



Marine & Offshore

Certificate number: 45785/B0 BV

File number: MAT 101530-2017

Product code: 8999H

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

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APPROVAL CERTIFICATE for MATERIALS

This certificate is issued to

CSP Companhia Siderurgica do Pecem
Ceara - BRAZIL

for the type of product

SEMI-FINISHED PRODUCTS

Continuous cast slabs intended to rolled products grades A to E and AH32 to EH40

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 is a renewal of certificate N° 45785/A1 BV expiring on 02/05/2022

This certificate will expire on: 02 May 2027

For Bureau Veritas Marine & Offshore,
At BV RIO DE JANEIRO, on 14 Mar 2022,
Lando Ribeiro



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 :

Continuous cast slabs intended to rolled products:

| Steel grade | Deoxidation practice and refining | Thickness range | Delivery condition |
|--------------|---|-----------------|--------------------|
| A-B-D-E | Killed and fine grain treated with Al | 220mm-300mm | As Cast |
| A-B-D-E | Killed and fine grain treated with Al+Nb+Ti | 220mm-300mm | As Cast |
| AH32 to EH40 | Killed and fine grain treated with Al+Nb+Ti | 220mm-300mm | As Cast |

Steelmaking by LD-KGC converter and LF furnace. Continuous casting.

2. DOCUMENTS AND DRAWINGS :

2.1 - Documentation issued by CSP Companhia Siderurgica do Pecem:

- "Data Book - Bureau Veritas Rev.1" dated 26 June 2016.
- "Bureau Veritas Test Plan Rev. 1" dated 17 June 2017.

2.2 - Documentation issued by Dongkuk Steel Mill Co., Ltd - Dangjin Works :

- "DKS rolling parameters for certification" dated 16 June 2016.
- "General information for approval of manufacturing process to steel plates" submitted 27 June 2016.

3. TEST REPORTS :

3.1 - Documentation issued by CSP Companhia Siderurgica do Pecem: "Witness test - BV Rev.0" dated 04/09/2017, "Witness test - BV Rev.0" dated 19/10/2016, "Witness test - BV (slabs 300mm)" dated 20/10/2016.

- "Test report (initial approval for CSP slabs) issued by Dongkuk Steel Mill Co., Ltd - Dangjin Works and dated March 2017.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The semi-finished products are to be supplied by CSP Companhia Siderurgica do Pecem in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - CSP Companhia Siderurgica do Pecem has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, CSP Companhia Siderurgica do Pecem has declared to Bureau Veritas the following production site:

CSP Companhia Siderurgica do Pecem
Rodovia CE 155 Km 11,5
Sao Goncalo do Amarante - CE Brazil
Ceara, Brazil

6. MARKING OF PRODUCT :

As per Bureau Veritas Rules for Classification.

7. OTHERS :

This certificate replaces approvals No.45785/A0 BV and No.45785/A1 BV.

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