



Marine & Offshore  
Division

Certificate number: 38856/A1 BV

File number: MAT 25846-2014

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*

**SIDERFORGEROSI Group SPA**

Arsiero (Vicenza) - ITALY

*for the type of product*

**STEEL FORGINGS**

Carbon, carbon-manganese, low alloy, alloy austenitic and austenitic-ferritic stainless steel forgings of maximum weight 16 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: 30 Jun 2019**

**For BUREAU VERITAS,**

At BV VENEZIA, on 03 Nov 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 :

#### Arsiero Plant :

Type of steel	Maximum delivery condition	Typical tested grades
Carbon steels Carbon-manganese steels	Maximum weight 15 000 kg	Grade C45E according to EN 10083-1 Grade LF2 according to ASTM A350M Grades II and IV according to ASTM A765M Grade F65 according to ASTM A694M
Alloy steels Low-alloy steels	Maximum weight 10 000 kg	Grade 18CrNiMo7-6 according to EN 10084 Grade 34CrNiMo6 according to EN 10250-3 Grade F22 according to ASTM A182M
Austenitic stainless steels Austenitic-ferritic stainless steels	Maximum weight 16 000Kg	Grades F316/F316L according to ASTM A182M Grade F51 according to ASTM A182M

No steelmaking.

Open die forging, Ring rolling and heat treatment as applicable.

#### Cogollo Plant:

Type of steel	Maximum delivery condition	Typical tested grades
Carbon steels Carbon-manganese steels	Maximum weight 5000 kg	Grade LF2 according to ASTM A350M
Alloy steels Low-alloy steels	Maximum weight 5000 kg	Grade 18CrNiMo7-6 according to EN 10084
Austenitic stainless steels	Maximum weight 5000 Kg	Grades F316/F316L according to ASTM A182M

No steelmaking.

Open die forging, Ring rolling and heat treatment as applicable.

#### Busano Plant:

Type of steel	Maximum delivery condition	Typical tested grades
Alloy steels Low-alloy steels	Maximum weight 500 kg	Grade 42CrMo4 according to EN 10083

No steelmaking.

Closed die forging and heat treatment as applicable.

### 2. DOCUMENTS AND DRAWINGS :

As per following documents issued by FORGEROSS SPA:

- "Documentation supplied to Bureau Veritas for approval of work for manufacture of steel forgings - Section 1 to 5" dated 20 November 2009.

As per following documents issued by Metallurgica Siderforge s.r.l:

- Drawings N° GCH13129001 and N° GCHA3169001 dated November 2012.
- "Procedure for heat treatment of solution annealing carrying out on stainless steel - N° 7.10SS\_TT Rev.1" dated 15 July 2013.
- "Manufacturing capabilities" dated June 2012.
- "List of qualified suppliers" dated 29 April 2013.

- Flow chart of manufacturing process dated 2013.
- "Forging process N° 139/02/13 and 139/01/13" dated 30 April 2013.

As per following documents issued by SIDERFORGEROSS I Group SPA:

- "Specific information to be submitted for approval NR480, Sec 5" provided on July 2016.

### 3. TEST REPORTS :

As per following documents issued by FORGEROSS I SPA:

- "Documentation supplied to Bureau Veritas for approval of work for manufacture of steel forgings - Section 6 to 7" dated 20 November 2009.

As per following documents issued by Metallurgica Siderforge s.r.l:

- "Inspection certificates N°2628/06, N°2629/06, N°3154/06, N°3155/06,N°3978/06, N°3979/06, N°6210/06, N°6211/06, N°6212/06, N°6213/06"dated from July to December 2006
- "Inspection certificate N°2072/13, N°2068/13, N°2073/13, N°2074/13, N°2075/13, N°2076/13, N°2078/13, N°2077/13, N°2079/13, N°2080/13 and N°2081/13" dated 23 April 2013.
- "Test report N° 11590-2013and N° 34549" April 2013.
- Documentation for Approval of manufacturing plant in Busano Cavanese dated 20 January 2012

As per following documents issued by SIDERFORGEROSS I Group SPA:

- "Inspection certificates N° 57012, N° 57013, N° 57014 and 57015 dated 27 July 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 mentionned on reviewed drawings, as applicable.

### 5. PRODUCTION SURVEY REQUIREMENTS :

The steel forgings are to be supplied by SIDERFORGEROSS I Group SPA 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 number 22807/A1 BV, 19618/B1 BVand 38856/A0 BV.

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