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

GB/T 19919-2025

Replacing GB/T 19919-2005

**Small craft - Windows, portlights, hatches, deadlights and doors
- Strength and watertightness requirements**

小艇窗、舷窗、舱口盖、风暴盖和门强度和密封性要求

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents". Drafting.

This document supersedes GB/T 19919-2005 "Strength and Sealing Requirements for Small Boat Windows, Portholes, Hatch Covers, Storm Covers and Doors". Compared with GB/T 19919-2005, apart from structural adjustments and editorial changes, the main technical changes are as follows.

- Added content on terms and definitions (see Chapter 3);
- The requirements for water tightness have been changed (see 4.3.1, 4.4.1 in the 2005 version);
- The size restrictions for glass installed in Zone I of the hull have been changed (see 6.3.1.1, 2005 version of 6.3.1.1);
- The requirements for glass use in Zone IIa have been revised (see 6.3.2, 2005 version of 6.3.2);
- The requirement for continuous deck hatch covers has been added (see 6.3.3);

- Added requirements for breaching escape ramps on multihull boats (see 6.3.8);
- Added definitions and requirements for commercially available components (see 6.3.9);
- The requirement for simply supported plates has been added (see 7.2.9, 7.2.10);
- A direct calculation method for laminated glass has been added (see 7.3);
- Added advanced calculation methods for reinforced panels (excluding glass) (see 7.4);
- Pressure testing requirements have been added (see D.2.1);
- The requirement for watertightness testing has been added (see D.2.2);
- Requirements for mechanical connection testing have been added (see D.3);
- The separation test method has been changed (see D.4.3, D.3.3 in the 2005 edition).

This document is equivalent to ISO 12216:2020 "Strength and sealing requirements for windows, portholes, hatch covers, storm covers and doors of small boats".

The following minimal editorial changes have been made to this document.

- Incorporates the amendments to ISO 12216:2020/Amd1:2022, indicated in the margin of the relevant clauses with double vertical lines (||).

1 Scope

This document specifies the technical requirements and testing methods for the windows, portholes, hatch covers, storm covers and doors on small boats with a hull length not exceeding 24m, as defined in GB/T 19916-2025.

The type of boat, design category, and location of the aforementioned components must be considered.

The components considered in this document are only those that play a crucial role in the watertightness of the small boat.

This document does not include devices with openings or non-openings installed below Zone I (see 3.5.2).

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document.

For references to documents with a date, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies to this document.

GB/T 20895.1-2025 Assessment and Classification of Stability and Buoyancy of Small

Boats - Part 1: Non-sail boats with a hull length of not less than 6m Boat (ISO 12217-1:2022, IDT)

Note: There are no technical differences between the content referenced in GB/T 20895.1-2025 and the content referenced in ISO 12217-1:2015.

GB/T 20895.2-2025 Assessment and Classification of Stability and Buoyancy of Small Boats - Part 1: Sailing Boats with Hull Length Not Less Than 6m (ISO 12217-2:2022, IDT)

Note: The content referenced in GB/T 20895.2-2025 is not technically different from the content referenced in ISO 12217-2:2015.

GB/T 20895.3-2025 Assessment and Classification of Stability and Buoyancy of Small Boats - Part 1: Boats with Hull Length Less Than 6m (ISO 12217-3:2022, IDT)

Note: The content referenced in GB/T 20895.3-2025 is not technically different from the content referenced in ISO 12217-3:2015.

GB/T 33196.1-2016 Strength, watertightness and weathertightness of viewing windows on large yachts - Part 1: Design of independent glass openings Standards, materials, framework and testing (ISO 11336-1:2012, IDT)

ISO 6603-1:2000 Plastics - Determination of punching properties of rigid plastics - Part 1: Non-instrumental impact testing

EN 356:1999 Glass in building - Safety glass. Tests and classification of glass against impact.

EN 1063:1999 Glass in building - Safety glass. Tests and classification for bullet impact resistance

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1.1 Opening

Cuts in the hull of a small boat, such as the hull structure or superstructure.