TYPE APPROVAL CERTIFICATE

Certificate No:
TAS00001CW
Revision No:
1

This is to certify:

That the Fender

with type designation(s)
FE Element Fender

Issued to
ShibataFenderTeam AG
Hamburg, **Germany**

is found to comply with
Guidelines for the Design of Fender Systems : 2002 (PIANC 2002)

Application :

Moulded rubber fender for marine application

Issued at **Hamburg** on **2023-03-28**

This Certificate is valid until **2028-03-27** .
DNV local unit: **Hamburg**

Approval Engineer: **Joachim Rehbein**

for **DNV**
Digitally Signed By: Dau, Gabi
Location: DNV Hamburg, Germany
Signing Date: 29.03.2023 , on behalf of

Thorsten Lohmann
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
FE Element Fender: Moulded rubber

Size H [mm]: FE 250 up to FE 2000

Assessed production sites
- Shibata Industrial Co., Ltd., 1058 Nakao, Uozumi-cho, Akashi-city, Hyogo-pref., 674-0082, Japan;
- Shibata Asia Sdn. Bhd., No.7, Jalan Korporat 1B/KU9, Taman Perindustrian Meru, 42200 Klang, Selangor, Malaysia.

Application/Limitation
This type of fender is approved according to the 'Guideline for the design of Fender Systems: 2002, Appendix A – Constant Velocity' issued by the International Navigation Association (PIANC).

Any significant changes in design and/or quality of the material will render the approval invalid.

If there are any changes to the product design, the design documentation and / or the TE certificate, information about this and revised documentation shall be sent to the DNV local office.

This Type Approval certificate is not valid for designs, components, equipment, systems or products which are subject to classification by DNV.

Type Approval documentation
- Initial TE – documentation for certificate KBZ 1156 HH

Renewal documentation:
- Renewal TA Assessment Report (90.02a), 2017-11-28 at Shibata Industrial Co, Japan
- Renewal TA Assessment Report (90.02a), 2017-11-21 at Shibata Asia Sdn. Bhd., Malaysia
- Supporting documentation (TDS, product catalogue 08/2017 E, deflection and material tests October and November 2016 at Shibata Asia Sdn. Bhd., Malaysia)

Renewal **TAS00001CW rev.01:**
- Application for DNV type approval TAA901 of 2022-06-14;
- Type approval assessment report TA401 of 2022-11-10 at ShibataFenderTeam AG, Hamburg, Germany;
- Supporting documentation:
  Inspection report for FE;
  SGS FE750 Fender Inspection Certificate SFTG-4617-2020;
  SFTG-5171-2021 Bihar International Saudi Arabia FE1600 (G3.0);
  # SFT_Physical Properties + Fender Testing;
  FE Element Fenders - full system.

Tests carried out
According to Type Approval documentation

Marking of product
Product shall be marked with manufacturer's name and type designation.

The marking is to be carried out in such a way that it is visible, legible and indelible. The marking of product is to enable traceability to the DNV type approval certificate.

Periodical assessment
Periodical assessments will be carried out bi-yearly (Certificate Retention) and at renewal after 5 years (Certificate Renewal).
When possible, these assessments may be harmonised with normal surveys for product certification and / or 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

END OF CERTIFICATE