

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(07)/2019-20

TEST OF DEFORMED M.S. REBAR

Frog Mark/ Description	Sample No.	Bar	Actual	Weight/	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		(G.L. 5D)	Elongation	at Maximum Force, A _{gt}	(Separate Samples)	(Separate Samples)	
SSRM TMT 500W 8	1	8	7.86	0.381	26.75	532	540 (78500)	31.51	627	632 (91500)	1.18	24	5	Satisfactory	Satisfactory			
	2	8	7.81	0.376	26.50	527	540 (78500)	31.31	623	632 (91500)	1.18	17	4	Satisfactory	Satisfactory			
	3	8	7.84	0.379	28.19	561	540 (78500)	32.46	646	632 (91500)	1.15	19	4	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	9.86
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 BDS ISO 6935-2:2016 Table 6)

Steel Grade	Upper Yield Strength		R _m /R _{eL}		Ductility Properties	
	Minimum	Maximum	Minimum	Maximum	A _{gt}	A _{gt}
S400C-E / S400C-WR	400	-	1.15	-	14	7
S500C-E / S500C-WR	500	-	1.25	-	17	8
S400DWR	400	-	1.25	-	16	8
S420DWR	420	1.3 * R _{eL} (min.)	1.25	-	16	8
S500DWR	500	-	1.25	-	13	8

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.

Falwida 09.03.2020

Dr. Fahmida Gulshan
 Professor and Head

