



Certificate No:
TAS000041E

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Chafe Chains (Type A, B, C)

with type designation(s)

QAC230801D76R4A
QAC230801D76R4A-SDL
QAC230801D76R4FA
QAC230801D76R4FSA
QAC230801D76R4FEA
QAC230801D76R3B
QAC230801D76R3B-SDL
QAC230801D76R3B-SPL
QAC230801D76M3B
QAC230801D76M3B-SDL
QAC230801D54M3
QAC202309-OCIMF-RPT

Issued to

Qingdao Anchor Chain Co., Ltd.
Qingdao, Shandong, China

is found to comply with

DNV-OS-E302 – Offshore mooring chain, Edition July 2022

DNV rules for classification – Ships

OCIMF's Recommendations for Equipment Employed in the Bow Mooring of Conventional Tankers at Single Point Moorings, Fourth Edition May 2007

Application :

To be used for Mooring of conventional tankers at single point moorings, and/or FPSO

Issued at **Høvik** on **2023-10-09**

This Certificate is valid until **2028-10-08**.

for **DNV**

DNV local unit: **Qingdao**

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.

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.



Form code: TA 251

Revision: 2022-12

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Product description

This type approval certificate covers the following non-standard links:

- Ø95mm, Ø105mm and Ø117mm QRH pear links for Ø76mm studlink chafe chains
- Ø68mm special end links for Ø54mm studlink chafe chains
- Ø95mm special end link for Ø76mm studlink chafe chains
- Ø115mm hook link for Ø76mm studlink chafe chains
- Ø115mm QRH drop link for Ø76mm studlink chafe chains
- Ø76mm Step down link for Ø76mm studlink chafe chains

Application/Limitation

The approval is conditional that the manufacturer is approved by DNV for making K3 grade chains in Ø54mm size, and R3 & R4 grades chains in Ø 76 mm size.

The chafe chains are to be used for mooring of conventional tankers at single point moorings, and/or FPSO.

The K grade chains shall be manufactured and tested in accordance with DNV-RU-SHIP-Pt.3 Ch.11. July 2023. The R grade chains shall be manufactured and tested in accordance with Offshore Standard DNV-OS-E302 "Offshore Mooring Chain" July 2022.

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 DNV-RU-SHIP-Pt.3 Ch.11. July 2023 or DNV-OS-E302 July 2022.

Marking of product

Special End Link shall be marked according to DNV-RU-SHIP-Pt.3 Ch.11. July 2023 section 11 §5.8 or Offshore Standard DNV-OS-E302 "Mooring Chain" July 2022 Ch2 Sec2 §2.12

Periodical assessment

For retention of this Type Approval, a DNV 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 DNV-CP-0338 Type approval scheme).

Validity of this certificate can be checked at <https://approvalfinder.dnv.com>