



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00000WT
Revision No:
2

This is to certify:

That

Schmiedewerk Stooss AG
Maienbrunnenstrasse 8, Hedingen,
Switzerland

is an approved manufacturer of
Steel Forgings

in accordance with
DNV rules for classification – Ships

and the following particulars:

Application area	Forgings for hull structures and equipment Forgings for shafting and machinery Forgings for gearing Stainless steel forgings
Steel type	Carbon and carbon-manganese, Alloy, Austenitic stainless, Martensitic stainless, Ferritic-austenitic (duplex) stainless
Forging method	Open die forging, ring rolling
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 classed object shall fulfill the material requirements in the applicable DNV class rules.

Issued at **Hamburg** on **2022-12-13**

for **DNV**

This Certificate is valid until **2025-12-31**.

DNV local unit: **Essen**

Approval Engineer: **Stefan Röhr**

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 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 circumstance be limited to 300,000 USD.



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	NV F400UW, NV F440UW, NV F480UW, NV F520UW, NV F560UW, NV F600UW	OD, RR	5 000	N, NT, QT
Alloy	NV F550AW, NV F600AW, NV F650AW	OD, RR	5 000	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	NV F400U, NV F440U, NV F480U, NV F520U, NV F560U, NV F600U, NV F640U, NV F680U, NV F720U, NV F760U	OD, RR	5 000	N, NT, QT
Alloy	NV F600A, NV F700A, NV F800A, NV F900A, NV F1000A, NV F1100A	OD, RR	5 000	QT

Stainless steel forgings

Steel type ⁴⁾	Forging method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
Austenitic	OD, RR	5 000	SHT
Martensitic	OD, RR	5 000	SHT
Ferritic-austenitic (22Cr Duplex, 25Cr Duplex)	OD, RR	5 000	SHT

Steels acc. other standards

Grade	Forging method ¹⁾	Max. weight [kg]	Heat treatment condition ²⁾
C-Mn and alloy steel acc. to EN 10083-2 and -3	OD, RR	5 000	Acc. standard
C-Mn and alloy steel acc. to EN 10250-2 and -3	OD, RR	5 000	Acc. standard
Austenitic stainless steel acc. to EN 10250-4	OD, RR	5 000	Acc. standard
Case hardening steels acc. to EN 10084	OD, RR	5 000	Acc. standard
P250GH acc. EN 10222-2	OD, RR	5 000	Acc. standard

Remarks:

- 1) OD: Open die forging; RR: Ring Rolling
- 2) QT: Quenched and tempered; N: Normalized; NT: Normalized 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