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

GB/T 17755-2010

Replacing GB/T 17755-1999

**Single-and three-core power cables with extruded solid
insulation for rated voltages 6 kV($U_m=7.2$ kV) up to 30
kV($U_m=36$ kV) in ships**

船用额定电压为6 kV ($U_m=7.2$ kV) 至30 kV ($U_m=36$ kV) 的单芯及三芯挤包实
心绝缘电力电缆

(English Translation)

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Foreword

This standard is equivalent to IEC 60092-354.:2003 "Marine electrical equipment Part 354. Rated voltage of 6kV ($U_m = 7.2\text{kV}$) to 30kV ($U_m = 36\text{kV}$) single-core and multi-core extruded solid insulated power cable. " this standard is equivalent to translation IEC 60092-354.:2003.

For ease of use, this standard has been modified as follows.

- a) the word "part of IEC 60092" is replaced by "this standard";
- b) Replace the comma as a decimal point with a decimal point ".";
- c) prerequisites for the removal of international standards;
- d) In order to be consistent with the existing national standard series of standards, the standard name to "marine rated voltage of 6kV ($U_m = 7.2\text{kV}$) to 30kV ($U_m = 36\text{kV}$) single-core and three-core extruded solid insulated power cable ";
- e) For international standards cited in IEC 60092-354.:2003, this part of the international standard, which is used as our standard, Standards instead of international standards, the rest is not equivalent to the use of our standards, in the standard are directly quoted;
- f) Delete the words "considered by TC18" in Chapters 1 and 4;
- g) Replace "(see 11.1)" in Table 1 with the words "(see 11.2)";
- h) "85 ° C" in Table 7 was changed to "90 ° C".

This standard replaces GB/T 17755-1999 "rated voltage of 6kV, 10kV and 15kV extruded insulation single and three core marine power cable".

Compared with the original standard, this standard has the following main changes.

- a) rated voltage from the original "6kV, 10kV and 15kV" to "6kV, 10kV, 15kV, 20kV and 30kV";
- b) the nominal cross-sectional area of the conductor, from the single-core cable maximum cross-sectional area of "630mm²" to "1000mm²";

c) change "270mm" in Chapter 7, "Continuity of Marks" to "275mm";

d) changed the frequency test voltage;

e) the deletion of 17.1 in the original standard.

This standard is proposed by China Shipbuilding Industry Corporation.

This standard is nationalized by the National Marine Ship Standards Technical Committee (SAC/TC12).

The drafting of this standard. China Shipbuilding Industry Corporation, the 107th Institute, Nanyang Cable Group, Shanghai Nanyang Electric Co., Ltd., Changzhou eight benefits Cable Co., Ltd.

1 Scope

This standard applies to the fixed-laying of the extruded solid insulation, conductor and core shield, rated voltage of 3.6/6 (7.2) kV, Ships and Offshore Installations of 6/10 (12) kV, 8.7/15 (17.5) kV, 12/20 (24) kV and 18/30 (36) kV (see Chapter 4) cable. The maximum rated voltage for marine power cables is 8.7/15 (17.5) kV.

See Chapter 8 for the various types of power cables. Unless otherwise specified in this standard, the structural requirements and test methods shall comply with IEC 60092-350 Provisions.

The purpose of this standard is.

- Standardize the following cables. the cable is laid according to IEC 60092-350 and its safety and reliability are Guarantee - standardize production requirements and characteristics for such cables that are directly or indirectly related to safety;
- Specifies the test method to check for compliance with these requirements.

Note 1: Only cables with radial fields are involved.

Note 2: IEC 61892-4, Mobile and stationary offshore installations - Electrical installations - Part 4. Cables.

2 Normative reference documents

The terms of the following documents are hereby incorporated by reference into this standard. Whichever is the date of the reference file, which is followed by all (Excluding corrigenda) or revisions do not apply to this standard, however, encourage the parties to reach an agreement under this standard Whether you can use the latest version of these files. For undated references, the latest edition applies to this standard.

GB/T 2951 (all parts) Common test methods for insulating and sheathing materials for cables and cables (idt IEC 60811) GB/T 3956-1997 Conductor for cables (IEC 60228. 1978,

IDT) GB/T 13029.1-2003 Marine electrical installations - Selection and installation of cables for low voltage power systems (IEC 60092-352.

1997, IDT)

GB/T 17556 Marine power and communication cable sheathing materials (GB/T 17556-2010, IEC 60092-359.:1999, Electrical installations in ships-Part 359.

Sheathing materials for shipboard power and telecommunication cables, IDT) GB/T 17557 Insulating materials for electrical, control, instrumentation and data cables for ships and offshore installations (GB/T 17557-2010, IEC 60092-351.:2004 Electrical installations in ships-Part 351. Insulating materials for shipboard and offshore units, power, control, instrumentation, telecommunication and data cables, IDT) GB/T 18380.33-2008 Burning tests for cables and cables under flame conditions - Part 33. Bundled wires Cable flame vertical spread test Class A (IEC 60332-3-22.:2000, IDT) IEC 60038.:2002 standard voltage IEC 60092-350 Marine electrical equipment - Part 350. Power, control and instrumentation for ships and offshore installations General structure and test method Test for IEC 60230 cable and its accessories Electrical test methods for IEC 60885-2 cables - Part 2. Partial discharge test