

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

Sent by: Engr. Md. Maksudul Karim (MME BUET), General Manager TEST OF DEFORMED M.S. BARS IBDS ISO 6935-2:20161 Shariar Steel Mills Ltd, Konapara, Jatrabari, Dhaka.

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

Samples were received in UNSEALED condition.

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			-	-1			,	-	-	-		1	3	N	7				No.	SI.	
	_	-		7	-	1		_	-		1	1	SSRM B420 DWR	SSRM B420 DW	SSRM B420 DWR				Identification	Frog Mark /	
																, ,			0	Noi	
	•	•	•	•	•	_			1		•	-	6	10	10	mm			dia.	Nominal	
	1	٠	-	+	-		-		1	-	-	-	9.9	9.9	9.9	mm			dia.	Actual	
	1	-			T	-	-	-)				-	0.600	0.605	0.600	kg/m	Length	Unit	Per	Mass	
														0,602		kg/m	Length	Unit	Mass Per	Average	
						-						1	34.1	34.9	34.9	kN		Load	Proof	Yield or	
									,				431	442	442	MPa	R _H	Strength	Proof	Yield or	
														439		MPa	Ref	Strength,	Yield	Average	
			-	1	1	-						1	47.8	47.8	47.8	Š			Load	Tensile	
	•	-	-	-	1	-			1		1	•	605	605	605	MPa	3 0		Strength	Tensile	Surilyion so
		•												605		MPa	æ	Strength,	Tensile	Average	0.000
		,			•						•			1.38						R _m /R _{eH}	
		•		1			ļ			-		•	32	34	34	= 5d)	(G.length	(%)	Elongation	Total	Campico nele l'occisea in Origin india
		•			•									33			(%)	Elongation	Total	Average	
		1	1						•	-	-		Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend	
			•										•	-					Test	Reben	

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

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

50 1964 15.42

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

Nominal mass per Nominal, kg/m

minal cross sectional area, sq.mm

Nominal bar dia., mm

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

BDS 1SO 693	5-2 Tensil	BDS ISO 6935-2 Tensile Requirements for Common Steel Grades	Common	Steel Grade	35
Steel	Yield S	Yield Strength, Ren, MPa	Duo	Ductiliy Properties	ties
Grade	Min.	Max.	Rm/ReH	Elongatio	Elongation, % (min.)
			min.	Total	At R _m
B400C-R	400		1.15	14	7
B400CWR	400		1.15	14	7
B500C-R	500		1.15	14	
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 _{ен} (min.)	1.25	17	8
B420DWR	420	1.3 R _{ен} (min.)	1.25	16	80
B500DWR	500	1.3 R eн (min.)	1.25	ដ	60

Countersigned by:

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

Dept. of Civil Engg., BUET

KJSWdNFnt



Dr. Md. Shafiul Bari Test performed by:

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 paper. 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.

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Testing & Consulta Bureau of Researc

STRENGTH OF MATERIALS LABORATORY

Sent by: Engr. Md. Maksudul Karim (MME BUET), General Manager TEST OF DEFORMED M.S. BARS IBDS ISO 6935-2:2016 Shariar Steel Mills Ltd, Konapara, Jatrabari, Dhaka.

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

Date of Test: 6/2/2023

Samples were received in UNSEALED condition

Nominal bar dia., mm	BDS ISO 69	-	•	1	-	1		1		1	-			ಚ	2	_				No.	SI.	
dia., mm	35-2:2016 Weight Re													တ္တ	S	S						
6	BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).	-	1	1	-	1	1		•	•	•	-	-	SSRM B420 DWR	SSRM B420 DWR	SSRM B420 DWR				Identification	Frog Mark /	
8 10 12	al Area etc. (Table																					
	2).	•		•		•	•		•				•	12	12	12	mm			dia.	Nominal	
16 20 2		-	1	1	-		1				-	,	-	11.8	11.8	11.9	mm			dia.	Actual	
2* 25		1	1	1	7		7-				-	-	-	0.864	0.860	0.877	kg/m	Length	Unit	Per	Mass	
14 16 20 22* 25 28 32 40 50						•		**.**.******	**************************************						0.867		kg/m	Length	Unit	Mass Per	Average	
50						1								52.2	51.7	53.1	kN		Load	Proof	Yield or	
COLIVERSITION	Conversi	•			•						•			462	458	470	MPa	Ren	Strength	Proof	Yield or	
Conversion lactor. 1.0 Million - 1.0 Million - 143 psr. on engins are based on nonlinear alea.	V V 1945														463		MPa	Ref	Strength,	Yield	Average	
ME a - 1.0 P	V V 7 7 9 V				-	7	-	- I						70.8	69.9	71.6	ΚN			Load	Tensile	
1 150	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	•	-	•	•	•	•	•					625	620	635	MPa	20		Strength	Tensile	camples were received in onorwern conditions
Jai, oueligui	oi Chronath								•			•			625		MPa	.Z0 ₃	Strength,	Tensile	Average	ole lenelle
s are pased	1 250 6000								•						1.35						R _m /R _{eH}	C 111 C 140
		•	•		•	•	•	•	•	•	•			30	28	30	= 5d)	(G.length	(%)	Elongation	Total	F7.FF0 601
<u>a</u> ra.			-									•			29			(%)	Elongation	Total	Average	
				•	•		•	•		-	•	•		Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend	
				•																Tes	Reber	

*22mm dia. bar is n	unit length	Nominal mass per	Nominal cross sectiona	Nominal bar dia., mm
*22mm dia. bar is not covered in BDS ISO 6935-2:2016. Its properties are derived follow	Permissible deviation,%	Nominal, kg/m	ional area, sq.mm	m
5-2:201	±8	0.222	28.3	9
6. Its p	±8	0.395	28.3 50.3	8
ropert	±6	0.616 0.887	78.5	10
ies are	9∓	0.887	113	12
derive	±5 ±5 ±5 ±4 ±4 ±4 ±4 ±4	1.21	113 154 201 314 380 491 616 804 1257	14
d follo	±5	1.58	201	16
Š	±5	2.46	314	20
the pri	±5	8 2.46 2.98	380	22*
nciple	1 4	3.85	491	25
used	±4	4.84	616	28
for oth	±4	6.31	804	32
the principle used for other bar sizes	14	9.87	1257	40
sizes.	±4	3.85 4.84 6.31 9.87 15.42	1964	50

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

コココルコココココ		THE TAX THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF		A COLUMN	
Steel	Yield S	Yield Strength, R .H, MPa	Du	Ductilly Properties	rties
Grade	Min.	Max.	Rm/ReH	Elongation	n, % (min.)
			min.	Total	
B400C-R	400		1.15	14	7
B400CWR	400		1.15	7.1	7
B500C-R	500		1.15	7.1	7
B500CWR	500		1.15	71	7
B600C-R	600		1.15	0,	7
B450CWR	450	1.25 R _{ен} (min.)	1.15		7.5
B400DWR	400	1.3 R _{eH} (min.)	1.25	77	8
B420DWR	420	1.3 R eн (min.)	1.25	91	8
B500DWR	500	1.3 R eH (min.)	1.25	E	8

Countersigned by:

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

It is also recommended that the test results be collected by a duly authorized person.



Dr. Md. Shafiul Bari Test performed by:

07 February 2023

20023

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 pap 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 (MME BUET), General Manager TEST OF DEFORMED M.S. BARS [BDS ISO 6935-2:2016] Shariar Steel Mills Ltd, Konapara, Jatrabari, Dhaka.

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

Date of Test: 6/2/2023

Ref.: Letter; Dt. 5/2/2023

Samples were received in UNSEALED condition.

SI. Frog Mark Nominal Actual Mass Average Yield or Yield or Average No. Identification dia. dia. Per Mass Per Proof Proof Yield Vield Vi	Conversion factor: $1.0 \text{ MPa} = 1.0 \text{ N/mm}^2 = 145 \text{ psi}$. Strengths are based on nominal area.	ii. Strengths are based on nominal area.	i. Strengths are based on nominal ar	ii. Strengths are base	ii. Strength	bs	$N/mm^2 = 145$	0 MPa = 1.0	ion factor; 1.	Conversi	50	tc.(Table 2). 10 12 14 16 20 22* 25 28 32 40 50	22* 25	16 20	ble 2). 12 14	Nominal Area etc. (Ta	BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2). Nominal bar dia., mm 10 12	BDS ISO 6935-2:2016 Nominal bar dia., mm
Frog Mark / Nominal Identification Actual Identification Mass Adverage Identification Yield or Yield or Yield or Idia. Identification dia. Her Mass Per Proof Proof Proof Idia. Per Mass Per Proof Proof Proof Proof Idia. Per Mass Per Proof Proof Proof Proof Proof Proof Idia. Identification Identification Identification Length Length Length Idia. Identification													1	T	-		-	-
Frog Mark / Nominal Identification Actual Identification Mass Adverage Identification Yield or Identification Yield or Identification Yield or Identification Identification Idia. Idia. Per Mass Per Proof Proo				1	1	1							-	1	•		1	ī
Frog Mark / Nominal Identification Actual Identification Mass Adverage Identification Yield or Identification Yield or Identification Yield or Identification Yield or Identification Per Mass Per Proof					-					8				-	•		-	-
Frog Mark / Nominal Identification Actual Identification Mass Adverage Identification Yield or Yield or Yield or Idia. Per Idia. Mass Per Idia. Proof Idia.		1	1	1		_								-	•		_	ı
Frog Mark / Nominal Identification Actual Identification Mass Adverage Identification Yield or Identification Per Identification Mass Per Identification Proof Identification				1	1	•	-	/						-	•		-	
Frog Mark / Nominal Identification Actual Identification Mass Adverage Identification Yield or Identification Per Identification Mass Per Identification Proof Identification			ı		,		1						7///	-	•		-	
Frog Mark / Nominal Idia. Actual Idia. Mass Average Vield or Vield or Adia. Vield or Per Idia. Vield or Proof Idia. Per Idia. Mass Per Idia. Proof		•	•	•		-	•							-	,		-	1
Frog Mark / Nominal Identification Actual Identification Mass Adverage Identification Yield or Identification Per Identification Mass Per Identification Proof Identification Proof Identification Proof Identification Proof Identification Per Identification Mass Per Identification Proof Identification				-			\$\frac{1}{2}\frac{1}{2						77///	-	•		-	1
Frog Mark I Nominal dia. Actual dia. Mass Average dia. Yield or Yield or Yield or Proof dia. Identification dia. Per dia. Mass Per Proof Pro					-										•		•	-
Frog Mark I Nominal dia. Actual dia. Mass Average dia. Yield or Yield or Yield or Proof dia. Identification dia. Per dia. Mass Per Proof Proof Proof Unit Unit Load Strength Image:				•				2			Sallshiesters			-			-	
Frog Mark I Nominal dia. Actual dia. Mass Average dia. Yield or Yield or Yield or Proof dia. Identification dia. Per Mass Per Proof Proof Unit Unit Load Strength Unit Length Unit Length Length Fe _{el} NM SSRM B420 DWR 16 15.9 1.549 1.549 87.6 436 SSRM B420 DWR 16 15.8 1.545 86.6 431 SSRM B420 DWR 16 15.8 1.545 86.6 431				•	-	-		2						-	•		•	
Frog Mark / Nominal offia. Actual dia. Mass dia. Average Proof dia. Yield or Proof P		•		1				125		V)))			-	-			•	1
Frog Mark / Nominal offication Actual offication Mass offication Actual offication Mass offication Proof offication <td>125 620 25 Satisfactory</td> <td>620 25</td> <td>620</td> <td></td> <td></td> <td></td> <td>125</td> <td></td> <td></td> <td>431</td> <td>86.6</td> <td></td> <td>1.545</td> <td>15.8</td> <td>16</td> <td>DWR</td> <td>SSRM B420 I</td> <td>3</td>	125 620 25 Satisfactory	620 25	620				125			431	86.6		1.545	15.8	16	DWR	SSRM B420 I	3
Frog Mark / Nominal identification Actual dia. Mass Average dia. Yield or Proof Pro	126 625 620 1.44 25 25 Satisfactory	625 620 1.44 25 25	625 620 1.44	625 620	625		126		431	436	87.6	1.549	1.549	15.9	16	DWR	SSRM B420 [2
Frog Mark / Nominal dia. Actual dia. Mass dia. Average Proof Unit Yield or Proof Proof Proof Unit Identification dia. dia. Per Mass Per Unit Proof Unit Load Strength Imm mm kg/m kg/m kg/m kN MPa	124 615 24 Satisfactory	615	615				124			426	85.6		1.553	15.9	16	DWR	SSRM B420 [1
Frog Mark / Nominal Actual Mass Average Yield or Yield or Identification dia. Per Mass Per Proof Proof Unit Unit Load Strength Length Length	kN MPa MPa = 5d)	MPa MPa	MPa MPa	MPa	MPa		N		MPa	MPa	kN	kg/m	kg/m	mm	mm			
Frog Mark / Nominal Actual Mass Average Yield or Yield or Identification dia. Per Mass Per Proof Proof Unit Unit Load Strength	R _m R _m (G.iength (%) samples)	R _m (G.length (%)	מ			æ ≅		V////	Ren	$R_{ m eH}$		Length	Length					
Frog Mark / Nominal Actual Mass Average Yield or Yield or Identification dia. Per Mass Per Proof Proof	Strength, (%) Elongation (Seperate	(%) Elongation	(%)	Strength,	Strength,			7////	Strength,	Strength	Load	Unit	Unit					
Frog Mark / Nominal Actual Mass Average Yield or Yield or	Load Strength Tensile Elongation Total Test	Strength Tensile Elongation	Strength Tensile	Strength	Strength		Load	7////	Yield	Proof	Proof	Mass Per	Per	dia.	dia.	On .	Identification	No.
	Tensile Tensile Average R_m/R_{eH} Total Average Bend	Tensile Average R_m/R_{eH} Total	Tensile Average R _m /R _{eH}	Tensile Average	Tensile Average		nsile		Average	Yield or	Yield or	Average	Mass	Actual	Nominal	5	Frog Mark	SI.

Nominal bar dia., mm

Nominal mass per Nominal, kg/m Nominal cross sectional area, sq.mm 22mm dia. bar is not covered in BDS ISO 6935 14 | 16 | 20 | 22* | 25 | 28 | 32 | 40 | 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.

DD0 100 093	ISUAL Z-C	DDS 130 6935-2 Tensile Requirements for Common Steel Grades	Common	Steel Grade	Ğ
Steel	Yield S	Yield Strength, RaH, MPa	Duo	Ductiliy Properties	ties
Grade	Min.	Max.	Rm/ReH	Elongation,	n, % (min.)
			Min.	Total	At R m
B400C-R	400		1.15	14	
B400CWR	400		1.15	7.1	7
B500C-R	500		1.15	46	
B500CWR	500		1.15	74	
B600C-R	600		1.15	10	
B450CWR	450	1.25 R _{вн} (min.)	1.15		7.5
B400DWR	400	1.3 R _{вн} (min.)	1.25	17	8
B420DWR	420	1.3 R _{eH} (min.)	1.25	16	8
RSOODWR	500	13 Pau (min	3	*	

Countersigned by:

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

Dept. of Civil Engg., BUET



Test performed by:

07 February 2023

Dr. Md. Shafiul Bari

Professor, Dept. of Civil Engg., BUET

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STRENGTH OF MATERIALS LABORATORY

Sent by: Engr. Md. Maksudul Karim (MME BUET), General Manager TEST OF DEFORMED M.S. BARS IBDS ISO 6935-2:2016] Shariar Steel Mills Ltd, Konapara, Jatrabari, Dhaka

Ref.: Letter; Dt. 5/2/2023

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

Date of Test: 6/2/2023

									_													
Vominal ba	BDS ISO 69	-	-	-	-	•	,		ı		-		,	ယ	2	1				No.	SI.	
Nominal bar dia., mm	935-2:2016 Weigh																					
	BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).	1	1		-	-	1	1	1	-	-	1	1	SSRM B420 DWR	SSRM B420 DWR	SSRM B420 DWR				Identification	Frog Mark /	
6 8 10	minal Area etc. (T													∌	Ϋ́	Æ						
14	able 2).			•	-	-	•				-		•	20	20	20	mm			dia.	Nominal	
16 20		•	1	1	-	-	1				-		-	19.9	19.9	19.9	mm			dia.	Actual	
22* 25		-	1		7///		\-\frac{1}{2}			\hat{A}		*	-	2.444	2.441	2.441	kg/m	Length	Unit	Per	Mass	
16 20 22* 25 28 32 40 50						-			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		MIII AKAKAKAI				2.442		kg/m	Length	Unit	Mass Per	Average	
50							1							150	147	151	ΚN		Load	Proof	Yield or	
CONVENSION INCIDIT	Conversi	•												479	469	482	MPa	R ≗	Strength	Proof	Yield or	
טון ומפוטוי ויי	on factor. 10														477		MPa	Ret	Strength,	Yield	Average	
WII 07 1:0	MDS = 10		-	1		-	1	-						206	204	206	ΚN			Load	Tensile	
AV. 111.0	$10 \text{ MPa} = 10 \text{ N/mm}^2 = 145 \text{ ns}$ Strengths are based on nominal area		-	-	1	_	(W)				•	-	1	660	650	660	MPa	2 0		Strength	Tensile	A esidition
pai. Juenga	nei Strongth											•			655		MPa	.70 ₃	Strength,	Tensile	Average	A10001
וט מול טמטכו	e are hase								•						1.37						R _m /R _{eH}	EU III ON
	on nominal	-	-	-	-	1					•	•	•	22	23	22	= 5d)	(G.length	(%)	Elongation	Total	damples were received in owordene condition.
9	בסונ		1			•			i			•			N			(%)	Elongation	Total	Average	delicon,
		-	-	1		1				•		-		Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend	
		-	-								-			•	•					Tes	Rebei	

*22mm dia. bar is not covered in	unit length	Nominal mass per	Nominal cross sect	Nominal bar dia., mm
ot covered in BDS ISO 6935-2:2016. Its properties are derived following	Permissible deviation,%	Nominal, kg/m	cross sectional area, sq.mm	3
35-2:201	±8	0.222	28.3	6
6. Its p	±8	0.222 0.395	50.3	8
roperti	±6	0.616 0.887	50.3 78.5	10
es are o	±6 ±5		113	12
derived		1.21	154	14
follo	±5	1.58	201	16
wing 1	± 5	2.46	314	20
the pri	±5	2.98	380	22*
nciple	±4 ±4	3.85	491	25
used	#4	4.84	616	28
for ot	±4	6.31	804	32
her ba	#	2.46 2.98 3.85 4.84 6.31 9.87 1	1257	40
inciple used for other bar sizes.	±4 ±4	15.42	154 201 314 380 491 616 804 1257 1964	50

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.

DEG TOO GOOD	7-2 1511311	DDS 130 0333-2 Tellslie Nequirelliells for Collinoir Steel Glades	COMMISSION	Office Grand	2
Steel	S plai.	Yield Strength, R ett, MPa	Du	Ductilly Properties	ties
Grade	Min.	Max.	Rm/ReH	Elongatio	Elongation, % (min.)
			min.	Total	At R _m
B400C-R	400		1.15	71	7
B400CWR	400		1.15	14	7
B500C-R	500		1.15	14	7
B500CWR	500		1.15	14	7
B600C-R	600		1.15	0	
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	8
B500DWR	500	1.3 R eH (min.)	1.25	13	8

Countersigned by:

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

Dept. of Civil Engg., BUET



Dr. Md. Shafiul Bari Test performed by:

07 February 2023

2023

Professor, Dept. of Civil Engg., BUET

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BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET) DEPARTMENT OF CIVIL ENGINEERING

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Sent by: Engr. Md. Maksudul Karim (MME BUET), General Manager TEST OF DEFORMED M.S. BARS IBDS ISO 6935-2:2016 Shariar Steel Mills Ltd, Konapara, Jatrabari, Dhaka.

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

Date of Test: 6/2/2023

Nominal bar dia., mm		-			-	1			•			-	ယ	2	1				No.	SI.
35-2:2016 Weight of dia., mm																				
BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2). Nominal bar dia., mm 6 8 10 12	1	1	1	-	1	1	•		-		•	•	SSRM B420 DWR	SSRM B420 DWR	SSRM B420 DWR				Identification	Frog Mark /
Nominal Area e													DWR	DWR	DWR				on	K)
tc. (Table 2).			1	•		•		•	•		•		25	25	25	mm			dia.	Nominal
16 20	-	1	1	-	-	-				-	•	-	24.9	24.8	24.8	mm			dia.	al Actual
16 20 22* 25 28	1	1	1	7.66		-	(E			-)	•		3.817	3.792	3.795	kg/m	Length	Unit	Per	Mass
777 07							**! **! **!	00004700000						3.801		kg/m	Length	Unit	Mass Per	Average
32 40 50						1							233	233	227	ΚN		Load	Proof	Yield or
Convers		•	•	•	*							,	475	475	463	MPa	ReH	Strength	Proof	Yield or
sion factor: 1.0														471		MPa	Ref	Strength,	Yield	Average
MPa = 1.0		-		1	1	1	-				1		321	322	318	ΚN			Load	Tensile
$N/mm^2 = 145$		-	-	,	-		,	-	-	-	1	-	655	655	645	MPa	3 0		Strength	Tensile
psi. Strength								•						650		MPa	7 0 ∃	Strength,	Tensile	Average
is are based		•												1.38						R _m /R _{est}
Conversion factor: 1.0 MPa = 1.0 N/mm ² = 145 psi. Strengths are based on nominal area.		-		-	-					-	-	-	20	20	20	= 5d)	(G.length	(%)	Elongation .	Total
area.		,												28			(%)	Elongation	Total	Average
	-		•	•						-			Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend
				-	,									-					Tes	Reber

Nominal bar diamm	inal bar dia mm	6	6 8 10 1 1	10	1 12	14	16	20	22*	25	28	32	40	50
Nominal cross sectional	ional area. so.mm	28.3	50.3	78.5	113	154	201 314 380	314	380	491	616 804	804	1257	
9	ai ca, oq			3		1	1	1	900		2	2		
nai mass per	Nominal, kg/m	0.222	0.395	0.616	0.887	1.21	1.58	2.46	2.98 3.85		4.84	6.31	9.87	9.87 15.42
unit length	Permissible deviation, %	±8	\$±	9∓	±6	±5	±5	5年 5年	±5	±4	±4	77	PT PT PT PT	±4
*22mm dia bar is no	*22mm dia, bar is not covered in BDS ISO 6935-2:2016. Its properties are derived following the principle used for other bar sizes	-2-201	e Its o	roperti	es are	derive	d folk	wing	he pri	nciple	pasu	for of	her ba	rsizes

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.

BDS ISO 6935-2 Tensile Requirements for Common Steel Grades

Steel	Yield S	Yield Strength, R.H, MPa	Du	Ductiliy Properties	ties
Grade	Min.	Max.	Rm/ReH	Elongation	n, % (min.)
			min.	Total	
B400C-R	400	•	1.15	14	7
B400CWR	400		1.15	74	
B500C-R	500		1.15	74	7
B500CWR	500		1.15	14	
B600C-R	600		1.15	0,6	
B450CWR	450	1.25 R eн (min.)	1.15		7.5
B400DWR	400	1.3 R eH (min.)	1.25	24	8
B420DWR	420	1.3 R eн (min.)	1.25	96	8
B500DWR	500	1.3 R eH (min.)	1.25	2.	8

Countersigned by:

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

Dept. of Civil Engg., BUET



Test performed by: 07 February 2023

Professor, Dept. of Civil Engg., BUET Dr. Md. Shafiul Bari

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 paper. 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