Certificate No:
TAS00003NH

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Cargo Securing Devices

with type designation(s)
Fully Automatic Twistlock FA-8DS

Issued to
Minato Seiki Iron Works Co., Ltd.
Ibaraki, Osaka Pref, Japan

is found to comply with
DNV class programme DNV-CP-0068 – General – Certification of container securing devices

Application :

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

SWL, tension (kN)	**250**
SWL, shear (kN)	**210**

Issued at **Hamburg** on **2022-11-16**
This Certificate is valid until **2027-11-15**.
DNV local unit: **Shanghai**

Approval Engineer: **Mark-Oliver Wobig**

for **DNV**

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.

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.

Product description

Fully Automatic Twistlock, Type FA-8DS Rev.A

Application/Limitation

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

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 impact energy testing at -20°C, with the impact energy requirements acc. to DNV-CP-0068. 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
S34-21008800	A	Fully Automatic Twistlock (FA-8DS Rev.A)
S34-21008801	A	Body (FA-8DS-1)
S34-21008802	A	Latch Spring (FA-8DS-2)
S34-21008803	A	Latch (FA-8DS-3)
S34-21008804	A	Cap Screw Nut (FA-8DS-4.8)
S34-21008806	A	Stopper Spring (FA-8DS-6)
S34-21008807	A	Stopper Pin (FA-8DS-7)

Drawing approval: 262.1-038663-1 dated 2022-11-16
Prototype test report, No. ZS20221101 dated 2022-11-10

Tests carried out

The prototype test was carried out in Shanghai, P.R. China, dated 2022-11-10 in accordance with the DNV-CP-0068.
The operational test was carried out in Valluhn, Germany, dated 2022-11-09 in accordance with the DNV-CP-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.

Manufacturer

Suzhou Joysea Engineering & Trading Co. Ltd., No.8 Huimin Rd., Dianzhan Ind. Zone, Xinmao Town, Taicang, Jiangsu Province, China