

APPROVAL OF MANUFACTURER CERTIFICATE

This is to certify:

That
GRÄF Verbindungsteile GmbH
Bitburg, Germany

is an approved manufacturer of
Bolt and Nuts

in accordance with
DNV GL rules for classification – Ships

and the following particulars:

Application area	Bolts and nuts
Products	Fasteners (bolts, screws, nuts, washers, etc.)
Steel type	Carbon, carbon-manganese, Austenitic stainless, Martensitic stainless, Ferritic stainless, Nickel alloy, Non-magnetizable steels
Manufacturing method	Alloy
Dimensions	Hot forming / machining / heat treatment
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 GL classed object shall fulfill the material requirements in the applicable DNV GL class rules.

Issued at **Hamburg** on **2018-03-27**

for **DNV GL**

This Certificate is valid until **2021-03-31**.

DNV GL local station: **Essen**

Approval Engineer: **Stefan Röhr**

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Thorsten Lohmann
Head of Section



Particulars of the approval

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

Steel type / grade	Max. diameter [mm]	Delivery condition
EN 10083-1, -2	140	acc. to standard
EN 10269	140	acc. to standard
EN 10272	140	acc. to standard
EN 10088-1, -3	140	acc. to standard
EN 10025	140	acc. to standard
DIN 17200	140	acc. to standard
DIN 17240	140	acc. to standard
DIN 17280	140	acc. to standard
DIN 17440	140	acc. to standard
DIN 267, Part 13	140	acc. to standard
ISO 3506-1, -2, -3	140	acc. to standard
ISO 898-1, -2	140	acc. to standard
VG 85539	140	acc. to standard
SEW 390	140	acc. to standard
SEW 400	140	acc. to standard