



# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:  
**AMMM000024J**  
Revision No:  
**2**

This is to certify:

That

**Officine Ambrogio Melesi & C. S.r.l.**  
**Largo de Vecchi 11, 23813 Cortenova LC,**  
**Italy**

is an approved manufacturer of  
**Steel Forgings**

in accordance with

**DNV GL rules for classification – Ships**  
**DNVGL-OS-B101 – Metallic materials**

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 boilers, pressure vessels and piping systems</b> <b>Stainless steel forgings</b>
<b>Steel type(s)</b>	<b>Alloy,</b> <b>Austenitic stainless,</b> <b>22Cr duplex stainless,</b> <b>25Cr duplex stainless</b>
<b>Forging method</b>	<b>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 **2021-09-17**

for **DNV**

This Certificate is valid until **2024-09-30**.

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

Approval Engineer: **Andreas Koch**

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

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Form code: AM 311

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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>
Alloy	VL F550AW, VL F620AW, VL F650AW	OD	2 500	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>
Alloy	VL F600A, VL F700A, VL F800A, VL F900A, VL F1000A, VL F1100A	OD	2 500	QT

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

Steel type	Grade <sup>3)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
Alloy	VL F0.5Mo	OD	2 500	NT, QT
	VL F1Cr0.5Mo	OD	2 500	NT, QT
	VL F2.25Cr1MoN	OD	2 500	N
	VL F2.25Cr1MoQT	OD	2 500	QT

### Stainless steel forgings

Steel type / grade <sup>3) 4)</sup>	Forging method <sup>1)</sup>	Max. weight [kg]	Heat treatment condition <sup>2)</sup>
Austenitic stainless	OD	2 500	SHT
22Cr duplex stainless	OD	1 500	SHT
25Cr duplex stainless	OD	1 500	SHT

#### Remarks:

- <sup>1)</sup> OD: Open die forging
- <sup>2)</sup> N: Normalised  
 NT: Normalised and tempered  
 QT: Quenched and tempered  
 SHT: Solution Heat Treated (Solution Annealing)
- <sup>3)</sup> Including equivalent grades to other standards
- <sup>4)</sup> Stainless steel forgings shall be in accordance with recognized standards, e.g. EN 10222, ASTM A473/A965/A1049 and JIS G 3214. Recognition of other standards is subject to submission to the Society for evaluation