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STRENGTH OF MATERIALS LABORATORY

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

Sent by: Engr. Md. Masudul Karim, General Manager (GM Plant)

Shahriar Steel Mills Ltd., Konapara, Jatrabari, Dhaka

BRTC No.: 1102-80237/CE/22-23; Dt. 8/1/2023

Ref.: Letter, Dt. 8/1/2023

Date of Test: 9/1/2023

ENR
Bureau of Research
Testing & Consulting

700

Samples were received in UNSEALED condition.

[illegible]

Conversion factor: 1.0 MPa = 1.0 N/mm² = 145 psi. Strengths are based on nominal area

BOS ISO 6933-2:2016 Weight Requirements, Nominal Area etc. (Table 2)													
Nominal bar dia, mm	6	8	10	12	14	16	20	22*	25	28	32	40	50
Nominal cross sectional area, sq.mm	28.3	50.3	78.5	113	154	201	314	360	491	616	804	1257	1964
Nominal mass per unit length	0.222	0.395	0.616	0.887	1.21	1.58	2.46	2.98	3.85	4.84	6.31	9.87	15.42
Permissible deviation, %	±8	±8	±6	±6	±5	±5	±5	±5	±4	±4	±4	±4	±4

Actual diameter of bars are shown for informative purpose only, it is not a requirement of BDS ISO 6935-2:2016. Actual diameter is the diameter of a perfectly round plain bar having same mass per unit length.

BDS ISO 6935-2 Tensile Requirements for Common Steel Grades

Steel Grade	Yield Strength, R_{eH} , MPa		Ductility Properties		
	Min.	Max.	R_m/R_{eH} min.	Elongation, % (min.) Total	At R_{mH}
B400C-R	400	--	1.15	14	7
B400CWR	400	--	1.15	14	7
B500C-R	500	--	1.15	14	7
B500CWR	500	--	1.15	14	7
B500C-R	600	--	1.15	10	7
B450CWR	450	1.25 R_{eH} (min.)	1.15	--	7.5
B400DWR	400	1.3 R_{eH} (min.)	1.25	17	8
B420DWR	420	1.3 R_{eH} (min.)	1.25	16	8
B500DWR	500	1.3 R_{eH} (min.)	1.25	16	8

Countersigned by:

Prof. Dr. A. B. M. Badruzzaman, Test-in-Charge

Dept. of Civil Engng., BUET



16 January 2023

Test performed by:

Dr. Munaz Ahmed Noor

Professor, Dept. of Civil Engng., BUET

Important Note: Samples as supplied to us have been tested. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that the samples are sent in a secure and sealed cover/package/container under the signature of a competent authority. In order to avoid fraudulent fabrication of test results, this report has been printed on a security paper. It is also recommended that the test results be collected by a duly authorized person.

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	Min.	Max.	R_{m}/R_{eH} min.	Elongation, % (min.)	$A_5 R_{m}$
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B400CWR	400	--	1.15	14	7
B500C-R	500	--	1.15	14	7
B500CWR	500	--	1.15	14	7
B600C-R	600	--	1.15	10	7
B450CWR	450	1.25 R_{eH} (min.)	1.15	--	7.5
B400DWR	400	1.3 R_{eH} (min.)	1.25	17	8
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