

# APPROVAL OF MANUFACTURER CERTIFICATE

**This is to certify:**

That  
**FOC Ciscato S.p.A.**  
**Seghe di Velo d'Astico, Vicenza,**  
**Italy**

is an approved manufacturer of  
**Steel Forgings**

in accordance with  
**DNV GL rules for classification – Ships**

and the following particulars:

<b>Application area</b>	<b>Forgings for shafting and machinery,          Forgings for gearing,          Stainless steel forgings</b>
<b>Steel type</b>	<b>Carbon and carbon-manganese,          Alloy,          Austenitic stainless,          Ferritic stainless,          Ferritic-austenitic (duplex) stainless</b>
<b>Forging method</b>	<b>See page 2</b>
<b>Max. weight</b>	<b>25 000 kg for Carbon and carbon-manganese, Alloy, Ferritic          stainless and austenitic stainless,          6 500 kg for 22Cr duplex stainless</b>
<b>Max. diameter / section</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 GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2020-10-09**

This Certificate is valid until **2023-10-30**.

for **DNV GL**

DNV GL local station: **Venice**

Approval Engineer: **Andreas Koch**

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**Thorsten Lohmann**  
**Head of Section**

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **263.11-003972-3**  
 Certificate No: **AMMM00001FV**  
 Revision No: **2**

## Particulars of the approval

### Forgings for gearing

Steel type	Grade <sup>3)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Max. diameter / length [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	VL F400U, VL F440U, VL F480U, VL F520U, VL F560U, VL F600U, VL F640U, VL F680U, VL F720U, VL F760U	CD, OD, RR	25 000	450 / 6000	N, NT, QT
Alloy	VL F600A, VL F700A, VL F800A, VL F900A, VL F1000A, VL F1100A	CD, OD, RR	25 000	450 / 6000	QT

### Forgings for shafting and machinery

Steel type	Grade <sup>3)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Max. diameter / length [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	VL F400U, VL F440U, VL F480U, VL F520U, VL F560U, VL F600U, VL F640U, VL F680U, VL F720U, VL F760U	CD, OD, RR	25 000	450 / 6000	N, NT, QT
Alloy	VL F600A, VL F700A, VL F800A, VL F900A, VL F1000A, VL F1100A	CD, OD, RR	25 000	450 / 6000	QT

### Ferritic steel forgings for low temperature service

Steel type	Grade <sup>3)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Max. diameter / length [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	VL F450L, VL F490L	CD, OD, RR	25 000	450 / 6000	N, NT, QT
Alloy	VL F3.5Ni, VL F5Ni, VL F9Ni	CD, OD, RR	25 000	450 / 6000	NT, QT

### Stainless steel forgings

Steel type	Grade <sup>3) 4)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Max. diameter / length [mm]	Heat treatment condition <sup>2)</sup>
Austenitic	CrNi	CD, OD	25 000	450 / 6000	SHT
	CrNiMo	CD, OD	25 000	450 / 6000	SHT
Ferritic-austenitic	22 Cr Duplex	CD, OD	6 500	220 / 4000	SHT

#### Remarks:

- 1) OD: Open die forging; CD: Closed die forging; RR: Ring Rolling
- 2) QT: Quenched and tempered; N: Normalised; NT: Normalised and tempered  
SHT: Solution Heat Treated (Solution Annealing)
- 3) Incl. equivalent grades in acc. to other standards
- 4) Stainless steel forgings shall be in accordance with recognized standards, e.g. EN 10222, ASTM A473/A965/A1049 and JIS G 3214, provided that supplementary requirements contained herein are also met. Recognition of other standards is subject to submission to the Society for evaluation.