

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Fender**

with type designation(s)  
**Floating Pneumatic Fender**

Issued to

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

is found to comply with  
**ISO 17357-1:2014 Ships and marine technology – Floating pneumatic rubber fenders – Part 1: High pressure**

**Application :**

**Pneumatic fender for marine application**

Issued at **Hamburg** on **2020-01-23**

for **DNV GL**

This Certificate is valid until **2025-01-22** .

DNV GL local unit: **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 Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-032516-1**  
Certificate No: **TAS00002CD**

## Product description

Pneumatic rubber fender

Size [mm, diameter \* length]: 300 \* 500 up to 4500 \* 12000

Type: Type I - net type  
Type I single - net type, one end flange  
Type II - sling type

## Assessed production site

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

## Application/Limitation

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

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 certificate, information about this and revised documentation shall be sent to the DNV GL local office.

## Type Approval documentation

### Initial approval:

- Test certificate 15-043212, dated 2015-08-02.
- Test report TESQ-F-2015 issued by Trelleborg Engineered Systems (Qingdao) witnessed by DNVGL
- Test report GZIN1507028628MR issued by SGS
- Workshop inspection report F505, 2014-07-01

### Renewal documentation:

- Tye Approval Assesment Report, dated 2017-06-14, with addendum
- Change of name to Trelleborg Marine Engineering (Qingdao) Co., Ltd
- Ten Delivery certificates, 2018 to 2019
- Material test reports, compound tests, 2016 to 2019

## Tests carried out

Test and inspection for commercial fenders acc. ISO 17357-1.

## 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 Approval Certificate.

## Periodical assessment

A condition for retention of the TA certificate in its validity period is that periodical assessments are successfully carried out.

For retention of the Type Approval, a DNV GL Surveyor shall perform periodical assessment after 2 years and after 3.5 years to verify that the conditions for the Type Approval are complied with. Refer to DNVGL-CP-0338, Sec.4.

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.dnvgl.com>

END OF CERTIFICATE