

TYPE APPROVAL CERTIFICATE

This is to certify:

That the NDur Link (Nova Connector)

with type designation(s)
NDS16-70.152.4.5_TA

Issued to

Schmiedestück-Vertrieb Feuerstein GmbH
Hattingen Nordrhein-Westfalen, Germany

is found to comply with
DNVGL-OS-E302 – Offshore mooring chain, Edition July 2015

Application :

To be used for Temporary and Mobile Mooring
as defined in DNVGL-OS-E301, Position Mooring, July 2015

This Certificate is valid until **2021-08-25**.

Issued at **Høvik** on **2016-08-26**

DNV GL local station: **Essen**

for **DNV GL**

Approval Engineer: **Pierre-Eric Moulia**

Inger-Helene Hals
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

Non-standard Kenter Shackles (slim with 4 tooth locking mechanism, fastlock stone with 4 noses) to connect mooring chains.

This approval covers for the moment sizes 76 mm and 84 mm in R4, R4S and R5 grades. The extension to all standard sizes shall be completed within 6 months upon the review of the detailed drawings for each size.

Application/Limitation

The approval is conditional that the manufacturer is approved by DNVGL to make R4, R4S and R5 grades material of designations given in the type approval drawings.

The shackles are to be used in connection with chains for Temporary and Mobile defined in Offshore Standard DNVGL-OS-E301 "Position Mooring" July 2015.

The shackles shall be manufactured and tested in accordance with Offshore Standard DNVGL-OS-E302 "Offshore Mooring Chain" July 2015.

Individual Product Certificate is to be issued for each delivery.

Type Approval documentation

Tests carried out

Fatigue tests with DNVGL surveyor were performed for this type approval.
For every order, testing shall be carried out according to DNVGL-OS-E302 July 2015.

Marking of product

Each shackle shall be marked according to Offshore Standard DNVGL-OS-E302 "Mooring Chain" July 2015 Ch2 Sec2 §1.4.1 & §3.9

Periodical assessment

For retention of the Type Approval, DNVGL surveyor shall perform a survey every 2 ½ year and before the expiry date of this Certificate to verify that the conditions of the type approval are complied with.