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

GB/T 9327.1-1988

Replacing GB/T 9327.1-1988; GB/T 9327.2-1988; GB/T 9327.3-1988; GB/T 9327.4-1988; GB/T 9327.5-1988

**Compression and mechanical connectors for power cables for
rated voltages up to 35kV ($U_m=40.5\text{kV}$) -- Test methods and
requirements**

(English Translation)

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Foreword

This revised standard adopts IEC 61238-1:2003 "rated voltage of 30kV ($U_m = 36kV$) power cables and mechanical connection crimp gold Part with 1. Test methods and requirements "(2nd edition, in English).

This standard is based on IEC 61238-1:2003 redrafted its reg number and IEC 61238-1:2003 exactly.

In 61238-1 using IEC .2003 when the standard made some changes. About the technical differences have been incorporated into the text in which they are involved Terms of the space identified by a single vertical line. The main technical differences and explained as follows.

--- Taking into account China's power grid conditions, the scope of application of this standard will be extended to the voltage 35kV ($U_m = 40.5kV$).

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

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

--- Remove IEC 61238-1:2003 Introduction.

This standard replaces GB/T 9327.1-1988 "cable conductor compression and mechanical connectors General test method", GB/T 9327.2-1988 "Standard Test Method for fitting cable conductor DC resistance test methods for compression and mechanical connectors", GB/T 9327.3-1988 "cable conductor pressure Shrinkage and mechanical connectors Circuit Test Method Test Method ", GB/T 9327.4-1988" cable conductor compression and mechanical connectors for test Test methods for thermal cycle test method "and GB/T 9327.5-1988" cable conductor compression and mechanical connectors for tensile strength test method Test Methods. " this standard compared with GB/T 9327-1988, the main changes are as follows.

--- Types of connectors from the A, B, C categories reduced to A, B two types (GB/T 9327.4-1988 Appendix B, Chapter 1 edition);

--- Thermal cycles of 250 times, 500 times, 1,000 times uniform regulations for the 1000 (GB/T 9327.4-1988 Table 3, edition 6.3.3);

--- Short circuit test by the 3 times to 6 times (GB/T 9327.4-1988 Table 3, this version 6.3.4, Table 2);

--- Electrical test canceled initial resistance ratio requirements; average initial dispersion and dispersion requirements by the 0.15 (crimp), 0.3 (Mechanical) uniform provisions of 0.3 (GB/T 9327.1-1988 Table A1 and Table A3, this version of Table 2);

--- By the mechanical properties of tensile strength test to tensile test (GB/T 9327.1-1988 Table A4, edition Table 3);

--- A proposal for an increase to improve the measurement accuracy (Excerpts Appendix C);

--- Increasing the short-circuit current measurement (Excerpts Appendix D);

--- Increasing the calculation method (Excerpts Appendix E);

--- Increased interpretation (Excerpts Appendix F) calculation method;

--- Increasing the temperature graph interpretation (Excerpts Appendix G);

--- An explanation for increased electrical connection fittings statistical methods to assess test results (Excerpts Appendix H);

--- Increased IEC 61238-1 reference (reference edition);

--- Canceled the 1988 edition in five-part presentation of.

This standard Annex A, Annex B and Annex E are normative appendix; Appendix C, Appendix D, Annex F, Annex G and Annex H 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.

This standard was drafted. Shanghai Electric Cable Research Institute, the Permanent Group Co., Ltd.

1 Scope

This standard applies to the rated voltage of 35kV ($U_m = 40.5\text{kV}$) and below the power cable conductor crimp and mechanical connection fittings, for example, suitable for buried cables or cables installed in buildings. These cables are.

a) comply with GB/T 3956-2008 standard conductor Copper conductor cross-sectional area of $\geq 10\text{mm}^2$ or more, aluminum conductor cross-sectional area 16mm^2 or more.

b) maximum continuous operating temperature of conductor does not exceed 90°C .

This standard does not apply to the connection hardware overhead conductor, which is connected with special mechanical requirements of gold, to be designed. This standard also does not apply for releasably connecting with a sliding connection fittings or multi-core connection hardware (ie, slip ring connection fittings).

Although it is impossible to accurately determine the conditions of use for all applications, but you can still connect fittings divided into two categories.

--- A Class. A type of connector fittings can withstand short-circuit current is applied to a relatively long time and a larger role in the intensity distribution or industrial networks Network. Thus, A type connector fittings can be used in most environments.

--- Class B. Class B connection hardware for products fitted with protective devices (such as fast fuse means) and can be overload or short-circuit current load fast Excluded speed network.

Depending on the connection hardware applications, connection fittings the following tests.

--- A categories. short-circuit and thermal cycling test.

--- Class B. do only a heat cycle test.

The purpose of this standard is to determine the appropriate method for power cables with copper or aluminum conductor crimp or mechanical connectors and fittings for type testing Claim.

Previously, recognition of the products is based on the basis of performance up to the national standard or code of conduct on. This standard is published and it does not negate the existing recognition. However, according to earlier standards or specifications approved products can not declare compliance with this standard, unless these products are specially Test.

After the product to be recognized, without re-tested material unless the connection hardware, design or manufacturing process changes, and these variations Technology may affect the characteristics of the connection fittings.

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 2900.10-2001 Electrotechnical terminology cable (idt IEC 60050 (461). 1984) GB/T 3956-2008 conductor cable (IEC 60228:2004, IDT) GB/T 21223-2007 statistical analysis of aging test guidelines based on mean values \u200b\u200bof normally distributed test results on Methods (IEC 60493-1. 1974, IDT)

3 Terms and Definitions

GB/T 2900.10-2001 established and the following terms and definitions apply to this standard.