DNV·GL

Certificate No:
TAS00001HR

TYPE APPROVAL CERTIFICATE

This is to certify:

That the LTM D-Shackle MBL 710 ton

with type designation(s)
32105125

Issued to
GN Rope Fittings - Grofsmederij Nieuwkoop B.V.
Nieuwkoop, Netherlands

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

Application :

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

Issued at **Høvik** on **2018-06-29**
This Certificate is valid until **2023-06-30**.
DNV GL local station: **Rotterdam**

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.

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Job Id: **262.1-017485-1**
Certificate No: **TAS00001HR**

Certificate TAS00001HR replaces S-8096 that expired on 2018-06-30

Product description

D shackle for mooring chains with sizes up to grade NV R4 82,5 mm diameter (6975 kN).

Application/Limitation

The D shackle is to be used in Temporary, Mobile and Long Term Mooring lines as defined in Offshore Standard DNVGL-OS-E301 Position Mooring July 2015.

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

The approval is conditional that manufacturer is holding an Approval of Manufacturer DNVGL Certificate.

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 2015.

The 4886 kN proof load indicated on the approved drawing is for studless chain. For studlink chain (mobile mooring) the proof load shall be 5498 kN.

Marking of product

Each shackle shall be marked according to Offshore Standard DNVGL-OS-E302 July 2015 Ch2 Sec2 §1.4 & §3.9.

Periodical assessment

For retention of the Type Approval, a DNVGL surveyor shall perform a survey after 2 years and another one after 3,5 years (+/- 90 days), to verify that the type approval is complied with.