

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(09)/2019-20

TEST OF DEFORMED M.S. REBAR

Frog Mark/ Description	Sample No.	Bar	Actual	Weight/ Length	Average	Yield	Yield	Average	Tensile	Tensile	Average	R _m /R _{eL}	Elongation	Average	Elongation	Bend Test	Re-Bend Test
		Designation / Nominal Dia	Diameter	Length	Weight/ Length	Load	Strength, R _{eL}	Yield Strength	Load	Strength, R _m	Tensile Strength	R _m /R _{eL}	(G.L. 5D)	Elongation	at Maximum Force, A _e	(Separate Samples)	(Separate Samples)
SSRM TMT 500W 12	1	12	11.91	0.874	0.874	57.65	510	517 (75000)	71.82	635	635 (92000)	1.25	21	19	9	Satisfactory	Satisfactory
		12	11.93	0.877		59.00	522		72.80	644		1.23	18		6	Satisfactory	Satisfactory
	2	12	11.89	0.872	0.872	58.57	518	517 (75000)	70.84	626	635 (92000)	1.21	18	5	Satisfactory	Satisfactory	
		12	11.89	0.872		58.57	518		70.84	626		1.21	18		5	Satisfactory	Satisfactory
	3	12	11.89	0.872	0.872	58.57	518	517 (75000)	70.84	626	635 (92000)	1.21	18	5	Satisfactory	Satisfactory	
		12	11.89	0.872		58.57	518		70.84	626		1.21	18		5	Satisfactory	Satisfactory

* Strength values are calculated based on nominal area.

Weight Requirements and Nominal Cross-Sectional Area for Steel Rebar (As Per BS 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	0.868	1.58	2.47	3.85	4.84	6.31	9.86
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 BS ISO 6935-2:2016 Table 6)

Steel Grade	Upper Yield Strength		R _L /R _m		Ductility Properties	
	R _m MPa	Minimum	Minimum	A ₁ %	A ₂ %	Minimum
B400C-R / B400CVR	400	400	1.15	14	7	
B500C-R / B500CVR	500	500	1.25	17	8	
B400DVR	400	400	1.3 x R _m (min.)	16		
B500DVR	500	500	1.3	13		



Fahmida
09.03.2020

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.