

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Fender**

with type designation(s)
Floating Pneumatic Fender

Issued to

Shandong Nanhai Airbag Engineering Co., Ltd.
Jinan, 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 **2021-01-15**

This Certificate is valid until **2026-01-14** .

for **DNV GL**

DNV GL local unit: **Hamburg – CMC North/East**

Approval Engineer: **Joachim Rehbein**

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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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **262.1-034250-1**
Certificate No: **TAS00002VB**

Product description

Pneumatic rubber fender

Size diameter × length [mm]: 500 × 1,000 up to 4,500 × 12,000

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

Assessed production site

Shandong Nanhai Airbag Engineering Co., Ltd.,
Donghao Industry Park, Mingshui Economic Development Zone, Zhangqiu, Shandong, 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.

Type Approval documentation

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