

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cargo Securing Devices

with type designation(s)
Twistlock TL-A

Issued to

SEC Ship's Equipment Centre Bremen GmbH & Co. KG
Bremen, Germany

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) 250
SWL, offshore (kN) 100
SWL, shear. (kN) 210
SWL, compr. (kN) 1200

Issued at **Hamburg** on **2018-11-23**

This Certificate is valid until **2023-11-22**.

DNV GL local station: **Bremerhaven**

for **DNV GL**

Approval Engineer: **Mark-Oliver Wobig**

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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

Semi-Automatic Twistlock TL-A for use on offshore containers Schlumberger OSU-PA and OSU-PB

Application/Limitation

Load	Tension [kN]	Tension Offshore [kN]	Shear [kN]	Compression [kN]
Test Load	313	275	263	1500
Breaking Load	500	500	420	-

Tests to be carried out:

- Production testing DNV GL CP-0068 Container Securing: At least 2% of the items delivered are to be selected and subjected to the test load.
- Production testing DNV GL-ST-E271 2.7-1Offshore Containers: At least 10% 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-CP-0068 and DNV GL-ST-E271 2.7-1. The material shall be according to the approved drawings. Material certificates shall be 3.1 acc. to ISO10474:2013.
- These twistlocks are approved for special application on offshore containers type OSU-PA and OSU-PB made by Schlumberger Vector SAS.

Type Approval documentation

Drawing No.	Rev.	Title
P - TL 5023 C	C	Twistlock (Pg.1 and 2)
P - TL 5023 C	C	Zusammenstellung Twistlock TL-A (Pg.1 and 2)
P - TL 5003 B	B	Locking Device Arretierung (Pg.1 and 2)
P - TL 5019 B	B	Semi-Automatic-Twistlock left half (Pg.1 and 2)
P - TL 5020 C	C	Semi-Automatic-Twistlock right half (Pg.1 and 2)
P - TL 7037		Spring for Twistlock
P - TL 7086 F	F	Traction Rope
P - TL 7160		Traction Rope
P - TL 7181 A	A	Twistlock Cone for TL-A/L (Pg.1,2 and 3)
P - TL 7182		Twistlock Cone for TL-A (GA)... with spring
P - TL 7183 A	A	Rotation Spring

Tests carried out

The prototype test was carried out in Shanghai, P.R. China, dated 2018-11-02 in accordance with the DNVGL-CP-0068 Container Securing and DNV GL-ST-E271 2.7-1Offshore Containers.

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.