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

GB/T 9332.1-1988

Replacing GB/T 9332.1-1988

**Electrical installations in ships -- Cables for control and
instrumentation circuits 150/250V (300V)
(English Translation)**

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Foreword

This standard is identical with IEC 60092-376:2003 "Electrical installations in ships Part 376. control and instrumentation circuits with 150/250V (300V) Cable "2nd edition (in English).

For ease of use, this standard made the following editorial changes.

--- Remove the IEC 60092-376:2003 Foreword;

"," --- With the decimal point in the expression of a number instead of a comma as the decimal point, "";

--- IEC 60092-376:2003 Chapter 2 normative references in "IEC 60228, cable conductor," but in the IEC 60092-376:2003 is not referenced in the body of this standard Chapter 2 Normative references Delete the reference document;

--- IEC 60092-376:2003 12.2 percent coverage $F = (2F-F_2) \times 100$ instead of the standard 12.2 $K = (2F-F_2) \times 100$;

--- Increase the informative Appendix C.

This standard replaces GB/T 9332.1-1988 "shipboard control cables - General." this standard and GB/T 9332.1-1988 compared to the main changes are as follows.

--- Standard Edition 1988 by the name of "shipboard control cables - General" was changed to this version of "Marine Electrical equipment control and instrumentation circuit with 150/250V (300V) Cable ";

--- The scope of the 1988 version of "building with rubber and plastic insulated control cable" was changed to this version of "control and instrumentation circuits with shield Fixed laying and unshielded cable with extruded insulation ";

--- Increasing the continuity and durability requirements of flags, and specifies the test method (Chapter 7 of this edition);

--- This edition adds a conductor size 0.5mm² (Excerpts Chapter 9);

--- Material, type and thickness of the insulating mixture is updated (version 1988 Chapter 6, Section 10 of this edition);

--- Increasing the cable core wire for combined, separate electrostatic shielding and electrostatic shielding structure overall (Article 11 and Chapter 12 of this edition);

--- Specifies the thickness of the inner liner (Chapter 13 of this edition);

--- Material, type and thickness of the extruded jacket mixture is updated (version 1988 Chapter 8, Section 6 of this edition);

--- Metal braided material has been redefined (1988 version 8.4, Chapter 15 of this edition);

--- Combustion resistant properties were redefined (Version 9.5, 1988, edition 17.3);

--- Test items and methods have been redefined, sampling tests abolition of the "steel plating, chemical plating conductor test," adds the braid weave density test (Version 1988 Chapter 11, Chapter 17 of this edition);

--- Canceled the length of cable delivery, testing and acceptance, packaging requirements (Edition 1988 Chapter 10, Chapter 11 and Chapter 12);

--- Modify the insulation series code (1988 version 4.1.3, this version of Appendix C);

--- Modify jacket series code (1988 version 4.1.4, this version of Appendix C);

- Modify the combustion characteristics symbol (1988 version 4.1.5, this version of Appendix C);
- Modify the product representation (1988 version 4.2.1, this version of Appendix C).

This standard Annex A, Annex B and Annex C is informative appendix.

The standard proposed by China Electrical Equipment Industrial Association.

This standard by the national wire and cable Standardization Technical Committee (SAC/TC213) centralized.

GB/T 9332-2008/IEC 60092-376:2003

1 Scope

This standard applies to the rated voltage of 150/250V (300V) (see Chapter 4) fixed laying of cables with extruded insulation. Mainly used for ship and offshore equipment control and instrumentation circuits for shielded and unshielded cables.

All kinds of cables listed in Chapter 8, unless otherwise specified in this standard, structural requirements and test methods should be consistent with GB/T 20637-2006 of Provisions.

NOTE: If necessary, require fire-resistant (maintaining the integrity of the line) the terms of the cable.

The purpose of this standard.

- Designed to press GB/T 13029.1-2003 requirements for selecting and installing cables standardization, in order to ensure its safe and reliable;
- Specifies the requirements for the production of cables and directly or indirectly related with the security features;
- Specifies the requirements of this standard test method to check whether the product meets.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T 2951.11-2008 and optical cables - Common test methods for insulating and sheathing materials Part 11. General test method Measurement of thickness and overall dimensions of mechanical tests (IEC 60811-1-1:2001, IDT) GB/T 2951.12-2008 and optical cables -

Common test methods for insulating and sheathing materials Part 12. General test method Thermal aging methods (IEC 60811-1-2. 1985, IDT) GB/T 2951.13-2008 and optical cables - Common test methods for insulating and sheathing materials - Part 13. General test method Density Determination of water absorption tests - Shrinkage test (IEC 60811-1-3:2001, IDT) GB/T 2951.14-2008 cable and the cable Common test methods for insulating and sheathing materials - Part 14. General test method Low temperature test (IEC 60811-1-4. 1985, IDT) GB/T 2951.21-2008 cable and the cable Common test methods for insulating and sheathing materials - Part 21. elastomeric compounds designed Ozone resistance test - Test methods for thermal expansion --- Test --- mineral oil immersion tests (IEC 60811-2-1:2001, IDT) GB/T 2951.31-2008 cable and the cable Common test methods for insulating and sheathing materials - Part 31. Polyvinyl chloride mixture Special high temperature pressure test --- test methods for resistance to cracking (IEC 60811-3-1. 1985, IDT) GB/T 2951.32-2008 cable and the cable Common test methods for insulating and sheathing materials - Part 32. Polyvinyl chloride mixture Special test methods --- --- Loss of mass test - Thermal stability test (IEC 60811-3-2. 1985, IDT) GB/T 2951.41-2008 cable and the cable Common test methods for insulating and sheathing materials Part 41. polyethylene and polypropylene Mixed Methods specific environmental stress cracking resistance test --- --- --- melt index measurement method Direct measurement of combustion of carbon polyethylene Black and (or) mineral filler content --- thermal gravimetric analysis (TGA) measurements of carbon black content microscopy assessment of carbon black dispersion in polyethylene (IEC 60811-4-1:2004, IDT) GB/T 2951.42-2008 cable and the cable Common test methods for insulating and sheathing materials Part 42. polyethylene and polypropylene Mixture special test methods --- after-treatment temperature tensile strength and elongation at break after heat treatment test --- test --- winding hot air

--- Increased long-term thermal stability test after aging winding test --- --- determine the quality of the copper-catalyzed oxidative degradation test method GB/T 9332-2008/IEC 60092-376:2003