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

GB/T 29484.506-2025

**Electrical installations in ships - Part 506: Special features -
Ships carrying specific dangerous goods and materials
hazardous only in bulk**

船舶电气设备 第506部分：专辑 运载特定危险货物和散装危险物质的船舶
(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 is modified to adopt IEC 60092-506:2003 "Electrical equipment for ships - Part 506: Special cases of transport of certain dangerous goods and bulk cargoes".

Ships carrying dangerous substances.

Compared with IEC 60092-506:2003, this document has undergone the following structural adjustments.

---4.3.2 corresponds to 4.3.2 and 4.3.3 of IEC 60092-506:2003.

---5.3.3 corresponds to 5.3 of IEC 60092-506:2003;

---5.4 corresponds to 5.5 of IEC 60090-506:2003;

---5.4.2 corresponds to 5.6 of IEC 60092-506:2003;

---5.4.3 corresponds to 5.7 of IEC 60092-506:2003;

---5.5 corresponds to 5.8 of IEC 60092-506:2003.

The technical differences between this document and IEC 60092-506:2003, and the reasons therefor, are as follows.

a) Added packaged dangerous goods in Classes 2.3, 4.3, and 9, and changed the description of bulk dangerous substances (see...).

1.2), to be consistent with the requirements of the International Maritime Organization's International Maritime Dangerous Goods Code (2024 edition), and to add this document as Normative references;

b) GB/T 22189-2008 replaced the undated IEC 60092-501 (see 3.1, 3.2);

c) The content regarding "Class 4.1, 4.2, 5.1, 9 and MHB goods that can form explosive dust atmospheres" has been amended, adding...

The phrase "enclosures or semi-enclosures that have direct openings to areas 4.3.1a) and b) without appropriate measures to prevent the entry of flammable dust" has been added.

The "danger zone" of the sheltered premises (see 4.3.1) is consistent with the modification of the dangerous goods category in 1.2;

d) Added relevant content regarding Class 9, MHB cargoes that generate flammable gases upon contact with water (see 4.3.2, 5.4.3 and Appendix B), in line with international standards.

The Maritime Organization's International Maritime Dangerous Goods Code (2024 edition) requires consistency;

e) Added relevant content on "Special Provisions" (see 5.5) to ensure the safety of ship electrical equipment when transporting cargo with unknown characteristics;

f) Amended Appendix A regarding the transport of bulk fixed dangerous goods and MHB, and the latest regulations on qualified explosion-proof electrical equipment installed in hazardous areas.

The requirements are low (see Table A.1) and consistent with the requirements of the International Maritime Organization's International Maritime Dangerous Goods Code (2024).

The following editorial changes have been made to this document.

---The normative reference "IEC 60092-101:1994" that was not cited in the text has been removed;

---Note 5.5 in IEC 60092-506:2003 has been deleted;

---Added Appendix C (Informative) "List of National Standardization Documents that Correspond to IEC 60079 (All Parts)".

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Marine Electrical and Electronic Equipment (SAC/TC531).

1 Scope

1.1

This document applies to electrical equipment in the following types of ships and cargo holds.

a) Not specifically designed for transporting freight containers, but intended for transporting packaged dangerous goods in containers, mobile tanks, etc.

Ships and cargo holds;

b) Container ships and cargo holds specifically built for transporting dangerous goods in freight containers and mobile tank containers;

c) Roll-on/roll-off (Ro-Ro) ships and Ro-Ro cargo holds used for transporting dangerous goods;

d) Ships and cargo holds used for transporting bulk solid dangerous goods and substances that are hazardous only in bulk (MHB);

e) Cargo holds of ships and barges used for transporting non-bulk liquid and gaseous dangerous goods.

1.2

Dangerous goods that may require safety measures for electrical equipment have been addressed in relevant documents of the International Maritime Organization (IMO).

They are classified into the following categories.

a) Packaged dangerous goods.

---Class 1.Explosives (Class 1.4 dangerous goods in Group S of the International Maritime Dangerous Goods Code (IMDG Code)) (excluding objects)

- Class 2.1.All flammable gases that are compressed, liquefied, or dissolved under pressure;
- Class 2.3.All toxic gases with a secondary hazard level of Class 2.1;
- Class 3.All flammable liquids with flash points between -18°C and 23°C (closed-cup test);
- Class 4.3.Liquids that release flammable gases upon contact with water, with a flash point below 23°C;
- Class 6.1.All toxic substances with a flash point below 23°C (closed-cup test);
- Class 8.All corrosive liquids with a flash point of 23°C or less (closed cup test);
- Class 9.Miscellaneous hazardous substances that emit flammable vapors.

b) Bulk solid dangerous goods.

- Class 4.1.Flammable solids;
- Class 4.2.Self-igniting substances;
- Class 4.3.Substances that release flammable gases upon contact with water;
- Class 5.1.Oxidizing substances;
- Class 9.Other hazardous substances, i.e., substances for which experience has shown or may show hazardous characteristics and which should be subject to the provisions of this document.

He has no material possessions.

c) Bulk Hazardous Materials (MHB).

Substances that may pose a chemical hazard when transported in bulk, except for those listed in the dangerous goods category in the IMDG Code.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

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

This document.