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

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: Eng. Md. Maksudul Karim, General Manager (Plant) TEST OF DEFORMED M.S. BARS IBDS ISO 6935-2:2016

Shahriar Steel Mills Limited, Konapara, Jatrabari, Dhaka.

Project: Rupayan City, Uttara.

Samples were received in SEALED condition.

Date of Test: 17/8/2024 Ref.: Letter; Dt. 15/8/2024 BRTC No.: 1103-29045/CE/24-25; Dt. 15/8/2024

BDS IS	-	1	1	1	1	1	1	1			-	-	з	2	1				N <sub>O</sub>	SI.
BDS ISO 6935-2:2016 Weight Requirements, Nominal Area etc. (Table 2).	1					I		9	_	-	•	-	SSRM B500 DWR	SSRM B500 DWR	SSRM B500 DWR				Identification	Frog Mark /
Area etc. (Table 2).  Conversion factor: 1.0 MPa = 1.0 N/mm² = 145 psi. Strengths are based on nominal area.		-	•	-	-			•	•		•	•	20	20	20	mm			dia.	Nominal
9 2).	1	1	1	-	1	-	-			-	1	1	20.3	20.3	20.3	mm			dia.	Actual
20 20	1	1	1	1	1	_	-	1	1	7	1	1	2.542	2.537	2.535	kg/m	Length	Unit	Per	Mass
25 20		-			-							× × × × × × × × × × × × × × × × × × ×		2.538		kg/m	Length	Unit	Mass Per	Average
33		-	-	7	1	- SS			Tal addition			-	185	189	183	kN		Load	Proof	Yield or
Conver				1	1	1							590	605	585	MPa	Ren	Strength	Proof	Yield or
sion factor: 1.														590		MPa	ReH	Strength,	Yield	Average
0  MPa = 1.0	11			1	-	-	) - (()	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -					241	245	240	KN			Load	Tensile
$N/mm^2 = 145$	1111-28111	-	-	-	-					-	•		770	780	765	MPa	R <sub>m</sub>		Strength	Tensile
psi. Strengtl					•			•			•			770		MPa	<b>7</b> 0	Strength,	Tensile	Average
ns are based					1			ı			•			1. 1. 2.1						R <sub>m</sub> /R <sub>eH</sub>
on nominal a	1	1		-	1	•		-	-			1	22	21	22	= 5d)	(G.length	(%)	Elongation	Total
area.					1			•						23			(%)	Elongation	Total	Average
	1		1	1	1			1			1	•	-	•	•				Test	Bend
		1										•	•	1	•				Test	Rebend

22mm dia. bar is not covered in BDS ISO 6935-2:2016. Its properties are derived following the principle used iinal mass per Nominal, kg/m ninal cross sectional area, sq.mm 154

Nominal bar dia., mm

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 Strength,	Yield S	Yield Strength, R ен, MPa	Du	<b>Ductiliy Properties</b>	rties
Grade	Min.	Max.	Rm/ReH	Elongation,	
\$			min.	Total	At Rm
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	0,	
B450CWR	450	1.25 R eH (min.)	1.15	-	7.5
B400DWR	400	1.3 R et (min.)	1.25	17	
B420DWR	420	1.3 R et (min.)	1.25	16	
DENOTING	500	13 P (min )	1 25	5.	

Countersigned by:

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

-dE52XCSE

Dr. Munaz Ahmed Noor Test performed by:

27 August 2024

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.