

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cargo Securing Devices**with type designation(s)
Twistlock T-2.3D

Issued to

GERMAN LASHING Robert Böck GmbH
Bremen, Germanyis 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) 250**
SWL, shear (kN) 210
SWL, lifting (kN) 125Issued at **Hamburg** on **2020-01-24**This Certificate is valid until **2025-01-23**.DNV GL local station: **Essen**for **DNV GL**Approval Engineer: **Mark-Oliver Wobig**

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

Application/Limitation

Load	Tension [kN]	Shear [kN]	Lifting [kN]
Test Load	313	263	250
Breaking Load	500	420	500

Tests to be carried out:

- Production testing for twistlock: At least 2% of the items delivered are to be selected and subjected to the test load.
- Production testing for twistlock for lifting: Fittings used for lifting purposes require single testing and corresponding certification.
- Material tests for twistlocks are to be included energy testing at -20°C, with the impact energy requirements acc. to DNVGL-CP-0068, for lifting acc. to DNVGL-ST-0377. The material shall be according to the approved drawings. Material certificates shall be 3.1 acc. to ISO 10474:2013.

Type Approval documentation

Drawing No.	Rev.	Title
T-23D_Complete	d	Twistlock T-2.3 Complete
T-23CD_Housing right	n	Housing right -Lost Wax Casted
T-23HC_Housing left	l	Housing left -Lost Wax Casted
T-23D_Cone_e	e	Cone
T-23D_Mouthpiece_h	h	Mouthpiece -Lost Wax Casted
T-23D_Haulage Cable	f	Haulage Cable (Pg. 1 and 2)
T-23_Spring short	b	Spring short
T-23_Spring long	c	Spring long

Test report No.: 1230, dated 2019-12-02

Tests carried out

The prototype test was carried out in Nanjing, P.R. China, dated 2019-12-03 in accordance with the DNVGL-CP-0068 and DNV-GL-ST-0377.

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 + 3.5 years, to verify that the Type Approval is complied with.