



**Marine & Offshore  
Division**

**Certificate number:** 39988/A0 BV

**File number:** MAT 99821-2014

**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*

**ISEF S.r.l.**  
Carnago (VA) - ITALY

*for the type of product*

**STEEL FORGINGS**

Duplex austenitic-ferritic stainless steel forgings

**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: 13 Jan 2020**

**For BUREAU VERITAS,**

At BV GENOA, on 13 Jan 2015,

Gianni Pirovano



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 :

Square, round flanges types from DN15 to DN150.

Type of steel	Max. Dimensions & Weight	Typical tested grade
Duplex austenitic-ferritic stainless steels	Weight up to 34 kg Length up to 280mm Thickness up to 70mm	Grade F60 according to ASTM A182M

Closed die forging by press ; heat treatment solution annealing as applicable.

### 2. DOCUMENTS AND DRAWINGS :

As per following document issued by ISEF S.r.l.:

- "Manufacturing summary" No.MS-20 Rev.0 dated 07/11/2014,  
 - "Process flow chart" Rev.01 dated 07/11/2014, Ref. ICOL 1064.17 Rev.01,  
 - "Production equipment list" Rev.01 dated 17/04/2014; Ref.ICON006 dated 17/09/2012; Ref.ICON004 dated 12/05/2003;Ref.ICON011 dated 01/03/2012; Ref.ICON005 dated 26/10/2012; Ref.PGQ006 dated 30/10/2008; Ref.PGQ007 dated 30/10/2008.

- "Instruction I-07/12" Rev.01 dated 23/03/2012 issued by Sorbit S.r.l.

### 3. TEST REPORTS :

- As per following test reports issued by ISEF S.r.l.: Ref.2014/5457/PM, No. 2014/2838/LM, No.2014/2624/LC dated 16/10/2014, No.3654 V.1 & No. 56/14 dated 24/10/2014, No.2014/2992/A/LM dated 29/10/2014; No.48/14 dated 24/09/2014, No.2014/2564/LC dated 09/10/2014, No.2014/5354/PM dated 13/10/2014, No.3642 V.1 dated 15/10/2014, No.2014/2884/LM dated 18/10/2014, No.2014/3084/LM dated 08/11/2014.

### 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 ISEF S.r.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 \*\*\*