



Marine & Offshore

Certificate number: 18045/D0 BV

File number: MAT 11442-2008

Product code: 9007I

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

www.veristar.com

## APPROVAL CERTIFICATE for MATERIALS

*This certificate is issued to*

**EREGLI DEMIR VE CELIK FABRIKALARI T.A.S.**

Zonguldak - Türkiye

*for the type of product*

### HIGHER STRENGTH HULL STEEL ROLLED PRODUCTS

Slabs and Hot rolled coils, plates from coils and heavy plates in steel grades AH32 to FH36.

**Requirements:**

Bureau Veritas Rules on Materials and Welding for the Classification of Marine Units

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 14 Aug 2029**

**For Bureau Veritas Marine & Offshore,**

At BV ISTANBUL, on 14 Aug 2024,

Gurcan Yilmaz

***This certificate was created electronically and is valid without signature***



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

1.1 - Continuous cast slabs intended to hot rolled plates.

Steel grades	Deoxydation practice & refining	Slab dimensions (Thickness x Width x Length)	Delivery condition
AH32/AH36 DH32/DH36 EH32/EH36 FH32/FH36	Killed and grain fine treated with Al+Nb	200x1500x6000 - 12000mm	As Cast

Continuous cast slabs intended to hot rolled coils.

Steel grades	Deoxydation practice & refining	Slab dimensions (Thickness x Width x Length)	Delivery condition
AH32/AH36 DH32/DH36 EH32/EH36 FH32/FH36	Killed and grain fine treated with Al+Nb	200x750-1650x6000 - 12000mm	As Cast

1.2 - Hot rolled coils, plates from coils and heavy plates.

Steel grade	Deoxydation practice & Refining	Delivery conditions
AH32/AH36	Killed and fine grain treated with Al+Nb	Controlled Rolled (CR) up to 60mm for plates Controlled Rolled (CR) up to 15mm for coils and plates from coils
DH32/DH36	Killed and fine grain treated with Al+Nb	Controlled Rolled (CR) up to 8mm for plates Normalized (N) up to 60mm for plates Controlled Rolled (CR) up to 8mm for coils and plates from coils Normalized (N) up to 15mm for coils and plates from coils
EH32/EH36	Killed and fine grain treated with Al+Nb	Normalized (N) up to 60mm for plates Normalized (N) up to 15mm for coils and plates from coils
FH32/FH36	Killed and fine grain treated with Al+Nb	Normalized (N) up to 60mm for plates Normalized (N) up to 15mm for coils and plates from coils

Steelmaking by Basic Oxygen Furnace. Continuous Casting.

### 2. DOCUMENTS AND DRAWINGS :

2.1 - Document issued by Ereğli Demir Ve Çelik Fabrikalari T.A.S.:

- "Information for approval of Ereğli Iron and Steel Works Co. (Eredemir) for normal and higher strength hull steel grades of A, B, D, E, AH32, AH36, DH32, DH36, EH32, EH36, FH32, FH36", submitted 2007.
- Thickness measurements - Ref.ERD.GEN.TAL.3103 Rev.09 dated 27/11/2023.
- Technical Document for Application of BV Certification Ref.ERD-BV-2024 Edition No.1 dated 26/05/2024.

### 3. TEST REPORTS :

3.1 - Documents issued by Ereğli Demir Ve Çelik Fabrikalari T.A.S.:

- "Approval test" dated 25 June 2007.
- "Drop weight test" dated 15 May 2007.
- Production statistic data Ref.ERD-BV-2024 - Ed.04 Rev.02 dated 06/08/2024
- Macro etching data Report No02-Revision3 ED01 dated 09/08/2024.

**4. APPLICATION / LIMITATION :**

As per Bureau Veritas Rules for Classification.

**5. PRODUCTION SURVEY REQUIREMENTS :**

5.1 - The slabs and steel coils and plates are to be supplied by Ereğli Demir Ve Çelik Fabrikalari T.A.S in compliance with the type and the requirements described in this certificate.

5.2 - This type of product is within the category IBV of Bureau Veritas Rule Note NR320.

5.3 - BV product certificate is required.

5.4 - For information, Ereğli Demir Ve Çelik Fabrikalari T.A.S has declared to Bureau Veritas the following production site:

**Ereğli Demir Ve Çelik Fabrikalari T.A.S**

KDZ. EREĞLI

Zonguldak

Türkiye

**6. MARKING OF PRODUCT :**

As per Bureau Veritas Rules for Classification.

**7. OTHERS :**

This certificate replaces approvals from No.18045/A0 to No.18045/C0 BV.

It is Ereğli Demir Ve Çelik Fabrikalari T.A.S's responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

**\*\*\* END OF CERTIFICATE \*\*\***