



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM0000355

This is to certify:

That

North American Forgemasters, Co.,
710 Moravia St New Castle PA 16101-3948,
USA

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 shafting and machinery
Steel type	Alloy
Forging method	Open die forging
Max. weight	See page 2
Max. thickness	See page 2
Heat treatment condition	See page 2
Additional approval conditions	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 **2024-03-04**

This Certificate is valid until **2027-03-03**.

DNV local unit: **Houston Offshore Services**

Approval Engineer: **Stefan Röhr**



for **DNV**

This document has been digitally signed and will
therefore not have handwritten signature
Christian Wildhagen

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.



Form code: AM 311

Revision: 2022-12

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Particulars of the approval

Forgings for shafting and machinery

Steel type	Grade ³⁾	Forging method ¹⁾	Max. weight [kg]	Max. thickness [mm]	Heat treatment condition ²⁾
Alloy	NV F600A, NV F700A, NV F800A, NV F900A, NV F1000A, NV F1100A	OD	68 000kg	900	AF

Remarks:

- ¹⁾ OD: Open die forging
- ²⁾ AF: As forged
- ³⁾ Incl. equivalent grades in acc. to other standards, e.g. low alloy chromium-molybdenum grade 40CrMo8 acc. to customer spec. E2413-NAF-03

Additional approval conditions

Manufacturing of crank bars in as forged (pre-) condition for subsequent manufacturing to DNV type- or plan approved crankshafts or crankshaft components by DNV approved workshops