

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cargo Securing Devices**

with type designation(s)
Twistlock LK.CS-3-00

Issued to

is found to comply with
DNV GL rules for classification – Ships

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

SWL, tension (kN) 175
SWL, shear (kN) 125
SWL, compr. (kN) -

Issued at **Hamburg** on **2022-02-03**

This Certificate is valid until **2027-02-02**.

DNV GL local station: **Yantai Station**

Approval Engineer: **Mark-Oliver Wobig**



for **DNV GL**
Digitally Signed By: Abt,
Daniel
Location: DNVGL Hamburg
Signing Date: 2017-02-03

on behalf of Andree Orth
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

Twistlock LK.CS-3-00

Application/Limitation

<u>Load</u>	<u>Tension [kN]</u>	<u>Shear [kN]</u>
Test Load	218	156
Breaking Load	350	250

Tests to be carried out:

- Production testing: At least 2% of the items delivered are to be selected and subjected to the test load.
- Material tests are to be included energy testing at -20°C, with the impact energy requirements acc. to DNVGL-ST-0068. The material shall be according to the approved drawings. Material certificates shall be 3.1 acc. to DIN EN 10204.

Type Approval documentation

Drawing No. Rev. Title _____

LK.CS-3-00 Twistlock LK.CS-3 (6 sheets)

Approval letter:
MTPNO876/IGANT/262.1-004730-J-34, dated 2009-04-03.

Tests carried out

The prototype test was carried out in Yantai, P.R. China, dated 2016-12-12 in accordance with the DNVGL-ST-0068.

Marking of product

Each item shall be marked by manufacturer for traceability.

Periodical Assessment

For retention of the Type Approval, a DNVGL surveyor shall perform a survey after 2 and 3.5 years, to verify that the Type Approval is complied with.