Certificate No:
TAS000031W

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Omega Shackle 120mm R4

with type designation(s)
SOM0050.4-21TA

Issued to
Schmiedestück-Vertrieb Feuerstein GmbH
Hattingen, Nordrhein-Westfalen, Germany

is found to comply with
DNVGL-OS-E302 – Offshore mooring chain, Edition July 2018

Application :

to be used for Temporary, Mobile and Long Term Mooring
as defined in Offshore Standard DNVGL-OS-E301 "Position Mooring" July 2020

Issued at **Høvik** on **2021-06-02**
This Certificate is valid until **2026-06-01**.
DNV local station: **Essen**

Approval Engineer: **Pierre-Eric Moulia**

for **DNV**

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.

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.

Product description

Omega Shackle, with R4S bow and R4 bolt, for mooring lines with breaking strength up to 13573 kN (NV R4 120 mm chain).

Application/Limitation

The Omega shackles are to be used in connection with chains for Temporary, Mobile Mooring or Long Term Mooring as defined in Offshore Standard DNVGL-OS-E301 Position Mooring July 2020.

The Omega shackles shall be manufactured and tested in accordance with Offshore Standard DNVGL-OS-E302 “Offshore Mooring Chain” July 2018.

The approval is conditional that the manufacturer is approved by DNVGL for R4 and R4S grade material.

Individual Product Certificate is to be issued for each delivery.

Type Approval documentation

Tests carried out

For every order, testing shall be carried out according to DNVGL-OS-E302 July 2018.

Marking of product

Each Omega shackle shall be marked according to Offshore Standard DNVGL-OS-E302 July 2018 Ch2 Sec2 §1.4 & §3.9.

Periodical assessment

For retention of this Type Approval, a DNVGL surveyor shall perform a periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days). The objective of the periodical assessment is to verify that the conditions for the Type Approval have not been altered. (Ref DNVGL-CP-0338 Type approval scheme).