



APPROVAL OF MANUFACTURER CERTIFICATE

Certificate No:
AMMM000020B
Revision No:
3

This is to certify:

That
GRÄF Verbindungsteile GmbH
Dieselstraße 26,
54634 Bitburg, Germany

is an approved manufacturer of
Bolt and Nuts

in accordance with
DNV rules for classification – Ships
DNV class programme – DNV-CP-0247 Steel forgings
DNV class programme – DNV-CP-0346 DNV approval of manufacturer scheme

and the following particulars:

Application area	Bolts and nuts
Products	Fasteners (bolts, screws, nuts, washers, etc.)
Steel type	Carbon, carbon-manganese, Alloy, Austenitic stainless, Martensitic stainless, Ferritic stainless, Nickel alloy, Non-magnetizable steels
Manufacturing method	Hot forming / machining / heat treatment
Dimensions	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 **2024-03-26**

for **DNV**

This Certificate is valid until **2027-03-31**.

DNV local unit: **Essen**

Approval Engineer: **Stefan Röhr**

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

Fasteners (bolts, screws, nuts, washers, etc.) ¹⁾

Steel typ / Material type	Max. diameter [mm]	Heat treatment condition ²⁾
Carbon, carbon-manganese	140	acc. to standard
Alloy	140	acc. to standard
Austenitic stainless	140	acc. to standard
Martensitic stainless	140	acc. to standard
Ferritic stainless	140	acc. to standard
Nickel alloy	140	acc. to standard
Non-magnetizable steels	140	acc. to standard

Remarks:

- 1) Bolts, screws, nuts and washers acc. to recognized standards for the approved steel- and material groups stated above
- 2) Possible additional requirements acc. to DNV-RU-SHIP-Pt2-Ch2-Sec6.9 (bolts and nuts) must be observed

Additional approval conditions

Heat treatment subcontracted to DNV approved heat treatment workshop