Certificate no.:
TAS00004E6

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Container Equipment

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 standard DNV-ST-E271 – 2.7-1 Offshore containers, March 2023

Application:

Semi-automatic twistlock for use on offshore containers

Issued at **Aberdeen** on **2024-09-04**
This Certificate is valid until **2029-09-03**.
DNV local unit: **Bremerhaven**

for **DNV**

Approval Engineer: **Elisabeth Legg**

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 300,000 USD.

Manufactured by

DNV number: 110985

Local DNV office: Shanghai

Responsibility

SEC Ship's Equipment Centre Bremen GmbH & Co. KG takes full responsibility that both the design and production are in compliance with the Rules, Standards and / or Regulations listed on page 1.

Product description

These twistlocks are only approved for special applications, to connect offshore containers during lifting. They are not to be used in the lifting arrangement, only between units.

Application/Limitation

Tensile loads are based on the safety factors defined in DNV-ST-E271.

	Tension (offshore) [kN]	Shear [kN]	Compression [kN]
Proof test load	275	263	1500
Breaking load	500	420	
SWL	100	210	1200

Material shall be impact tested at -20˚C and Charpy impact energy shall be in accordance with DNV-ST-E271 Figure 3-1.
Twistlocks shall be delivered with Inspection certificate type 3.1 material certificate in accordance with DNV-ST-E271 Table 3-6.
Twistlocks shall be designed to prevent accidental opening and shall have no parts protruding outside the outer surfaces of the assembled unit.

DNV surveyor shall witness important production and test events and issue a product certificate for each batch of items. The product certificate shall include the following information, as a minimum:

- name and address of manufacturer
- type designation of the product
- material designation: type / grade of material used and heat number. (ISO and/or EN standard)
- safe working load
- identification marking for proper traceability in production
- test procedures
- test result of strength tests
- impact test results

Type Approval documentation

Tests carried out

Prototype testing

Prototypes tested to breaking load in tension.

Production testing

At least 10 % of the items delivered are to be selected and subjected to a proof load test equivalent to 2 SWL.
All twistlocks are to be function tested after the proof load testing has been completed.

Marking of product

Each item shall be clearly marked, for traceability

Periodical assessment

In order to maintain the validity of the type approval certificate, periodical assessments should be carried out according to DNV-SE-0284 at 2 and 3.5 year intervals. Periodical assessments will, when possible, be harmonised with other surveys and audits carried out.

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in https://approvalfinder.dnv.com