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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 21482-2019

Replacing GB/T 21482-2008

Ships and marine technology - Pneumatic rubber fenders

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 21482-2008 "Boat and marine technology inflatable rubber ball".

Compared with GB/T 21482-2008, the main changes of this standard are as follows.

- Increased the content of the low pressure ball (see Chapter 3 ~ Chapter 7 and Appendix C);
- Increased a type of high-pressure ball "single-ended type I" (see Chapters 3 through 7);
- Removed the 2008 version of Appendix A (see Appendix A of the 2018 version);
- Added a new Appendix A "High Pressure Ball Curtain Layer" (see Appendix A);
- Added Appendix B "End flanges and coils, metal parts" (see Appendix B);
- Added Appendix C "Ordering Information" (see Appendix C).

This standard uses the redrafting method with reference to ISO 17357-1:2014 "Ship and marine technology floating inflatable rubber ball part 1.

High Pressure and ISO 17357-2:2014 "Ship and Offshore Technology Floating Inflatable Rubber Balls Part 2. Low Pressure", with

The degree of conformity between ISO 17357-1:2014 and ISO 17357-2:2014 is non-equivalent.

This standard is proposed and managed by the National Marine Ship Standardization Technical Committee (SAC/TC12).

This standard was drafted. Jinan Changlin Airbag Container Factory Co., Ltd., China Shipbuilding Industry Comprehensive Technology and Economic Research Institute.

1 Scope

This standard specifies the classification, requirements, test methods and inspection rules for pneumatic rubber balls for ships and offshore installations (hereinafter referred to as "the ball").

Signs, etc.

This standard is applicable to the design, manufacture and acceptance of the ball used for the protection of the ship's and offshore installations when anchoring or mooring.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 528 Determination of tensile stress-strain properties of vulcanized rubber or thermoplastic rubber

GB/T 529 Determination of tear strength of rubber or thermoplastic rubber (pants, right angles and crescents)

Rubber and rubber -- Test methods for hardness of indented rubber -- Part 1 . Shore hardness test method (Shore hardness)

GB/T 3512 vulcanized rubber or thermoplastic rubber hot air accelerated aging and heat test

GB/T 6031 Determination of hardness of vulcanized rubber or thermoplastic rubber (hardness between 10 IRHD and 100 IRHD)

Rubber and rubber -- Determination of compression set - Part 1 . normal temperature and temperature conditions

Static tensile test of GB/T 7762 vulcanized rubber or thermoplastic rubber resistant to ozone cracking

GB/T 9881-2008 rubber terminology

GB/T 14800-2010 Geosynthetics static burst test (CBR method)

Determination of tensile strength and elongation at break of HG/T 2580 rubber or plastic coated fabrics

Rubber and plastics -- Determination of the tearing resistance of fabrics -- Part 1 . Constant speed tearing method

HG/T 3052 Determination of bond strength of rubber or plastic coated fabric coatings

ASTMD751 Standard Test Method for Coated Fabrics
(Standardtestmethodforcoatedfabrics)

FED-STD-191A Fabric Test Method (Textiletestmethods)

3 Terms and definitions

The following terms and definitions as defined in GB/T 9881-2008 apply to this document.

3.1

Absorbed energy guaranteedenergyabsorption; GEA

The energy that can be absorbed by the ball when it is compressed without permanent deformation or damage.

3.2

Initial internal pressure initialinternalpressure

The internal gas pressure when the ball is uncompressed.

3.3

Reaction forceforce

The force that acts on the ship or dock when the ball is compressed.

Note. The reaction force is equal to the internal pressure when the ball is compressed multiplied by the area of the ball that is in contact with the ship or dock.