



Certificate no.:
TAS00004FF

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Irizar Forge Smart Con-Link

with type designation(s)
IFSCL.70120.00.TA.23

issued to

FORJAS IRIZAR, S.L.
Lazkao, Gipuzkoa, Spain

is found to comply with

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

Application:

To be used for Temporary and Mobile Mooring
as defined in DNV-OS-E301, Position Mooring, July 2021

Issued at **Høvik** on **2024-10-29**

This Certificate is valid until **2029-10-28**.

DNV local unit: **Bilbao**

for **DNV**

Approval Engineer: **Pierre-Eric Moulia**

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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 USD 300 000.

Product description

Non-standard slim Kenter Shackles, with 2 tooth locking mechanism to connect mooring chains.

This approval covers sizes from 70 to 120 mm in R4, R4S and R5 grades.

Application/Limitation

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

The shackles are to be used in connection with mooring lines for Temporary and Mobile Mooring as defined in Offshore Standard DNV-OS-E301 "Position Mooring" July 2021.

The shackles 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.

Since one out of three fatigue tests has been performed when the certificate was issued, the Irizar Forge Smart Con-Link shall be inspected every 2 years (ref DNV-OS-E302 Oct 2013 Ch.2 Sec.2 § 3.7). When the two remaining tests are successfully performed, this 2 years inspection requirement will be removed.

Type Approval documentation

Tests carried out

Fatigue test with DNV Surveyor was performed for this type approval.
For every order, testing shall be carried out according to DNV-OS-E302 July 2022.

Marking of product

Each shackle shall be marked according to Offshore Standard DNV-OS-E302 "Mooring Chain" July 2022 Ch2 Sec2 §1.4 & §3.9

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/>