

# TYPE EXAMINATION CERTIFICATE

Certificate No:  
**TAS000015R**  
Revision No:  
**2**

**This is to certify:**

**That the Fender**

with type designation(s)  
**CF (Cylindrical Fender)**

Issued to

**Trelleborg Marine Engineering (Qingdao) Co., Ltd.**  
**Qingdao City, China**

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

**Application :**

**Solid rubber cylindrical fender for marine application**

Issued at **Hamburg** on **2019-12-17**

for **DNV GL**

This Certificate is valid until **2022-07-31**.

DNV GL local station: **Qingdao CMC**

Approval Engineer: **Joachim Rehbein**

**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 Examination Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-026278-3**  
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## Product description

CF: Solid rubber cylindrical fender

Size: 100 x 50 - 2700 x 1300 [OD x ID mm]  
Grade: refer to Technical Manual

## Assessed production site

Trelleborg Marine Engineering (Qingdao) Co., Ltd  
No. 35, Ronghai 4 Road, Chengyang Qingdao 266111, China

## 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 GL local office.

## Type Examination documentation

Initial TE – documentation for KBZ 1239 HH with reference number 14-044396, dated 2014-05-14.  
Durability test report TESQ-20180102, dated 2018-01-05, carried out 2018-01-02 to 2018-01-05.

Renewal documentation:

- Tye Approval Assesment Report, dated 2017-06-14, with addendum

Revision 2: change of name to Trelleborg Marine Engineering (Qingdao) Co., Ltd

## Tests carried out

- Deflection performance tests, dated 2017

## 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 GL Type Examination Certificate.

## Periodical assessment

For retention of the TE certificate in its validity period is that periodical assessments are successfully carried out.

The objective of the periodical assessment is to verify that the conditions for the TE have not been altered.

Periodical assessments will be carried out bi-yearly. When possible, this assessments may be harmonised with normal surveys for product certification and / or other surveys and audits carried out.

A Type Approval Certificate may be renewed for a further period of validity, at the customer's request. An application for renewal shall be submitted to the DNV GL local office.

END OF CERTIFICATE