

1 of

BRTC No.: 1102-82731/CE/22-23; Dt. 5/2/2023
Ref.: Letter, Dt. 5/2/2023
Date of Test: 6/2/2023

[illegible]

Conversion factor: $1.0 \text{ MPa} = 1.0 \text{ N/mm}^2 = 145 \text{ psi}$. Strengths are based on nominal area

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.

Steel Grade	Yield Strength, R_{eH} , MPa		Ductility Properties	
	Min.	Max.	R_m/R_{eH} min.	Total Elongation, % (min.)
B400C-R	400	--	1.15	14
B400CWR	400	--	1.15	14
B500C-R	500	--	1.15	14
B500CWR	500	--	1.15	14
B600C-R	600	--	1.15	10
B450CWR	450	1.25 R_{eH} (min.)	1.15	--
B400DWR	400	1.3 R_{eH} (min.)	1.25	17
B420DWR	420	1.3 R_{eH} (min.)	1.25	16
B500DWR	500	1.3 R_{eH} (min.)	1.25	13

Dept. of Civil Engg., BUET

Professor, Dept. of Civil Engg., BUET

07/02/2023

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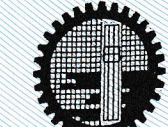


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Important Note: Samples as supplied to us have been tested. BRTC does not have any responsibility as to the representative character of the samples required to be tested. It is recommended that the samples are sent in a secure and sealed cover/packet/container 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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BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)
DEPARTMENT OF CIVIL ENGINEERING
STRENGTH OF MATERIALS LABORATORY

Mobile: 01819557964; PABX: (8802) - 55167100, 55167228-57 Ext. 7226, Info: <http://brc.ce.buet.ac.bd/#home>, Report verification: <http://verify.ce.buet.ac.bd>

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

Engr. Md. Maksudul Karim (MME BUET), General Manager
Shariat Steel Mills Ltd, Konapara, Jatrabari, Dhaka.

BRTC No.: 1102-82731/CE/22-23; Dt. 5/2/2023

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Samples were received in UNSEALED condition.

Sl. No.	Frog Mark / Identification	Nominal dia. mm	Actual dia. mm	Mass Per Unit Length kg/m	Average Mass Per Unit Length kg/m	Yield or Proof Load kN	Yield or Proof Strength R_{eH} MPa	Average Yield Strength, R_{eH} MPa	Tensile Load kN	Tensile Strength R_m MPa	Average Tensile Strength, R_m MPa	R_m/R_{eH}	Total Elongation (%) (G length = 50)	Average Total Elongation (%)	Bend Test (Separate samples)	Rebend Test (Separate samples)
1	SSRM B500 CWR	16	15.9	1.554	1.554	116	575	580	136	675	680	1.17	23	23	Satisfactory	Satisfactory
2	SSRM B500 CWR	16	15.8	1.547	1.551	118	585	580	138	685	680	1.17	21	23	Satisfactory	Satisfactory
3	SSRM B500 CWR	16	15.9	1.551	1.551	118	585	580	138	685	680	1.17	25	23	Satisfactory	Satisfactory
4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).

Nominal bar dia. mm	Nominal Area etc. (Table 2)									
	6	8	10	12	14	16	20	22*	25	28
nominal cross sectional area, sq. mm	28.3	50.3	78.5	113	154	201	314	380	491	616
nominal mass per length	0.222	0.395	0.616	0.887	1.21	1.58	2.46	2.98	3.85	4.84
Permissible deviation, %	+8	+8	+6	+6	+5	+5	+5	+5	+4	+4

mm dia. bar is not covered in BDS ISO 6935-2:2016. Its properties are derived following the principle used for other bar sizes.

nominal diameter of bars are shown for informative purpose only. It is not a requirement of BDS ISO 6935-2:2016.

nominal diameter is the diameter of a perfectly round plain bar having same mass per unit length.

Steel Grade	Yield Strength, R_{eH} MPa		Ductility Properties	
	Min.	Max.	R_m/R_{eH} min.	Elongation, % (min.)
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500C-R	500	--	1.15	14
500CWR	500	--	1.15	14
600C-R	600	--	1.15	10
150CWR	450	1.25 R_{eH} (min.)	1.15	--
400DWR	400	1.3 R_{eH} (min.)	1.25	17
420DWR	420	1.3 R_{eH} (min.)	1.25	16
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Countersigned by:
Prof. Dr. Hasib Mohammed Ahsan, Test-in-Charge
Dept. of Civil Engg., BUET

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07/02/2023

07 February 2023

Test performed by:
Dr. Md. Shafiqul Bari
Professor, Dept. of Civil Engg., BUET



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