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. Masudul Karim, General Manager (GM Plant) Shahriar Steel Mills Ltd., Konapara, Jatrabari, Dhaka.

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

Date of Test: 9/1/2023

Samples were received in UNSEALED condition

W				Ē	F	r	F	_	-	Ē										
OSI SO	•	-											ယ	2	1				ĕ	š
BDS ISO 6935-2:2016 We																				
BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).		1	1	,		-	,	-	-	•		•	SSRM B500 CWR	SSRM B500 CWR	SSRM B500 CWR				Identification	Frog Mark /
minal Area etc. (Tabl													\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	₹	R					
e 2).	٩		•	•	•		•			•		•	5	3	10	mm			dia.	Nominal
	-	1	-	1	1	- /				- 760	-		9.8	9.8	9.8	mm			dia.	Actual
				5		\$ \cdot \cdo	l kali kali r				1000		0.586	0.590	0.587	kg/m	Length	Unit	Per	Mass
							and raid which			15111111111111111111111111111111111111				0.588		kg/m	Length	Unit	Mass Per	Average
													42.2	43.2	42.2	ΚN		Load	Proof	Yield or
Copyorei					100 mm	80 7 · ·							535	545	535	MPa	æ ReH	Strength	Proof	Yield or
Conversion factor: 10 M					-									540		MPa	ReH	Strength,	Yield	Average
MD2 - 10					1	- 5							49.3	49.3	49.3	KN			Load	Tensile
1mm ² - 1AF	-		-					•		•		•	625	625	625	MPa	R _m		Strength	Tensile
pei Ctroppet														625		MPa	.20 ⊒	Strength,	Tensile	Average
Se are base											•			1.16						R _m /R _{eH}
$MD_2 = 1.0 \text{ N/mm}^2 = 10.5 \text{ ps}$; Strengths are based on nominal area	-		-		•				•	•	•		24	24	24	= 5d)	(G.length	(%)	Elongation	Total
2											•			24			(%)	Elongation	Total	Average
		1							•		•	•	Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend
													ry Satis	ry Satist	ry Satis					

-			
unit length	Vominal mass per	Nominal cross section	Nominal bar dia., mm
Permissible deviation, %	Nominal, kg/m	ional area, sq.mm	m
	0.222	28.3	6
±8 ±8	0.395	50.3	8
±6	0.616	28.3 50.3 78.5	10
±6	0.887	113	12
±5	1.21	154 201 314 380 491	14
±5	1.58	201	16
±5	2.46 2.98 3.85	314	20
5∓	2.98	380	22*
±4	3.85	491	25
t.	4.84	616	28
±5 ±5 ±4 ±4 ±4 ±4 ±4	6.31	616 804 1257 1964	32 40 50
±4	9.87	1257	40
±4	15.42	1964	9

".z/mm dia. bar is not covered in bibs 180 9839-2:2016, its propentes are derived tollowing the principle used for other Actual diameter of bars are shown for informative purpose only. It is not a requirement of BIDS 180 6935-2:2016. Actual diameter is the diameter of a perfectly round plain bar having same mass per unit length.

Steel	Yield S	Steel Yield Strength, Ray, MPa Ductiliy Properti	Du	Ductiliy Properties	ties
Grade	Min.	Max.	Rm/R.	Elongation	n, % (min.)
			min.	Total	At Rm
B400C-R	400		1.15	71	7
B400CWR	400		1.15	*t	
B500C-R	005		1.15	7.1	
B500CWR	500		1.15	14	
B600C-R	600		1.15	00	7
B450CWR	450	1.25 R et (min.)	1.15		7.5
B400DWR	400	1.3 R eн (min.)	1.25	ZE	8
B420DWR	420	1.3 R et (min.)	1.25	16	8
B500DWR	500	1.3 R eH (min.)	1.25	13	8

ersigned by:

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

H6ZrKP4f4



Dr. Munaz Ahmed Noor

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 p 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 Dept. of Civil Engg., BUET



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STRENGTH OF MATERIALS LABORATORY

Sent by: Engr. Md. Masudul Karim, General Manager (GM Plant) TEST OF DEFORMED M.S. BARS [BDS ISO 6935-2:2016]

Shahriar Steel Mills Ltd., Konapara, Jatrabari, Dhaka.

8

Date of Test: 9/1/2023

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

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

, mm	2016 Weight R													_S	s	S						
9	2016 Weight Requirements, Nominal Area etc. (Table 2).		1	•			•	•	1	1	•	•	•	SSRM B500 CWR	SSRM B500 CWR	SSRM B500 CWR				Identification	Frog Mark /	
8 10 12 14	Area etc. (Tabl																					
12 14	e 2).	•	•				•				•		•	12	12	12	mm			dia.	Nominal	
16 20 2		-	1	-	1	-		-	-/	-		-	-	11.8	11.8	11.7	mm ,			dia.	Actual	
25				· /	1110		1	ca (ca /)						0.858	0.857	0.843	kg/m	Length	Unit	Per	Mass	
16 20 22. 25 28 32 40 50								end and all build			000000				0.853		kg/m	Length	Unit	Mass Per	Average	
50														63.5	62.5	61.5	ΚN	The second secon	Load	Proof	Yield or	
COLLACIO	Convorce					1000 m								560	555	545	MPa	Ref	Strength	Proof	Yield or	
Conversion racion v.o ish a - 1.0 ishumi	on factor: 10		\\\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.						************						555		MPa	Res	Strength,	Yield	Average	
ANT L'D MAN	MD2 = 10		(2)))-	The second						-			-	73.7	73.7	72.7	KN			Load	Tensile	
					-			•		•	•	•	•	650	650	645	MPa	⊅ 0		Strength	Tensile	Samples w
pai. officingui	nei Stronath		,												650		MPa	Я m	Strength,	Tensile	Average	ere receive
s aic pasc	e are hase								•						1.17						R _m /R _{eH}	d in UNS
ino poi. Onengnio are pasca of normal area	on nominal						•	•			•	•	•	22	22	22	= 5d)	(G.length	(%)	Elongation	Total	s were received in UNSEALED condition.
5.00	פסו								-			•			83			(%)	Elongation	Total	Average	dition.
		•	•			•				•		•	•	Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend	
	-				_	-	-	_	-	-	_							-				

Satisf Satisf

sam (Sep

ominal mass per Nominal, kg/m minal cross sectional area, sq.mm ninal bar dia., mm ngtn Permissible deviation, % | ± 8 | ± 8 | ± 6 | ± 6 | ± 5 | ± 5 | ± 5 | ± 4 | \pm 28.3 0.222 8 10 12 14 16 20 22 25 28 32 50.3 78.5 113 154 201 314 380 491 616 804 0.395 0.616 0.887 1.21 1.58 2.46 2.98 3.85 4.84 6.31

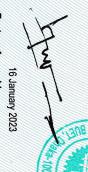
ctual diameter is the diameter of a perfectly round plain bar having same mass per unit length. ctual diameter of bars are shown for informative purpose only. It is not a requirement of BDS ISO 6935-2:2016.

Steel	Yield S	Steel Yield Strength, R at, MPa Ductilly Properti	Du	Ductiliy Properties	ties
Grade	Min.	Max.	Rm/R.	Elongation	n, % (min.)
			Min.	Total	At R
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
B600C-R	600		1.15	0,0	7
B450CWR	450	1.25 R et (min.)	1.15		7.5
B400DWR	400	1.3 R eH (min.)	1.25		8
B420DWR	420	1.3 R _{эн} (min.)	1.25	94	8
B500DWR	500	1.3 R e (min.)	1.25	£ t	8

ersigned by:

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

E8ftnJhXn



Dr. Munaz Ahmed Noor 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 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 Dept. of Civil Engg., BUET



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STRENGTH OF MATERIALS LABORATORY

Sent by: Engr. Md. Masudul Karim, General Manager (GM Plant) TEST OF DEFORMED M.S. BARS IBDS ISO 6935-2:2016]

Shahriar Steel Mills Ltd., Konapara, Jatrabari, Dhaka.

Date of Test: 9/1/2023 Ref.: Letter; Dt. 8/1/2023

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

Samples were received in UNSEALED condition

				_			_														
50010008		-					ļ		ŀ	-			3	2					No.	: <u>çr</u>	
BUSISO 8933-2:2016 (veight Requirements, Nominal Area etc. (Table 2).		1	•	•	1	T		r				-	SSRM B500 CWR	SSRM B500 CWR	SSRM B500 CWR				Identification	Frog Mark /	
Je 2).	-			ļ.				ŀ					16	16	16	mm			dia.	Nominal	
		-	1	-	1					- 1	-	-	15.8	15.8	15.8	mm			dia.	Actual	
		•				Ŷ - (la feet for	Total codice		-000	-		1.536	1.539	1.536	kg/m	Length	Unit	Per	Mass	
							radional policion							1.537		kg/m	Length	Unit	Mass Per	Average	
													112	113	112	ΚN	The second second second	Load	Proof	Yield or	
					100 × 100 ×								555	560	555	MPa	Ref	Strength	Proof	Yield or	
														555		MPa	Res	Strength,	Yield	Average	
10.10			7		1	25%	- 111			1852			133	134	134	Š			Load	Tensile	
7 7 6 7 7 7			,							•	•		660	665	665	MPa	R _m		Strength	Tensile	
		•						•			•			665		MPa	⊅	Strength,	Tensile	Average	
		•												1.20						R _m /R _{eH}	
	-	•	-		•	•	•		•		•		20	21	20	= 5d)	(G.length	(%)	Elongation	Total	Camping the second and office the containent.
											•			20			(%)	Elongation	Total	Average	
		-	•			•	•	•		•		•	Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend	
															Satis		sam	(Sep		Ret	

22mm dia. bar is not o	unit length JPe	Nominal mass per Nominal, kg/m	romman cross sectional area, sq.mm
*22mm dia. bar is not covered in BDS ISO 6935-2:2016. Its properties are de	Permissible deviation, % ±8 ±8		iai aiea, sq.iiiiii
5-2:201	±8	0.222	20.3
6. Its p	8∓	0.395	20.3
roperti	9∓	0.616	70.5
es are	±6]0.222]0.395 0.616 0.887 1	20.3 20.3 70.3 113
요	10		

1.21 1.58 2.46 2.98 3.85 4.84 6.31 ±5 ±5 ±5 ±5 ±4 ±4 ±4

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

Nominal bar dia., mm

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 Requ

Steel	Yield S	Yield Strength, R., MPa Ductiliy Properti	Du	Ductilly Properties	rties
Grade	.niM	Max.	Rm/Ret	Elongation	n, % (min.)
			a a	Total	
B400C-R	400	-	1.15	14	7
B400CWR	400		1.15	14	7
B500C-R	500	•	1.15	14	7
B500CWR	500		1.15	4	7
B600C-R	600		1.15	10	7
B450CWR	450	1.25 R et (min.)	1.15		7.5
B400DWR	400	1.3 R et (min.)	1.25	47	8
B420DWR	420	1.3 R et (min.)	1.25	16	8
B500DWR	500	1.3 R eн (min.)	1.25	13	8

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

Dept. of Civil Engg., BUET

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

Countersigned by:

ZPHHWrYD5





Dr. Munaz Ahmed Noor Test performed by:

Professor, Dept. of Civil Engg., BUET

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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.

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

Date of Test: 9/1/2023

received in UNSEALED condition

				_			_			_										
BDS ISO 693		•		1				•	-				3	2	1				No.	SI.
BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).	1	1	1	1	-	1	•		1		1	T	SSRM B500 CWR	SSRM B500 CWR	SSRM B500 CWR				Identification	Frog Mark /
able 2).	•	1	•		•	•		•					20	20	20	mm			dia.	Nominal
	-	-	-	1	1	- 1	+		- A	- 36	- 6	-	19.9	19.9	19.9	mm .			dia.	Actual
	-		-										2.442	2,444	2,443	kg/in	Length	Unit	Per	Mass
														2.443		kg/m	Length	Unit	Mass Per	Average
													180	185	184	ΚN	The same of the sa	Load	Proof	Yield or
				11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1377.	100 N - C 100 M							575	590	585	MPa	ReH	Strength	Proof	Yield or
					-									580		MPa	Ret	Strength,	Yield	Average
	811/1-1111	-	7	-								-	209	215	213	Š			Load	Tensile
2 _ 4		-			•				•	•	•		665	685	680	MPa	R _m		Strength	Tensile
														680		MPa	.Z0 3	Strength,	Tensile	Average
, h		•						•						1.17						R _m /R _{eH}
Company of the second of the s	-	-	-							•		-	20	20	20	= 5d)	(G.length	(%)	Elongation	Total
}					•						•			20			(%)	Elongation	Total	Average
									•				Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend
													y Satisf	y Satist	y Satisf		san	(Sep		Rel

Nominal bardia, mm	m	F
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7	BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).	E
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6 8 10 12 14 16 20 22*	10	K
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S	1	1
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unit	Nom	Nom	Nom
unit length Permissible deviation, % ±8 ±8 ±6 ±5 ±5 ±5 ±5 ±5 ±4 ±4 ±4	iinal mass pe	iinal cross se	lominal bar dia.,
Permissible deviation, % ±8	r (Nominal, kg/m	iinal cross sectional area, sq.mm	, mm
_±8	0.222	28.3	6
±8	0.395	28.3 50.3 78.5 113 154 201 314 380 491 616 804 1257 1964	8
±6	95 0.616 0.887	78.5	10
±6	0.887	113	12
± 5	1.21	154	14
±5	1.58 2.46 2.98 3.85 4.84 6.31 9.87	201	16
±5	2.46	314	20 22*
±5	2.98	380	22*
±4	3.85	491	25
#4	4.84	616	28
±4	6.31	804	32
#4	9.87	1257	40
15 15 15 14 14 14 14 14 14 14 14 14 14 14 14 14	15.42	1964	25 28 32 40 50

".z/mm dial part is not covered in BUS ISO 0835-22/16, its properties are derived rollowing the principle used for 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	Yield S	Steel Yield Strength, Ray, MPa Ductiliy Properti	Du	Ductiliy Properties	ties
Grade	Min.	Max.	Rm/R.H	Elongation	n, % (min.)
			min.	Total	
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
B600C-R ,	600		1.15	10	
B450CWR	450	1.25 R _{eH} (min.)	1.15		7.5
B400DWR	400	1.3 R et (min.)	1.25	17	8
B420DWR	420	1.3 R eн (min.)	1.25	16	8
B500DWR	500	1.3 R et (min.)	1.25	13	8

Zf6HNhXT2

Dr. Munaz Ahmed Noor Test performed by:

16 January 2023

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 p 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 Dept. of Civil Engg., BUET

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

rsigned by:



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STRENGTH OF MATERIALS LABORATORY

Sent by: Engr. Md. Masudul Karim, General Manager (GM Plant) TEST OF DEFORMED M.S. BARS [BDS ISO 6935-2:2016]

Shahriar Steel Mills Ltd., Konapara, Jatrabari, Dhaka.

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

Date of Test: 9/1/2023 Ref.: Letter, Dt. 8/1/2023

										Samples w	ere receive	d in UNS	Samples were received in UNSEALED condition.	dition.		
<u>s</u>	Frog Mark /	Nominal	Actual	Mass	Average	Yield or	Yield or	Average	Tensile	Tensile	Average	R _m /R _{eH}	Total	Average	Bend	Ret
Ę	Identification	dia.	dia.	Per	Mass Per	Proof	Proof	Yield	Load	Strength	Tensile		Elongation	Total	Test	
				Unit	Ugit	Load	Strength	Strength,			Strength,		(%)	Elongation	(Seperate	(Sep
				Length	Length		Ren	Ren		R _m	λο 3		(G.length	(%)	samples)	san
		mm	mm	kg/m	kg/m	ΚN	MPa	MPa	KZ	MPa	M₽a		= 5d)			
	SSRM B500 CWR	25	25.0	3.863		285	580		343	700			20		Satisfactory	Satis
2	SSRM B500 CWR	25	25.0	3.846	3.852	285	580	580	340	695	695	120	20	20	Satisfactory	Satist
3	SSRM B500 CWR	25	25.0	3.846		281	575		339	690			21		Satisfactory	Satisf
			-						-				-			
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	-		-		
22mm dia har is not covered in BDS ISO 6935-2-2016 Its properties are derived following the animals conditions the	unit length Permiss	Nominal mass per Nominal	Nominal cross sectional area, sq.mm	Nominal bar dia., mm	BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).
d in BDS (SO 5935)	Permissible deviation, % ±8	i, kg/m	a, sq.mm		t Requirements, No
2001	#	0.222	28.3	6	minal
7	±8	0.395	8.3 50.3 78	8	Area e
	±6	0.616	5.5	10	tc. (Ta
000000	±6	0.887	113	12	ble 2).
2000	±5	1.21		14	
4	±5	1.58	154 201 314	16	
	±5	2.46	314	20	
	±5	2.98	380	22*	
	#	3.85	491	25	
1	±5 ±5 ±4 ±4 ±4	4.84	380 491 616 804 1	28	
	±	6.31	804	32	
d	I/I	10	14	1///	(I/I)

1257 1964 9.87 15.42

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

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

Steel	Yield S	Steel Yield Strength, R.H. MPa Ductiliy Properti	D	Ductiliy Properties	ties
Grade	Min.	Max.	Rm/R.H	Elongation,	n, % (min.)
			min.	Total	At R _m
B400C-R	400		1.15	71	7
B400CWR	400		1.15	7.6	
B500C-R	500		1.15	7.1	7
B500CWR	500		1.15	7.1	7
B600C-R	600		1.15	10	7
B450CWR	450	1.25 R et (min.)	1.15		7.5
B400DWR	400	1.3 R eн (min.)	1.25	7.1	8
B420DWR	420	1.3 R et (min.)	1.25	16	8
B500DWR	500	1.3 R ↔ (min.)	1.25	13	8

rsigned by:

Prof. Dr. A. B. M. Badruzzaman, Test-in-Charge Dept. of Civil Engg., BUET





Dr. Munaz Ahmed Noor 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 printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are security printed as security printed are sent in a security printed and security printed are sent in a security printed and security printed are sent in a security printed and security printed are security printed as security printed and security printed are security printed as security printed and security printed are security printed as security printed and security printed are security printed as security printed and security printed are security printed as sec 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



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. Masudul Karim, General Manager (GM Plant) Shahriar Steel Mills Ltd., Konapara, Jatrabari, Dhaka.

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

Date of Test: 9/1/2023 Ref.: Letter; Dt. 8/1/2023

Samples were received in UNSEALED condition.

Nominal	BDS ISO		-											3	2	_				No.	Ş.
Nominal bar dia., mm 6 8 10	BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).	Ē	1	1	1	1			,		-1		-1	SSRM B420 DWR	SSRM B420 DWR	SSRM B420 DWR				Identification	Frog Mark /
14	able 2).	•	•	-		•		•	•				-	25	25	25	mm			dia.	Nominal
16 20			-	1	-		-/	-		F		-	,	24.7	24.7	24.7	mm			dia.	Actual
22* 25								(ca (cc / /						3.773	3.772	3.767	kg/m	Length	Unit	Per	Mass
20 22* 25 28 32 40 50															3,771		kg/m	Length	Unit	Mass Per	Average
50														229	226	225	ΚN		Load	Proof	Yield or
Convers							<i>XX XX</i>							467	461	459	MPa	R 완	Strength	Proof	Yield or
Conversion factor: 1.0						1									462		MPa	ReH	Strength,	Yield	Average
JMFa = 1.0	j		(C)	1		-		-				-		318	315	313	Š			Load	Tensile
N/mm = 145		-		•			•		•			-	-	645	640	635	MPa	30 3		Strength	Tensile
psi. Strengti			•												640		MPa	30 30	Strength,	Tensile	Average
ns are base															1.39						R _m /R _{eH}
MPa = 1.0 N/mm² = 145 pst. Strengths are based on nominal area.		-		•	,				•		•			20	19	19	= 5d)	(G.length	(%)	Elongation	Total
area.												•			19			(%)	Elongation	Total	Average
				6		•	-	•	•	•		•		Satisfactory	Satisfactory	Satisfactory		samples)	(Seperate	Test	Bend
																					Re

*33 4 5 5 5 5 5	unit length	Nominal mass per	Nominal cross sect	Nominal bar dia., mm
Communication of the Control of the	Permissible deviation, %	Nominal, kg/m	ional area, sq.mm	ä
3.30	_±8	0.222	28.3	6
	±8	0.222 0.395	50.3	8
] ±6	0.616	78.5	10
	±6 ±5	0.887	28.3 50.3 78.5 113 154 201 314 380 491 616 804 1257	12
		1.21	154	14
	±5	1.58	201	16
	±5	2.46	314	20 22*
	±5	2.98	380	22*
1	± 4	3.85	491	25
	4	4.84	616	28
	#	6.31	804	32
	#	9.87	1257	å
	15 15 15 14 14 14 14 14 14	2.46, 2.98 3.85 4.84 6.31 9.87 15.42	1964	25 28 32 40 50

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

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	Yield S	Yield Strength, R, MPa	Du	Ductiliy Properties	ties
Grade	Min.	Max.	Rm/R.	Elongation, % (min.)	n, % (min.
			min.	Total	At R _m
B400C-R	400		1.15	74	7
B400CWR	400		1.15	FE	
B500C-R	005		1.15	7.6	7
B500CWR	500		1.15	۴t	7
B600C-R	600		1.15	0,6	7
B450CWR	450	1.25 R eн (min.)	1.15		7.5
B400DWR	400	1.3 R et (min.)	1.25	7.	8
B420DWR	420	1.3 R _{ән} (min.)	1.25	16	8
B500DWR	500	1.3 R e (min.)	1.25	EL	8

fersigned by:

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

Dept. of Civil Engg., BUET

h39PXPbRG



Professor, Dept. of Civil Engg., BUET Dr. Munaz Ahmed Noor

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