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

GB/T 9326.1-2008

Replacing GB 9326.1-1988

**Oil-filled, paper or polypropylene paper laminate insulated,
metal-sheathed cables and accessories for alternating voltages
up to and including 500kV -- Part 1: Test**

交流500kV及以下纸或聚丙烯复合纸绝缘金属套充油电缆及附件 第1部分: 试验
(English Translation)

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Foreword

GB/T 9326 "AC 500kV, paper or polypropylene paper laminate insulated metal sheathed cables and accessories" consists of five parts.

--- Part 1. Test;

--- Part 2. AC 500kV and below paper insulated lead sheathed cables;

--- Part 3. Terminal;

--- Part 4. Connector;

--- Part 5. Pressure tanks.

This part of GB/T 9326 Part of.

The partial modification using IEC 60141-1:1993 "test - Part 1 oil-filled cables and gas - pressure cables and their accessories. AC voltage 500kV and paper or polypropylene paper laminate insulated, metal-sheathed cables and accessories, "3rd edition, amendments No. 1 (1995) and the second no amendments (1998) are included in the text content, and they are involved in terms of the margin by a vertical double identity.

The standard IEC 60141-1:1993 Part made some changes related to technical differences have been incorporated into the text, and covered them and the terms of the margin of a single vertical line identification, this section lists the reg number and in Appendix D of IEC 60141-1:1993 clauses series Control list number.

This part of IEC 60141-1. technical differences compared to 1993 are.

--- Use GB 311.1-1997 "insulated high voltage transmission and distribution equipment" (IEC 60071-1:1993, NEQ) voltage regulation Fixed by deleting the 66kV and the following of several voltage levels do not apply, the voltage range covers 66kV, 110kV, 220kV, 330kV, 500kV five levels;

--- Pursuant GB 311.1-1997, an increase of 330kV, 500kV voltage level switching impulse

voltage test; and in accordance with DL/T 401-2002 "high voltage cable guide for the selection" determine the impact test operating voltage and lightning impulse voltage peak;

--- To the GB 9326.2-1988 cable oil sample test (after routine tests, respectively installation and test), lead sheath expansion test (special Special test), lead sheath and reinforcing layer hydraulic test (type test), the outer protective layer of asphalt drops out test (type test), the outer sheath scraping test Test (type test) increases as the content of this section;

--- Cable type test increased aluminum sleeve Corrosion spread test (see 4.10), annex type test increased radio interference test terminal Test (see 7.6);

--- After installation test adds GB 9326.1-1988 the oil flow test (see 8.2) and dipping coefficient test (see 8.3) and its informative annex (see Appendix B and Appendix C).

This Part replaces GB 9326.1-1988 "AC 330kV and below-contained oil-filled paper - insulated cables and accessories for general provisions" GB 9326.2-1988 also on the contents included in this section.

The main technical differences compared with GB 9326.1-1988 part.

Name --- this section modify the IEC 60141-1:1993 is consistent, thus making this part as compared with GB 9326.1-1988, the voltage applied to scale up 500kV, and includes polypropylene paper laminate insulated;

--- Increased polypropylene paper laminate insulated relevant content (see Table 8);

--- Operation Impact test application of the test voltage (peak value) positive and negative polarity 3 times each to the positive and negative 10 times each (the previous version - Part 2 7.4.4; this section 4.6);

--- Cable type test increased aluminum sleeve Corrosion spread test (see 4.10); annex type test terminals increased radio interference test Test (see 7.6).

Appendix A of this section is normative appendix, Appendix B, Appendix C, Appendix D and Appendix E is an informative annex.

This part is proposed by the China Electrical Equipment Industrial Association.

This part of the National Standardization Technical Committee Wire and Cable (SAC/TC213) centralized.

This part of the unit responsible for drafting. Shanghai Electric Cable Research Institute.

Participated in the drafting of this section. Wuhan High Voltage Research Institute, Shanghai Sanyuan Cable Accessories Co., Ltd., Shanghai Cable Co., Ltd., Hubei Wing Ding means Electric Co., Ltd., Shenyang Cable Co., Ltd., Northeast Electric Power Design Institute.

1.1 Scope

This section GB/T 9326 applies to the radial electric field, paper or polypropylene paper laminate insulated, metal - sheathed cables and accessories for the test.

Cables and accessories run the minimum static pressure is 20kPa ~ 300kPa, the maximum static pressure is less than 800kPa, the minimum instantaneous pressure is not small at 20kPa (gauge pressure the pressure is higher than the value of atmospheric pressure).

In addition to 3.2,4.5 and 5.2 may be suitably modified by the purchaser and the manufacturer Agreement, this section also applies to the maximum static pressure exceeds 800kPa Cables and accessories.

These tests apply to cable and accessories used in the nominal phase voltage not exceeding 500kV system.

For large cable length, this part by purchaser and manufacturer agreement applies.

1.2 Normative references

The following documents contain provisions which, through reference to GB/T 9326 to the present, constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB 311.1-1997 insulation with high voltage power transmission equipment (neq IEC 60071-1:1993) GB/T 2951.11-2008 cable insulation and sheathing materials test methods - Part 1. General test method in Chapter 1 Measurement of thickness and overall dimensions - mechanical tests (IEC 60811-1-1:2001, IDT) GB/T 3048.13-2007 wire and cable electrical performance test methods - Part 13. impulse voltage test (IEC 60230. 1966, IEC 60060-1. 1989, MOD) GB/T 3956-1997 cable conductor (idt IEC 60228. 1978) GB/T 9326.2-2008 AC 500kV, paper or polypropylene paper laminate insulated metal sheathed cables and accessories 2 Part. AC 500kV and below paper insulated lead sheathed cables (IEC 60141:1993, NEQ) GB/T 11604-1989 high-voltage electrical equipment radio interference test method (eqv IEC 60018. 1983) JB/T 8996-1999 high-voltage cable selection guidelines (idt IEC 60183. 1984) JB/T 10181.3-2000 cable ampacity Part 2. Chapter 1 Thermal resistance is calculated (idt IEC 60287-2-1:1994) JB/T 10696.6-2007 mechanical, physical and chemical properties of the wire and cable test methods - Part 6. Test for abrasion of extruded jacket JB/T 10696.5-2007 mechanical and physicochemical properties of the wire and cable test methods - Part 5. Corrosion spread test IEC 60229:2007 cable sheath test with a special protective effect of extruded

1.3 Definitions and symbols

This section GB/T 9326 of the following definitions and symbols.

Black paper shielded cable. Cable shield covered with black paper as the conductor and the insulation in contact with the black paper.

No black paper shielded cable. cable without black paper, but with other materials for the sheath of the conductor; or carbon black paper, but not in contact with the insulation. For this section, the conductor unshielded cable included in this group.

U0. insulated conductor wire core cables and accessories designed to work with a nominal frequency voltage between shield.