



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM00001J0
Revision No:
2

This is to certify:

That

GN Rope Fittings - Grofsmederij Nieuwkoop B.V.
Transportweg 47, 2421 LT Nieuwkoop, Netherlands

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
Steel type	Forgings for shafting and machinery
Forging method	Carbon and carbon-manganese,
Max. weight	Alloy
Max. diameter / section	Open die
Heat treatment condition	2 500 kg
	300 mm
	See page 2

Manufacturer approved by this certificate is 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 **2023-07-19**

for **DNV**

This Certificate is valid until **2026-06-30**.

DNV local unit: **Netherlands CMC**

Approval Engineer: **Shylate Mahachi**

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.



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Particulars of the approval

Forgings for hull structures and equipment:

Steel type	Grade	Forging method ¹⁾	Max. weight [kg]	Max. diameter / section [mm]	Heat treatment condition ²⁾
C and C-Mn	NV F400UW, NV F440UW, NV F480UW, NV F520UW, NV F560UW, NV F600UW	OD	2 500	300	N, NT or QT
Alloy	NV F550AW, NV F600AW, NV F650AW	OD	2 500	300	QT

Forgings for shafting and machinery:

Steel type	Grade	Forging method ¹⁾	Max. weight [kg]	Max. diameter / section [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	OD	2 500	300	N, NT or QT
Alloy	NV F600A, NV F700A, NV F800A, NV F900A, NV F1000A, NV F1100A	OD	2 500	300	QT

Remarks:

¹⁾ OD: Open die forging.

²⁾ N: Normalised; NT: Normalised and Tempered; QT: Quenched and tempered.