



Marine & Offshore
Division

Certificate number: 23578/B0 BV

File number: MAT 81345-2010

Product code: 8153I

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

FRIULFORGIA SRL
SEDEGLIANO-UD - ITALY

for the type of product

STEEL FORGINGS

Carbon-manganese, alloy and austenitic stainless steel forgings of maximum weight 25 tons.

Requirements:

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

This certificate is issued to attest that BUREAU VERITAS 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: 18 Jan 2021

For BUREAU VERITAS,

At BV VENEZIA, on 18 Jan 2016,

Sandro BRUSEGAN



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. 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 Division 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 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 :

Carbon-manganese, alloy and austenitic stainless steel forgings.
Open-die forging with maximum capacity 25 tons.
Heat treatment as applicable.

2. DOCUMENTS AND DRAWINGS :

- "General Organization & Manufacturing Procedure" issued by FRIULFORGIA and dated 14 October 2009.
- "Forging management procedure N°570-14 rev.00" issued by FRIULFORGIA SRL and dated 18 May 2015.
- "Forging management procedure N°368-14 rev.00" issued by FRIULFORGIA SRL and dated 18 May 2015.
- "Inspection and test plan N°14-368 rev.00 and N°14-570 rev.00" issued by FRIULFORGIA SRL and dated 15 June 2015.

3. TEST REPORTS :

Typical tested grades are :

- Gr2 according to ASTM A266 for C-Mn steels.
- 30CrNiMo8 and 25CrNiMo4 according to EN10083-3 for alloy steels.
- F316L according to ASTM A182 for austenitic stainless steels.

- "Test certificates 00820/PP, 00906/PP and 00864/PP" issued by FRIULFORGIA and dated 16 March 2010.
- "Test certificates 00820/TR, 00906/TR and 00864/TR" issued by FRIULFORGIA and dated 24 May 2010.
- "Relazione N°10-6883" issued by Laboratorio Prove Bavaro and dated 15 June 2010.
- "Test certificates N° 07983/TR Rev.1 and N° 08446/TR Rev.1" issued by FRIULFORGIA SRL and dated 20 February 2015.
- "Certificates of Heat treatment N° 07983/TT and 08446/TT" issued by FRIULFORGIA SRL and dated 04 September 2014 and 16 January 2015.
- "Certificates of ultrasonic inspection N° 07983/UT and 08446/UT" issued by FRIULFORGIA SRL and dated 04 September 2014 and 16 January 2015.

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.

5. PRODUCTION SURVEY REQUIREMENTS :

The steel forgings are to be supplied by FRIULFORGIA SRL 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 :

This certificate replaces approvals N° 23578/A0 BV and N° 23578/A1 BV.

*** END OF CERTIFICATE ***