

# APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No: **AMMM00001GJ** Revision No:

This is to certify:

That

# Siepmann-Werke GmbH & Co. KG Emil-Siepmann-Straße 28, 59581 Warstein, Germany

is an approved manufacturer of **Steel Forgings** 

in accordance with

DNV rules for classification – Ships DNV class programme – DNV-CP-0247 Steel forgings

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

Stainless steel forgings

Steel type Carbon and carbon-manganese,

Alloy,

Austenitic stainless, Martensitic stainless, Ferritic stainless,

Austenitic-ferritic (Duplex) stainless

Forging method Closed die forging

Max. weight1 500 kgMax. thicknessSee page 2Heat treatment conditionSee 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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at Hamburg on 2023-04-25

for **DNV** 

**Head of Section** 

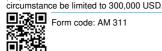
This Certificate is valid until 2026-03-31.

Approval Engineer: Andreas Koch

DNV local unit: Essen

Thorsten Lohmann

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



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Job Id: 263.11-002798-5 AMMM00001GJ Certificate No:

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## Particulars of the approval

#### Forgings for hull structures and equipment

Steel type	Grade <sup>3)</sup>	Forging method 1)	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	NV F400UW, NV F440UW, NV F480UW, NV F520UW, NV F560UW, NV F600UW	CD	1 500	500	N, NT, QT
Alloy	NV F550AW, NV F600AW, NV F650AW	CD	1 500	500	QT

#### Forgings for shafting and machinery Forgings for gearing

Steel type	Grade <sup>3)</sup>	Forging method 1)	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition 2)
C and C-Mn	NV F400U, NV F440U, NV F480U, NV F520U, NV F560U, NV F600U, NV F640U, NV F680U, NV F720U, NV F760U	CD	1 500	500	N, NT, QT
Alloy	NV F600A, NV F700A, NV F800A, NV F900A, NV F1000A, NV F1100A	CD	1 500	500	QT

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

Steel type	Grade <sup>3)</sup>	Forging method 1)	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition <sup>2)</sup>
C and C-Mn	NV F450H, NV F490H	CD	1 500	500	N, NT, QT
Alloy	NV F0.5Mo, NV F1Cr0.5Mo	CD	1 500	500	NT, QT
	NV F2.25Cr1Mo	CD	1 500	500	N, QT

#### Stainless steel forgings

Steel type / grade <sup>4)</sup>	Forging method 1)	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition <sup>2)</sup>
Austenitic stainless	CD	1 500	500	SHT
Martensitic stainless	CD	1 500	500	QT
Ferritic stainless	CD	1 500	500	SHT
22Cr duplex stainless	CD	1 500	500	SHT
25Cr duplex stainless	CD	1 500	500	SHT

## Remarks:

- 1) CD: Closed die forging
  2) QT: Quenched and tem QT: Quenched and tempered: N: Normalized: NT: Normalized and tempered SHT: Solution Heat Treated (Solution Annealing)
- Incl. equivalent grades in acc. to other standards
- 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

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