO 6935-2:2016)

Frog Mark/ Description	Sample No.	Bar	Actual	Weight/	Average	Yield	Yield	Average	Tensile	Tensile	Average	R _m /R _{el}	Elongation	Average	Elongation	Bend Test (Separate Samples)	Re-Bend Test (Separate Samples)
		Designation / Nominal Dia	Diameter	Length/ Length	Weight/ Length	Load	Strength, R _{el}	Yield Strength	Tensile Load	Strength, R _m	Tensile Strength		(GL 5D)	Elongation	at Maximum Force, A _{gt}		
SSRM TMT 500W 8	1	8	7.88	0.383		26.10	519		30.67	610		1.18	29		11	Satisfactory	Satisfactory
	2	8	7.90	0.385	0.384	29.32	583	552 (80000)	33.00	657	637 (92500)	1.13	22	26	8	Satisfactory	Satisfactory
	3	8	7.89	0.384		27.92	555		32.30	643		1.16	27		9	Satisfactory	Satisfactory

* Strength values are calculated based on nominal area.

Weight Requirements and Nominal Cross-Sectional Area for Steel Rebar (As Per BDS ISO 6935-2:2016 Table 2)

Bar Designation Number/Nominal Bar Diameter, mm	6	8	10	12	16	20	25	28	32	40
Nominal Mass per Unit Length, kg/m	0.222	0.395	0.617	0.888	1.58	2.47	3.85	4.84	6.31	9.85
Permissible Variation of Nominal Mass per Unit Length, %	±8	±8	±6	±6	±5	±5	±4	±4	±4	±4
Nominal Cross-Sectional Area, mm ²	28.3	50.3	78.5	113	201	314	491	616	804	1257

Minimum Tensile Requirements for Steel Rebar (As Per BDS ISO 6935-2:2016 Table 6)

Steel Grade	Upper Yield Strength		R _u /R _{el}		Ductility Properties	
	Minimum MPa	Maximum	Minimum	Maximum	A %	A _{gt} %
B400C-R / B400C-WR	400	-	1.15	-	14	7
B500C-R / B500C-WR	500	-	1.15	-	17	7
B400D-WR	400	-	1.3 x R _u (min.)	-	16	8
B420D-WR	420	-	1.25	-	16	8
B500D-WR	500	-	1.25	-	13	8



Fahmida 16.02.2020

Dr. Fahmida Gulshan
Professor and Head

Please note: The client supplied the sample and the result given herewith corresponds to the sample tested only. The Department of Materials and Metallurgical Engineering of BUET takes no responsibility regarding the misidentification, if any, of the sample.