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### **Ethiopian Conformity Assessment Enterprise**

Document No. TLD/F7.08-1 Copy No: Rev No: 3 Page No: Effective Date:

Title:

TEST REPORT የፍተሻ ሪፖርት

1 of 1 25 Oct 22

Name and address

ECAE Certification Directorate,

Test Report No:

MTR/1328/17

of client:

Tel:

Addis Ababa

+251-116-51-82-05

Test Order No:

0311

Fax: E-mail:

Reported date:

16/09/2024 11/08/2024

Date sample

Place of sampling

Date of sampling

Received:

09/09/2024

Factory

Client Sample code: (Brand)

CD/BM/0311/17

Sampled and submitted by

Certification Directorate

Type of sample:

Ribbed Steel reinforcement bar  $\phi$ 12mm

Date tested:

10/09/2024

Laboratory Designation Number: 16364077

S/ N	Characteristics tested	Test Method/ Specification	Method Specifica Standard Requirements (B500BWR)			Test result	Comment
1.	Mass per unit length (Kg/m)		Min	Nom	Max	. oot result	According to grade (B500BWR)
2.	Tensile strength Rm (Mpa)	$>(\bigcirc) >$	0.835	0.888	0.941	0.863	Pass
3.	Upper yield strength, ReH		-	-	-	-	-
	(Mpa)		500	-	-	625	Pass
4.	Characteristics value of Rm/ReH	ES ISO	1.08	-	-	1.15	Pass
5.	Elongation, A (%)	15630-1: 2023 /	14				
3.	Bend test	CES		-	-	21.7	Pass
		101:2021	No crack and rapture observed		No crack and	Pass	
7.	Carbon (%)					rapture	
8.	Silicon (%)	-	-	-	0.24	0.20	Pass
9.	Manganese (%)		-	-	0.65	0.21	Pass
10.	Phosphorous (%)		-	-	1.66	0.58	Pass
11.	Sulfur (%)		-	-	0.058	0.016	Pass
12.	Nitrogen (%)		-	-	0.058	0.039	Pass
	Remark		-	-	0.014	0.004	Pass

This test report relates only to the specific sample product which has been tested by ECAE

Test report authorized by, Name Liyew Wudie, Position Analyst IV, Sign

ISO/IEC 17025:2017 Accredited Testing Laboratory

11145

☎ 011 6 46-05-69, Fax. 011 6 45-97-20, E-mail <u>info-cs@eca-</u> e.com Web site: www.eca-e.com BOLE SUBCITY, WOREDA 6 ADDISABABA, ETHIOPIA



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Document No TLD/F7.08-1 Copy No: Rev No: Page No: Effective Date:

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TEST REPORT የፍተሻ ሪፖርት

1 of 1 25 Oct 22

Name and address

ECAE Certification Directorate,

Test Report No:

of client:

Addis Ababa

MTR/1329/17

Tel: Fax:

+251-116-51-82-05

Test Order No:

0311

E-mail:

Reported date:

16/09/2024

Date sample

Date of sampling

11/08/2024

Received:

09/09/2024

Place of sampling

Factory

0.017

0.027

0.004

int Enterpris

Pass

**Pass** 

Pass

Client Sample code: (Brand)

CD/BM/0311/17

Sampled and submitted by

Certification Directorate

Type of sample:

Ribbed Steel reinforcement bar \$\phi\$16mm

Date tested:

0.058

0.014

10/09/2024

Laboratory Designation Number: 16364078

Method Specification: CES 101:2021 SI Characteristics tested Test Method/ Standard Requirements N Comment Specification (B500BWR) Test result According Min Nom Max to grade Mass per unit length (Kg/m) 1. (B500BWR) 1.50 1.58 Tensile strength Rm (Mpa) 1.66 2. 1.52 **Pass** Upper yield strength,ReH 3. 500 (Mpa) 608 **Pass** 4. Characteristics value of 1.08 ES ISO Rm/ReH 1.14 Pass 15630-1: 5. Elongation, A (%) 2023 / 14 22.5 6. Bend test **Pass** CES No crack and rapture No crack Pass 101:2021 observed and 7. Carbon (%) rapture 0.24 8. Silicon (%) 0.16 **Pass** 0.65 9. Manganese (%) 0.21 Pass 1.66 10. Phosphorous (%) 0.63 Pass 0.058

Nitrogen (%) Remark

Sulfur (%)

11.

12.

Test report authorized by, Name Liyew Wudie, Position Analyst IV, Sign

ISO/IEC 17025:2017 Accredited Testing Laboratory

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ADDISABABA, ETHIOPIA

This test report relates only to the specific sample product which has been tested by ECAE



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**TEST REPORT** የፍተሻ ሪፖርት

Page No: Effective Date: 1 of 1 25 Oct 22

Name and address

ECAE Certification Directorate,

Test Report No:

MTR/1330/17

of client: Tel:

Addis Ababa

+251-116-51-82-05

Test Order No:

Date of sampling

0311

Fax: E-mail:

Reported date:

16/09/2024 11/08/2024

Date sample

Place of sampling

Factory

Received: Client Sample

09/09/2024

Sampled and

code: (Brand)

CD/BM/0311/17

submitted by Date tested:

Certification Directorate

Type of sample:

Ribbed Steel reinforcement bar  $\phi$ 24mm

SI	Characteristics tested		Method Specification: CES 101:2021				
N		Test Method/ Specification	(B500BV		uirements VR)	Test result	Comment
			Min	Nom	Max	· oot result	According to grade
1.	Mass per unit length (Kg/m)		2.00				(B500BWR
2.	Tensile strength Rm (Mpa)	PEULH	3.36	3.50	3.64	3.47	Pass
3.	Upper yield strength,ReH		-	-	-	-	_
	(Mpa)		500	-	-	597	Pass
4.	Characteristics value of		4				1 435
	Rm/ReH	ES ISO	1.08	-	-	1.16	Pass
5.	Elongation, A (%)	15630-1:	4.4				. 400
6.	Bend test	2023 /	14	-	-	21.7	Pass
		CES 101:2021	No crack and rapture observed		rapture	No crack and	Pass
7.	Carbon (%)					rapture	
8.	Silicon (%)		-	-	0.24	0.19	Pass
9.	Manganese (%)	17.4	-	-	0.65	0.21	Pass
10.	Phosphorous (%)			-	1.66	0.66	Pass
11.	Sulfur (%)		-	-	0.058	0.021	Pass
12.	Nitrogen (%)		-	- 1	0.058	0.035	Pass
	Remark		-	-	0.014	0.004	Pass

This test report relates only to the specific sample product which has been tested by ECAE

Test report authorized by, Name Liyew Wudie, Position Analyst IV, Sign

ISO/IEC 17025:2017 Accredited Testing Laboratory

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Document No. TLD/F7.08-1 Copy No: Rev No:

Effective Date:

25 Oct 22

Title:

TEST REPORT የፍተሻ ሪፖርት

Name and address

ECAE Certification Directorate,

Test Report No:

MTR/1331/17

of client: Tel:

Addis Ababa

Test Order No:

0311

Page No:

1 of 1

Fax: E-mail: +251-116-51-82-05

Reported date:

16/09/2024 11/08/2024

Date sample Received:

09/09/2024

Place of sampling

Factory

Client Sample

Sampled and

Date of sampling

code: (Brand)

CD/BM/0311/17

submitted by

Certification Directorate 10/09/2024 -

Type of sample:

Ribbed Steel reinforcement bar  $\phi 32mm$ 

Date tested:

16/09/2024

Laboratory Designation Number: 16364080

S/ N	Characteristics tested	Test Method/ Specification	Method Specification Standard Requirements (B500BWR)			tion: CES 10° Test result	Comment
1.			Min	Nom	Max	restresuit	According to grade
-	Mass per unit length (Kg/m)		6.06	6.31	0.50		(B500BWR
2.	Tensile strength Rm (Mpa)		0.00	0.31	6.56	6.11	Pass
3.	Upper yield strength,ReH		-	-	-	-	100
	(Mpa)		500	-	-	561	Pass
4.	Characteristics value of Rm/ReH	ES ISO	1.08	-	-	1.17	Pass
5.	Elongation, A (%)	15630-1:					. 4.00
6.	Bend test	2023 / CES	14	-	-	17.2	Pass
7.	Carbon (%)	101:2021		_		the control of the co	
3.	Silicon (%)	101.2021	-	-	0.24	0.16	Pass
9.	Manganese (%)		-	-	0.65	0.24	Pass
10.	Phosphorous (%)		-	-	1.66	0.83	Pass
1.	Sulfur (%)		-	-	0.058	0.017	Pass
2.	Nitrogen (%)		-	-	0.058	0.031	Pass
	Remark		-	-	0.014	0.003	Pass

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