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

GB/T 18573-2009

Replacing GB/T 18573-2001

Small craft -- Electrical devices -- Lightning-protection systems

小艇 电气装置 避雷保护

(English Translation)

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Foreword

This standard is equivalent to using ISO 10134.2003Ed2 "Small craft - Electrical devices - Lightning protection." this standard replaces GB/T 18573-2001 "Small craft - Electrical devices - Lightning protection." this standard compared with GB/T 18573-2001, there are the following changes.

- Increase in Chapter 1, "Note.", indicating the possibility of boats being struck by lightning;
- Increase in Chapter 2, the term "side discharge", "lightning conductor jumper", "lightning conductor earth";
- 3.2 lightning grounding conductor cross-sectional area from 8mm² increased to 21mm²;
- 3.3 jumper lightning conductor cross-sectional area from 8mm² increased to 13mm²;
- 4.2.1 linear conductor cross-sectional area from 8mm² increased to 13mm²;
- Increased 5.1 Other article number extended;
- 5.4.2, the increase in note 3, the provisions of the carbon fiber material considered non-electrically conductive material;
- 5.4.3 increase, lightning protection masts for temporary use, set the location and under the guidance of the cross-sectional area and the total area of the underwater ground plate it makes provision;
- Original standard 5.6 "internal metal objects" in the amended section imprecise, the original standard "and which at any point in" to "At any point";
- 5.8.2 increase, makes provision for metal sea valves and sibilings through the hull means lightning protection system;
- 5.9 "lightning ground plate", the detailed provisions increased docking site and ground plate;
- Chapter 8 of this section, the original standard "motorboat" to "motor boat." Appendix A

of this standard is a normative appendix.

The standard proposed by China State Shipbuilding Corporation.

This standard by the National Standardization Technical Committee boat.

This standard was drafted. China Shipbuilding Industry Corporation seventh Research Institute of -.

1 Scope

This standard specifies the hull length of not more than 24m boat established protection device design, manufacture and installation requirements.

Note: With the possibility of lightning in different geographical locations and time is different, however, when the discharge conditions exist between the clouds and the earth, can not be avoided by lightning Discharge occurs. On the broad waters or dock, the boat is likely to be struck by lightning. Lightning protection system on the boat and not completely avoid equipment damage and Personal injury, this standard does not involve such a complete protection.

2 Terms and definitions

The following terms and definitions apply to this standard.

Conductive path distance of not more than 2mm, to prevent low-voltage current through, but does not block from the lightning current through.

To intercept lightning discharges, lightning protection system cusp located in the upper part.

A current flows from the conductive member boat to the facilities of the boat floating in the water.

For lightning air terminals connected to a conductive structure or facility electrical connection between the floors.

Occurs between the lightning protection system with any metal objects arc discharge.

For voltage balance between the object and the lightning protection system metallic conductors.

Air connection ends or lightning protection masts to the lightning conductor connected to the floor.

Grounded air terminals, masts or overhead ground wire below, in fact, to avoid direct lightning area.

Note 1: does not relate to avoid equipment damage or personal injury is completely protected.

Note 2: When the boat out of the water, lightning protection system does not provide protection; and when the boat floating in the water or on the shore at the time, and if any part of the boat is

connected to power lines Then, the lightning protection system will not be protected.

3 General requirements

3.1

Protection of personnel and boats from lightning, not only with equipment design and maintenance of both complexes, but also to conduct the relevant personnel.

GB/T 18573-2009/ISO 10134:2003