

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM00000WJ**  
Revision No:  
**1**

**This is to certify:**

That

**FOMEC SPA**  
**Corso Inghilterra 40,**  
**12084 Mondovi CN,**  
**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 hull structures and equipment</b> <b>Forgings for shafting and machinery</b> <b>Forgings for gearing</b> <b>Forgings for boilers, pressure vessels and piping systems</b> <b>Ferritic steel forgings for low temperature service</b>
<b>Steel type</b>	<b>Carbon and carbon-manganese,</b> <b>see page 2</b>
<b>Forging method</b>	<b>Open die forging</b>
<b>Max. weight</b>	<b>25 000 kg</b>
<b>Max. diameter / section</b>	<b>See page 2</b>
<b>Heat treatment condition</b>	<b>See page 2</b>
<b>Additional approval conditions</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 **2019-05-20**

for **DNV GL**

This Certificate is valid until **2022-06-30**.

DNV GL local station: **Genoa**

Approval Engineer: **Christian Wildhagen**

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



Job Id: **263.11-003594-3**  
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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]	Max. diameter / section [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	VL F400UW, VL F440UW, VL F480UW, VL F520UW, VL F560UW, VL F600UW	OD	25 000	685	N, NT, QT

### Forgings for shafting and machinery

#### Forgings for gearing

Steel type	Grade <sup>3)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Max. diameter / section [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	OD	25 000	685	N, NT, QT

### Forgings for boilers, pressure vessels and piping systems

Steel type	Grade <sup>3)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Max. diameter / section [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	VL F450H, VL F490H	OD	25 000	685	N, NT, QT

### Ferritic steel forgings for low temperature service

Steel type	Grade <sup>3)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Max. diameter / section [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	VL F450L, VL F490L	OD	25 000	685	N, NT, QT

#### Remarks:

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