



Marine & Offshore

Certificate number: 47694/A0 BV

File number: MAT 2395-2016

Product code: 8154I

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

SIDENOR ACEROS ESPECIALES, S.L.

Reinosa (Cantabria) - SPAIN

for the type of product

STEEL CASTINGS

Steel castings in grade 420 NORSOK M-122

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: 29 Jun 2022

For Bureau Veritas Marine & Offshore,

At BV MADRID, on 29 Jun 2017,

Montserrat Espin



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 :

Steel castings in grade 420 NORSOK M-122 of maximum weight 15tons.

Steelmaking by electric arc furnace (EAF) and ladle furnace (LF). Casting in sand moulds. Heat treatment: homogenized and quenching and tempering.

2. DOCUMENTS AND DRAWINGS :

- "Approval of the manufacturing process of cast material NorsokM122 Gr.420" Rev.01 dated 20/03/2017 issued by Sidenor Aceros Especiales, S.L.

3. TEST REPORTS :

As per document issued by Sidenor Aceros Especiales, S.L.:

- "Approval of the manufacturing process of cast material NorsokM122 Gr.420" Rev.01 dated 20/03/2017 .

- "List of cast pieces manufactured in Sidenor using material Norsok M122" Rev.0 dated 23/06/2017.

4. APPLICATION / LIMITATION :

As per Bureau Veritas Rules for Classification. Chemical composition, Tensile properties and Charpy-V notch test requirements are to be as per Bureau Veritas Rules NR216 and/or alternative specification mentioned on reviewed drawings, as applicable.

Weldability tests carried out on cast coupons having 100mm thickness.

5. PRODUCTION SURVEY REQUIREMENTS :

The steel castings are to be supplied by Sidenor Aceros Especiales, S.L. in compliance with the type and the requirements described in this certificate. This type of product is within the category IBV of Bureau Veritas Rule Note NR320. BV product certificate is required.

6. MARKING OF PRODUCT :

As per Bureau Veritas Rules for Classification.

7. OTHERS :

Nil.

*** END OF CERTIFICATE ***