



Marine & Offshore  
Division

Certificate number: 44833/A0 BV

File number: MAT 105696-2016

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*

**M.E.G.A. S.p.A.**  
Scanzorosciate (BG) - ITALY

*for the type of product*

**STEEL FORGINGS**

Forgings in carbon, carbon-manganese, alloy, austenitic stainless and duplex 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: 06 Apr 2022**

**For BUREAU VERITAS,**

At BV VENEZIA, on 06 Apr 2017,

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 :**

Forgings fittings for marine applications such as tees, elbows, sleeves etc.

<b>Type of steel</b>	<b>Max. Weight</b>	<b>Typical tested grades</b>
Carbon steels Carbon-manganese steels	Weight up to 100 kg	Grade LF2 Cl.1 according to ASTM A350 Grade A105 according to ASTM A105
Alloy steels Low-alloy steels	Weight up to 50 kg	Grade F11 and F91 according to ASTM A182
Austenitic stainless steels Duplexand Superduplexstainless steels	Weight up to 100kg	Grade F304L, F51 and F53 according to ASTM A182

No steelmaking. Forgings made from round or square bars. Closed die forging by press; heat treatment as applicable. Minimum forging ratio 3:1.

### **2. DOCUMENTS AND DRAWINGS :**

As per following documentation issued by M.E.G.A. S.p.A.:

- Die forging facility, General brochure, List of manufacturing and handling equipment, List of quality control equipment, Organization chart, List of raw material supplier submitted March 2016.
- Quality personnel list QSF-L2 Rev.01 dated 04/02/2012,
- Procedure QC-11 Rev.02 dated 19/11/2013, QC-10 Rev.01 dated 16/06/2014, MFG-06 Rev.01 dated 02/01/2013, Ref.MFG-01 Rev.02 dated 14/02/2013, QC-08 Rev.02 16/06/2014, MFG-08 Rev.0 27/07/2011, MFG-07 Rev.0 22/07/2011.

### **3. TEST REPORTS :**

As per following reports issued by M.E.G.A. S.p.A.:

- Test reports Specimen NKBL for grade LF2 Cl.1 Heat 09/35987 dated July 2016.
- Test reports Specimen NKBX for grade F11 Heat 25302 dated July 2016.
- Test reports Specimen NKBU for grade A105 Heat 13/39248 dated July 2016.
- Test reports Specimen NKCA for grade F91 Heat 601403 FC-RM dated July 2016.
- Test reports Specimen NKCB for grade F304L Heat 426570 dated July 2016.
- Test reports Specimen NKCC for grade F51 Heat 92005 dated July 2016.
- Test reports Specimen NKCD for grade F53 Heat 91992 dated July 2016.

### **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 M.E.G.A. S.p.A. 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 \*\*\***