



# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM000021Y**  
Revision No:  
**5**

This is to certify:

That

**Friulforgia S.r.l.**  
**Località Pannellia, 55**  
**33039 - Sedegliano (UD),**  
**Italy**

is an approved manufacturer of  
**Steel Forgings**

in accordance with

**DNV rules for classification – Ships**  
**DNV OS-B101 – Metallic Materials**  
**DNV class programme – DNV-CP-0247 Steel forgings**

and the following particulars:

<b>Application area</b>	<b>Forgings for hull structures and equipment, Forgings for shafting and machinery,</b>
<b>Steel type</b>	<b>Carbon and carbon-manganese, Alloy</b>
<b>Forging method</b>	<b>See page 2 Open die forging,</b>
<b>Max. weight</b>	<b>see page 2</b>
<b>Heat treatment condition</b>	<b>See page 2</b>

Manufacturer(s) approved by this certificate is/are accepted to deliver according to DNV GL, DNV and GL rules.  
Materials to be applied to DNV classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2024-05-16**

This Certificate is valid until **2027-12-31**.

DNV local unit: **Italy/Malta CMC**

Approval Engineer: **Enno Brück**



for **DNV**

This document has been digitally signed and will  
therefore not have handwritten signature

Christian Wildhagen

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: AM 311

Revision: 2022-12

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## Particulars of the approval

### Forgings for hull structures and equipment

Steel type	Grade <sup>3)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
C and C-Mn	NV F400UW, NV F440UW, NV F480UW, NV F520UW, NV F560UW, NV F600UW	OD	25 000	N, NT, QT
Alloy	NV F550AW, NV F620AW, NV F650AW	OD	25 000	QT

### Forgings for shafting and machinery

Steel type	Grade <sup>3)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
C and C-Mn	NV F400U, NV F440U, NV F480U, NV F520U, NV F560U, NV F600U, NV F640U, NV F680U, NV F720U, NV F760U	OD	25 000	N, NT, QT
Alloy	NV F600A, NV F700A, NV F800A, NV F900A, NV F1000A, NV F1100A	OD	25 000	QT

Remarks:

- 1) OD: Open die forging
- 2) QT: Quenched and tempered  
 N: Normalised  
 NT: Normalised and tempered
- 3) Incl. equivalent grades in acc. to other standards