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

GB/T 20637-2025

Replacing GB/T 20637-2006

**Electrical installations in ships - General construction and test
methods of power, control and instrumentation cables for
shipboard and offshore applications**

船舶电气装置 船用和海上设施用电力、控制和仪表电缆一般结构和试验方法

(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 20637-2006 "General Structure and Test Requirements for Marine Electrical Cables" and is consistent with...

Compared with GB/T 20637-2006, apart from structural adjustments and editorial changes, the main technical changes are as follows.

---The scope of application of the standard has been changed (see Chapter 1, Chapter 1 of the 2006 edition);

---Added terms "braided armor layer", "compatibility test", "insulated core", "bare shielded wire/drain wire", "electrostatic shielding", "fire resistant/wire" "Road integrity", "inner sheath", "multi-unit cable", "outer sheath", "pair group", "four-wire group", "single-unit cable", "SZ cabling", "three-wire" the term "group" and its definition have been removed, along with the terms "sheath" and "flexible wire" and their definitions (see Chapter 3, Chapter 3 of the 2006 edition).

---Added "General Requirements" for cable structure (see 4.1);

---The regulations concerning "conductors" have been amended (see 4.2, Chapter 4 of the 2006 edition);

---The provisions related to "insulation" have been amended (see 4.3, Chapter 5 of the 2006 edition);

---A "blocking" requirement has been added (see 4.4);

---The regulations related to "cabling" have been amended (see 4.5, Chapter 6 of the 2006

edition);

---The provisions regarding "lining, filling, and strapping" have been amended (see 4.6, Chapter 7 of the 2006 edition);

--- An "inner sheath" requirement has been added (see 4.7);

--- An "outer sheath" requirement has been added (see 4.9);

---The following have been removed. "components of the outer protective layer, wire armor, metal belt armor, dimensions of metal armor, impregnated fiber weaving, armor".

Regulations regarding the use of padding (see Chapter 8 of the 2006 edition);

---The environmental temperature requirements for testing have been changed (see 5.1.1, 9.1 in the 2006 edition);

---The overview of routine tests has been revised (see 5.2.1, 10.1 in the 2006 version);

---The regulations concerning "voltage testing" have been amended (see 5.2.3, 10.3 of the 2006 version);

---Added "Partial Discharge Test" (see 5.2.4);

---The overview of sampling tests has been revised (see 6.1, 11.1 in the 2006 edition);

---Added a "retest" for sampling tests (see 6.3);

---The "size of the armor layer" has been removed (see 11.6 in the 2006 edition);

---The section "Performance Tests of PVC Insulation and PVC, SHF1, and SHF2 Sheaths at Low Temperatures" has been removed (see 11.9 of the 2006 edition).

---The "water tightness test" has been removed (see 11.10 in the 2006 edition);

---The "Overview" of electrical type testing has been amended (see 7.1, 12.1 of the 2006 edition);

---The temperature requirements for "Insulation Resistance Measurement at Ambient Temperature" have been changed (see 7.2.1, 12.2.1 in the 2006 edition);

---Added a "Working Capacitor" test (see 7.5);

--- An "inductance-resistance ratio" test has been added (see 7.6);

---Added "High Voltage Procedure Test" (see 7.7);

---Added "Special Test for Low Temperature Performance" (see 8.10);

---The relevant tests and requirements for PVC insulation have been deleted (see 13.6, 13.7, 13.8, and 13.9 in the 2006 edition);

---The "Oil Resistance Test for Sheaths" has been amended (see 8.15, 2006 edition 13.12);