



Marine & Offshore  
Division

Certificate number: 44301/A0 BV

File number: MAT 104914-2016

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*

**RTD Srl**

Arsiero (VI) - ITALY

*for the type of product*

**STEEL FORGINGS**

Forgings made in carbon, carbon-manganese and austenitic stainless steels.

### 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 Oct 2021**

For BUREAU VERITAS,

At BV VENEZIA, on 18 Oct 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](http://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 :

Forgings fittings for marine applications such as discs, rolled rings, flanges etc.

Type of steel	Max. Weight	Typical tested grades
Carbon steels Carbon-manganese steels	Weight up to 2000 kg	S355J2G3 according to EN 10250-2 (1)
Austenitic stainless steels	Weight up to 130 kg	Grade F316L according to ASTM A182 (2)

(1): Chemical specification as per RTD Srl "Purchasing Material Specification, LF2-43" (S355J2G3, RTD Srl internal designation LF2-43).

(2): Chemical specification as per RTD Srl "Purchasing Material Specification, F316L".

Open die forging by press, piercing, hot rolling operations as applicable; Carbon, C-Mn steels forgings are normalized; Austenitic stainless steels forgings are solution annealed. Minimum forging ratio 5:1.

### 2. DOCUMENTS AND DRAWINGS :

- "Description of RTD SRL's forging facility in Arsiero (VI)" Revision No.01 dated 18/03/2016 and issued by RTD Srl.

### 3. TEST REPORTS :

- For carbon, carbon manganese steels: Ref.02/2013 Rev.0 dated 19/04/2013, Ref.PM13064D, Ref.MT13064D dated 12/06/2013 issued by RTD Srl; Ref.34890 dated 22/05/2013, Ref.34885 dated 21/05/2013 issued by laboratory S.Marco Srl.

- For austenitic stainless steels: Ref.21/2015 Rev.0, Ref.22/2015 Rev.0, Ref.23/2015 Rev.0 dated 16/10/2015, Ref.15713/1, Ref.15713/2 dated 30/11/2015, Ref.PM15713A1, Ref.PM15713A2, Ref.PM15713B1, Ref.PM15713B2, Ref.PM15713C1, Ref.PM15713C2, Ref.US15713A, Ref.US15713B, Ref.US15713C dated 17/11/2015, issued by RTD Srl; Ref.40630 dated 17/11/2015, Ref.40631, Ref.40632, dated 17/11/2015 issued by laboratory S.Marco Srl.

### 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 forgings are to be supplied by RTD 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 :

Nil.

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