

APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00001BK
Revision No:
1

This is to certify:

That

**Richard Neumayer Gesellschaft für Umformtechnik mbH
Hausach, Germany**

is an approved manufacturer of
Steel Forgings

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Forgings for hull structures and equipment Forgings for shafting and machinery Forgings for gearing Forgings for boilers, pressure vessels and piping systems
Steel type	Stainless steel forgings Carbon and carbon-manganese, Alloy, Austenitic stainless Ferritic-austenitic (duplex) stainless
Forging method	Closed die forging
Max. weight	See page 2
Heat treatment condition	See page 2

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 **2020-01-15**

for **DNV GL**

This Certificate is valid until **2022-12-31**.

DNV GL local station: **Augsburg**

Approval Engineer: **Stefan Röhr**

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Thorsten Lohmann
Head of Section



Job Id: **263.11-003636-3**
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Particulars of the approval

Forgings for hull structures and equipment

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
C and C-Mn	VL F400UW, VL F440UW, VL F480UW, VL F520UW, VL F560UW, VL F600UW	CD	40 kg	N, NT, QT
Alloy	VL F550AW, VL F600AW, VL F650AW			QT

Forgings for shafting and machinery /Forgings for gearing

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
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	40 kg	N, NT, QT
Alloy	VL F600A, VL F700A, VL F800A, VL F900A, VL F1000A, VL F1100A	CD	40 kg	QT

Forgings for boilers, pressure vessels and piping systems

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
C and C-Mn	VL F450H, VL F490H	CD	40 kg	N, NT, QT
Alloy	VL F0.5Mo, VL F1Cr0.5Mo	CD	40 kg	N, NT, QT
	VL F2.25Cr1Mo	CD	40 kg	N, QT

Stainless steel forgings

Steel type / grade ⁴⁾	Forging method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
Austenitic stainless	CD	40 kg	SHT
25Cr duplex stainless	CD	40 kg	SHT

Remarks:

- 1) CD: Closed die forging
- 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.