

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



#### STRENGTH OF MATERIALS LABORATORY

TEST OF DEFORMED M.S. BARS [BDS ISO 6935-2:2016]

Sent by: Engr. Md. Maksudul Karim, General Manager (Plant)
Shahriar Steel Mills Ltd., Jatrabari, Dhaka.

Project: Shahriar Steel Mills Ltd.

Samples were received in UNSEALED condition.

Ref.: Letter; Dt. 7/5/2023 Date of Test: 9/5/2023

BRTC No.: 1102-90360/CE/22-23; Dt. 8/5/2023

N B	Ē	Ē			Ē		Ē			Ē						Ē					
Nominal bar dia., mm		-		i				i				1	ယ	2	-				No.	ফ	111111111111111111111111111111111111111
Weight Requirements, Nominal		-			-1	I		T.		-	1		SSRM B420 DWR	SSRM B420 DWR	SSRM B420 DWR				Identification	Frog Mark /	
Area etc. (Table 2).  8   10   12   14	1	1	•		•		•		•	•		1	10	3	10	mm			dia.	Nominal	
16 2	-	1	ı	1	-	1				-			9.9	9.9	9.9	mm			dia.	l Actual	
16 20 22* 25 28 32 40 50		1	1						4			1	0.605	0.600	0.605	kg/m	Length	Un	Per	al Mass	
25 28													)5		)5					7777	
32 40					1					red red red				0.603		kg/m	Length	Unit	Mass Per	Average	
50						1		Shall and less					34.3	35.2	35.6	ΚN	Y Y	Load	Proof	Yield or	
Conver													434	445	451	MPa	Ref	Strength	Proof	Yield or	
Conversion factor: 1.					•									443		MPa	Ren	Strength,	Yield	Average	
0  MPa = 1.0					1	-	1						47.5	49.7	50.1	kN			Load	Tensile	
N/mm <sup>2</sup> = 149		•	•			(C) - 11   12   12   12   12   12   12   12					9	•	600	630	635	MPa	Rm		Strength	Tensile	
5 psi. Strengt		•			•			•						620		MPa	λο 3	Strength,	Tensile	Average	
hs are base								•			•			1.40						R <sub>m</sub> /R <sub>eH</sub>	
1.0 MPa = 1.0 N/mm <sup>2</sup> = 145 psi. Strengths are based on nominal area.								•	•	•		•	32	30	28	= 5d)	(G.length	(%)	Elongation	Total	
l area.					•			•						30			(%)	Elongation	Total	Average	
	-	•		•					•	•			Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend	
											•	•	•	1					Tes	Rebe	

*	E	7	-	7
22mm dia baris no	init length	Nominal mass per	Nominal cross sectional area, sq.mm	Vominal bar dia., mm
*22mm dia bar is not covered in BDS ISO 6935-2-2016. Its properties are derived following the principle used	Permissible deviation; %	Nominal, kg/m	tional area, sq.mm	ā
5-0-201	±8	0.222	28.3	6
6 Ifs n	±8	0.395	28.3 50.3	8
Coperti	±6	0.616	78.5	10
es are	±6	288.0	113	12
Derive	±5	121	154	14
5	±5	1.58	201	16
Mino.	±5	2.46	314	20
henri	±5	2.98	380	22*
ncinla	±4	3.85	491	25
Deed	±4	2.46   2.98   3.85   4.84   6.31   9.87   15.42	616	28
or of	±4	6.31	804	32
for other har	±4	9.87	1257	40
294 3	±4 ±4	15.42	1964	50

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

Steel	Yield S	Steel Yield Strength, Ret, MPa Ductiliy Properti	Du	Ductiliy Properties	ties
Grade	Min.	Max.	Rm/Res	Elongation,	n, % (min.)
			min.	Total	At R <sub>m</sub>
B400C-R	400		1.15	71	7
B400CWR	400		1.15	7.1	7
B500C-R	500		1.15	71	7
B500CWR	500		1.15	14	7
B600C-R	600	-	1.15	10	7
B450CWR	450	1.25 R eн (min.)	1.15		7.5
B400DWR	400	1.3 R eн (min.)	1.25	44	8
B420DWR	420	1.3 R eн (min.)	1.25	16	8
B500DWR	500	1.3 R (min.)	1 25	ಪ	••

Countersigned by:

Dept. of Civil Engg., BUET, Dhaka-1000, Bangladesh Prof. Dr. Hasib Mohammed Ahsan, Test-in-Charge

TYDW73275

G BBCF 09 May 2023

eka-1000

Dr. Md. Delwar Hossain Test performed by:

Professor, Dept. of Civil Engg., BUET

It is also recommended that the test results be collected by a duly authorized person. samples are sent in a secure and sealed cover/packet/container under the signature of a competent authority. In order to avoid fradulent fabrication of test results, this report has been printed on a security pa 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



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#### STRENGTH OF MATERIALS LABORATORY

Sent by: Engr. Md. Maksudul Karim, General Manager (Plant) TEST OF DEFORMED M.S. BARS IBDS ISO 6935-2:20161

Shahriar Steel Mills Ltd., Jatrabari, Dhaka.

Project: Shahriar Steel Mills Ltd.

> Ref.: Letter, Dt. 7/5/2023 Date of Test: 9/5/2023

Re

BRTC No.: 1102-90360/CE/22-23; Dt. 8/5/2023

1						Г						Т			F		-	F
	<u>§</u> ≅			•	2	ယ		•				•	i		1	-	-	-
	Frog Mark / Identification			SSRM B420 DWR	SSRM B420 DWR	SSRM B420 DWR		-		1	•							
	Nominal dia.		mm	12	12	12			-	•	•	•	•	•	•	1	-	-
	Actual dia.		mm	11.9	11.8	11.9	1	1	-				•	-		1	i	
	Mass	Unit Length	kg/m	0.876	0.863	0.869	-	1							7	U	-	•
	Average Mass Per	Unit Length	kg/m		0.869				Mikarakadosdo	The state of the s								
	Yield or Proof	Load	kΝ	50.6	51.9	51.4			Norto Amin		Sport Start		-					
	Yield or Proof	Strength R <sub>eH</sub>	MPa	447	459	455	1											•
	Average Yield	Strength,	MPa		454					では、								
	Tensile Load		KN	69.9	72.5	69.5						-	- 1	-				
Samples w	Tensile Strenath	Æ,	MPa	620	640	615	1	•								-	-	
ere receiv	Average Tensile	Strength, R <sub>m</sub>	MPa		625									•			•	
ed in UNS	R <sub>m</sub> /R <sub>eH</sub>				1.38			•						•				
Samples were received in UNSEALED condition.	Total Elongation	(%) (G.length	= 5d)	25	23	23	•	•	•	•	•	•	•	•	-	-	-	•
idition.	Average Total	Elongation (%)			24			•										
	Bend Test	(Seperate samples)		Satisfactory	Satisfactory	Satisfactory	•	•	•	•	•	•			•			•

Nominal bar dia., mm OS ISO 6935-2:2016 Weight Requirements, Nominal Area etc.

2mm dia. bar is not covered in BDS ISO 6935-2:2016. Its properties are derived following the principle used for other bar sizes minal mass per minal cross sectional area, sq.mm 1.21 154 201 14 16 20 22\* 25 28 32 40 50 491 616 804 1257 1964 3.85 4.84 6.31 9.87 15.42

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

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

Steel	Yield S	Steel Yield Strength, Ren, MPa Ductilly Properti	Due	<b>Ductiliy Properties</b>	rties
Grade	Min.	Max.	Rm/ReH	Elongation	n, % (min.)
			Ð,	Total	
B400C-R	400		1.15	14	
B400CWR	400		1.15	14	
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 eн (min.)	1.15		7.5
B400DWR	400	1.3 Reh (min.)	1.25	17	8
B420DWR	420	1.3 R <sub>eH</sub> (min.)	1.25	16	8
RSOODWR	500	13 P (min )	75	3	•

Countersigned by

Prof. Dr. Hasib Mohammed Ahsan, Test-in-Charge

Dept. of Civil Engg., BUET, Dhaka-1000, Bangladesh

Conversion factor: 1.0 MPa = 1.0 N/mm<sup>2</sup> = 145 psi. Strengths are based on nominal area.

ELDGr2FGG

JANA PAR 09 May 2023

Test performed by: Dr. Md. Delwar Hossain

Professor, Dept. of Civil Engg., BUET

samples are sent in a secure and sealed cover/packet/container under the signature of a competent authority. In order to avoid fradulent fabrication of test results, this report has been printed on a security It is also recommended that the test results be collected by a duly authorized person. 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



# BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)

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#### STRENGTH OF MATERIALS LABORATORY

Sent by: Engr. Md. Maksudul Karim, General Manager (Plant) TEST OF DEFORMED M.S. BARS IBDS ISO 6935-2:20161

Shahriar Steel Mills Ltd., Jatrabari, Dhaka.

Project: Shahriar Steel Mills Ltd.

Samples were received in UNSEALED condition.

Rebe Te

Date of Test: 9/5/2023 Ref.: Letter; Dt. 7/5/2023

BRTC No.: 1102-90360/CE/22-23; Dt. 8/5/2023

kg/m kN MPa MPa MPa MPa MPa MPa MPa MPa 126 625 620 1.35 91 453 459 125 620 1.35 620 1.35	1 SSRM B420 DWR 16 15.8 2 SSRM B420 DWR 16 15.8 3 SSRM B420 DWR 16 15.8
kg/m kN MPa MPa kN MPa MPa MPa MPa 126 625 625 620 1.35 91 453 459 123 615 620 1.35 91 453 125 620 1.35	SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8
kg/m kN MPa MPa kN MPa MPa MPa MPa 126 625 625 620 1.35 91 453 459 125 620 1.35 620 1.35 91 453 125 620 1.35 620 1.35	SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8
kg/m         kN         MPa         MPa         kN         MPa         MPa           1.535         92         458         459         123         615         620         1.35           91         453         459         125         620         1.35           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -         -           -         -         -         -         -         -         -         -	SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8
kg/m         kN         MPa         MPa         kN         MPa         MPa           1.535         92         458         459         123         615         620         1.35           91         453         459         125         620         1.35           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -         -           -         -         -         -         -         -         -         -	SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8
kg/m kN MPa MPa kN MPa MPa MPa 126 625 625 1.35 92 458 459 125 620 1.35 91 453 125 620 1.35 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8
kg/m         kN         MPa         MPa         kN         MPa         MPa           1,535         92         458         459         123         615         620         1.35           91         453         459         125         620         1.35           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -         -           -         -         -         -         -         -         -         -           -         -         -         -         -         -         -         -           -         -         -         -         -         -         -         -	SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8
kg/m         kN         MPa         MPa         kN         MPa         MPa           1.535         92         458         459         123         615         620         1.35           91         453         125         620         1.35           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -           -         -         -         -         -         -	SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8
kg/m         kN         MPa         MPa         kN         MPa         MPa           1.535         92         458         459         123         615         620         1.35           91         453         459         125         620         1.35	SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8  SSRM 8420 DWR 16 15.8
kg/m         kN         MPa         MPa         kN         MPa         MPa           1.535         92         458         459         123         615         620         1.35           91         453         125         620         1.35	SSRM B420 DWR 16 15.8  SSRM B420 DWR 16 15.8  SSRM B420 DWR 16 15.8
kg/m         kN         MPa         MPa         kN         MPa         MPa           1,535         92         458         459         123         615         620         1.35           91         453         125         620         1.35	SSRM B420 DWR 16 15.8  SSRM B420 DWR 16 15.8  SSRM B420 DWR 16 15.8
Kg/m         kN         MPa         MPa         kN         MPa         MPa           1,535         92         458         459         123         615         620         1.35           91         453         125         620         1.35	SSRM B420 DWR 16 15.8 SSRM B420 DWR 16 15.8 SSRM B420 DWR 16 15.8
kg/m         kN         MPa         MPa         kN         MPa         MPa           1,535         92         458         459         123         615         620         1.35           91         453         125         620         1.35	SSRM B420 DWR 16 15.8  SSRM B420 DWR 16 15.8  SSRM B420 DWR 16 15.8
Kg/m         kN         MPa         MPa         kN         MPa         MPa           1,535         92         458         459         123         615         620         1.35	SSRM B420 DWR 16 15.8 SSRM B420 DWR 16 15.8
Kg/m         kN         MPa         MPa         kN         MPa         MPa           94         468         126         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625         625	<b>16</b> 15.8
kg/m kN MPa MPa kN MPa MPa	
Lorigor III	mm
h length Rou	
Unit Load Strength	
Per Mass Per Proof Proof Yield Load Strength Tensile Elongation	dia. dia.
Mass Average Yield or Yield or Average Tensile Tensile Average R <sub>m</sub> /R <sub>eH</sub> 10ta	Frog Mark / Nominal Actual

Nominal bar dia., mm BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. Nominal mass per | Nominal, kg/m 22mm dia. bar is not covered in BDS ISO 6935-2:2016. Its properties are derived following the principle used for other bar sizes 314 380 1964

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

Steel	Yield S	Steel Yield Strength, Rad, MPa Duc	Du	<b>Ductiliy Properties</b>	rties
Grade	Min.	Max.	Rm/ReH	Elongation,	n, % (min.)
			Min.	Total	At R <sub>m</sub>
B400C-R	400	-	1.15	14	7
B400CWR	400		1.15	14	
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 eн (min.)	1.15		7.5
B400DWR	400	1.3 R eн (min.)	1.25	17	8
B420DWR	420	1.3 R eн (min.)	1.25	16	œ
PEROPUSE					

B500DWR 500 1.3 R at (min.) 1.25 13

Countersigned by:

Prof. Dr. Hasib Mohammed Ahsan, Test-in-Charge

Dept. of Civil Engg., BUET, Dhaka-1000, Bangladesh



appour, 09 May 2023

"AP-1000,

Test performed by: Dr. Md. Delwar Hossain

Professor, Dept. of Civil Engg., BUET

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Testing & Consulta

## STRENGTH OF MATERIALS LABORATORY

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Project: Shahriar Steel Mills Ltd. Shahriar Steel Mills Ltd., Jatrabari, Dhaka.

Date of Test: 9/5/2023 Ref.: Letter; Dt. 7/5/2023

BRTC No.: 1102-90360/CE/22-23; Dt. 8/5/2023

Samples were received in UNSEALED condition.

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-		-		-	1			•				3	N	1				No.	SI.	
•	ı				1					1	1	SSRM B420 DWR	SSRM B420 DWR	SSRM B420 DWR				Identification	Frog Mark /	
			•												П			<u> </u>	Non	
1			-					•			•	20	20	20	mm			dia.	Nominal	
1	-	1	1	-	1.	1	-	1	-	-	-	19.9	19.9	19.9	mm			dia.	Actual	
-	1	¥	1						- 1	A	- 18	2.441	2.443	2.446	kg/m	Length	Unit	Per	Mass	
									THAT ARABATAS				2.443		kg/m	Length	Unit	Mass Per	Average	
					1		Andres Instru	SCAL-411-11	16000			148	144	145	kN		Load	Proof	Yield or	
		•										473	460	463	MPa	ReH	Strength	Proof	Yield or Yield or	
								**************************************					465		MPa	R et	Strength,	Yield	Average	
11 (1 - C) (1 - C) (1 - C)		1		-	-	-					1	204	202	202	ΚN			Load	Tensile	
-	-	•	•			-		7	•	•	•	650	640	640	MPa	æ		Strength	Tensile	
	•									•			645		MPa	70 ==	Strength,	Tensile	Average	
							•			•			1.39						R <sub>m</sub> /R <sub>eH</sub>	
-		ř			1	•	•	•		•	1	26	26	25	= 5d)	(G.length	(%)	Elongation	Total	
							1						26			(%)	Elongation	Total	Average	
-												Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend	
F			+		-	+	F		F	-	F	E	E	Ė	F					

BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2). Nominal mass per Nominal, kg/m 22mm dia, bar is not covered in BDS ISO 6935-2:2016. Its properties are derived following the principle used for other bar sizes lominal cross sectional area, sq.mm

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

Steel	Yield S	Yield Strength, ReH, MPa	Du	<b>Ductilly Properties</b>	ties
Grade	.niM	Max.	Rm/ReH	Elongation, % (min.)	n, % (min.
			min.	Total	At R <sub>m</sub>
B400C-R	400		1.15	71	
B400CWR	400		1.15	7.1	
B500C-R	500		1.15	14	
B500CWR	005		1.15	7.1	7
B600C-R	600	-	1.15	* 0J	7
B450CWR	450	1.25 R et (min.)	1.15		7.5
B400DWR	400	1.3 R <sub>eH</sub> (min.)	1.25	Th.	8
<b>B420DWR</b>	420	1.3 R <sub>ен</sub> (min.)	1.25	16	8
B500DWR	500	1.3 R eн (min.)	1.25	13	00

Countersigned by:

Prof. Dr. Hasib Mohammed Ahsan, Test-in-Charge

Dept. of Civil Engg., BUET, Dhaka-1000, Bangladesh



Conversion factor: 1.0 MPa = 1.0 N/mm<sup>2</sup> = 145 psi. Strengths are based on nominal area



Dr. Md. Delwar Hossain

Professor, Dept. of Civil Engg., BUET

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Shahriar Steel Mills Ltd., Jatrabari, Dhaka.

Project: Shahriar Steel Mills Ltd.

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Date of Test: 9/5/2023 Ref.: Letter; Dt. 7/5/2023 BRTC No.: 1102-90360/CE/22-23; Dt. 8/5/2023

BDS ISO			1	-		,		•				-	•	ယ	2		1				N <sub>O</sub>	SI.	
BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).	-	1	•					1	1	•	1	-		SSRM B420 DWR	SSRM B420 DVK	COLUMN CIEC CANA	SSRM B420 DWR				Identification	Frog Mark /	
Area etc. (Table 2).	•	-				•				•				25	20	3	25	mm			dia.	Nominal	
	-	1	1				-	-			-	-	-	24./	24.1	24.7	24.7	mm			dia.	Actual	
	1	-	•									1	-	3./53	0.104	3 764	3.755	kg/m	Length	Unit	Per	Mass	
									1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Mystyrol and sylling the	MilledGeetestattatta					3757		kg/m	Length	Unit	Mass Per	Average	
														177	2010	336	221	· kN		Load	Proof	Yield or	
Conver	-	111												431		461	451	MPa	R <sub>H</sub>	Strength	Proof	Yield or	
sion factor: 1.																454		MPa	æ Æ	Strength,	Yield	Average	
0 MPa = 1.0	381116-1771	-			1	-	1	1				-		010	3 1	321	317	Ŕ			Load	Tensile	
$N/mm^2 = 14$	,		,					-			-		1	9	212	655	645	MPa	R <sub>m</sub>		Strength	Tensile	
5 psi. Streng		•														645		MPa	<b>2</b> 0	Strength,	Tensile	Average	
ths are bas									•							1.42						ステスを	1
Conversion factor: 1.0 MPa = 1.0 N/mm <sup>2</sup> = 145 psi. Strengths are based on nominal area.										-		•			36	26	25	= 5d)	(G.length	) (%)	Elongation	i otal	
l area.			1													26			(%)	Elongation	lotal	Average	
							1					•	•	-	Satisfactory	Satisfactory	Satisfactory		samples	(seperate	) rest	Total	ם אמל
													•			-					g	Too	0000

3	unit length	Nomir	Nomir	Nomir	BDSIS
1 1 1 1 1		ninal mass per	nal cross sect	ominal bar dia., mm	SO 6935-2:201
to be provided by the properties are derived following the principle used for other bar sizes.	Permissible deviation, %	Nominal, kg/m	l cross sectional area, sq.mm	m	BDS ISO 6935-2:2016 Weight Requirements, N
20.004	±8 ±8	0.222	28.3	6	ominal Area etc.
1000	±8	0.395	28.3 50.3 78.5	8	Area e
2001	±6	0.616		10	ic. (la
00 000	±6	0.887	113 154 201 314 380 491 616 804 1	12	(lable 4).
dorivo	±5	1.21	154	14	
5	±5	1.58	201	16	
200	±5	2.46	314	20	
000	±5	2.98	380	22	16
ncinia	#4	3.85	491	25	
used	#4	2.46 2.98 3.85 4.84 6.31	616	28	9/
100.00	14	6.31	804	32	
er bar	±5 ±5 ±5 ±4 ±4 ±4 ±4 ±4	9.87	1571	40	
Sizes	1	15.42	1904	9	

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

RDS ISO 6935-2 Tensile Requirer

Steel	Yield S	Steel Yield Strength, Ren, MPa Ductiliy F	Du	<b>Ductiliy Properties</b>	ties
Grade	Win.	Max.	Rm/ReH	Elongation	n, % (min.)
			min.	Total	At R <sub>m</sub>
B400C-R	400	1	1.15	14	7
B400CWR	400	ì	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 eн (min.)	1.15	-	7.5
B400DWR	400	1.3 R <sub>eн</sub> (min.)	1.25	17	8
B420DWR	420	1.3 R <sub>eH</sub> (min.)	1.25	16	8
B500DWR	500	1.3 R eн (min.)	1.25	13	80

Countersigned by:

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Dr. Md. Delwar Hossain

Professor, Dept. of Civil Engg., BUET

samples are sent in a secure and sealed cover/packet/container under the signature of a competent authority. In order to avoid fradulent fabrication of test results, this report has been printed on a security personal security p 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 It is also recommended that the test results be collected by a duly authorized person.