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

GB/T 12666.1-2008

Replacing GB/T 12666.1-1990

**Test method on a single wire or cable under fire conditions -
Part 1: Vertical specimen flame test**

单根电线电缆燃烧试验方法 第1部分：垂直燃烧试验

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Foreword

GB/T 12666 "single wire and cable fire test method" is divided into three parts.

--- Part 1. Vertical burning test;

--- Part 2. Horizontal burning test;

--- Part 3. tilt combustion test. This section GB/T Part of 112,666. This Part replaces GB/T 12666.2-1990 "burning wire and cable test methods - Part 2. single wire or cable vertical burning test Test method "of DZ-3 method (GB/T 12666.2-1990 has been abolished, the DZ-1 and DZ-2 method method has been GB/T 18380.1- 2001 and GB/T 18380.2-2001 alternative), and GB/T 12666.1-1990 "burning wire and cable test methods - Part 1.

General "part of the content included in this section. This part of GB /and GB/T 12666.2-1990 compared to T 12666.1-1990 main changes are as follows:

--- Sample length was changed to "about 455mm" (GB/T 12666.2-1990 4.2, Chapter 3 of this edition);

--- Ignition source was changed to "adopt the provisions of GB /Z5169.15-2001 blowtorch" (GB/T 12666.1-1990 Table

2 Excerpts 5.1);

--- Test environment was changed to "at least a sealed test chamber volume of 4m³" (GB/T 12666.2-1990 4.1.2, edition 5.3);

--- Kraft paper strip width was changed to "about 10mm" (GB/T 12666.2-1990 4.3.2, Chapter 6 of this edition);

--- Cone touches the inner bottom indication flag with a blue flame above the sample surface distance changed to "250mm" (GB/T 12666.2- 4.3.2, Chapter 6 of this edition 1990);

--- BEDDING cotton layer thickness was changed to "no greater than 6mm" (GB/T 12666.2-1990 4.3.1, Chapter 6 of this edition);

--- Flame modification for the fire as "flame a total height of (125 ± 10) mm, blue inner cone height (40 ± 2) mm" (GB/T 12666.1- Table 2, Chapter 6 of this edition 1990);

--- Added Figure 1 "blowtorch base is fixed with a wedge" (see 5.2). 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. Baosheng Science and Technology Innovation Co., Ltd., Tianjin Jinshan Electric Wire & Cable Co., Ltd., Anhui Hualing electrical Cable Group Co., Ltd., Shanghai Nanyang Electric Wire Co., Ltd., Yangzhou Shuguang Cable Co., Ltd. Ya'alon Shanghai Industrial Holdings Limited. The main drafters of this section. Guo Han Yang, Tangchong Jian, Zheng Guojun, Huguang Zheng, Qu Wei, Liang Guohua, Lubang Xiu. This part of the standard replaces the previous editions are.

--- GB/T 12666.1-1990, GB/T 12666.2-1990 (DZ-3 method). Single wire and cable fire test method Part 1. Vertical Burning Test

1 Scope

GB/T 12666.1-2008 is the Chinese national standard on test method on a single wire or cable under fire conditions - part 1: vertical specimen flame test, in the field of electrical engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 30 June 2008 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 April 2009. Classification: ICS 29.060.20, CCS K13. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This section GB/T 12666 applies to test single wire or cable or cables insulated cores in a vertical state with a predetermined fire Direct combustion flame retardant properties. GB/T 12666 provisions of this part of the single wire or cable vertical burning fire intermittently for test equipment and methods, and gives recommendations Performance requirements.

Note. Use to delay the spread of flame and meet the requirements of this part of the wire or cable and ensure that the lack of wires and cables can prevent flame under all conditions laid Spread, therefore, the spread in some high-risk situations, such as when large cable bundles laid perpendicular to the length, but also the use of a special device to prevent. Should not be recognized To comply with this part of the cable sample specified performance requirements, this kind of cable bundles also exhibit similar properties.

2 Normative references

The following documents contain provisions which, through reference

GB/T 12666 in this section 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 /Z5169.15-2001 Fire hazard testing for electric and electronic products Test methods 500W nominal test flame and guidance (IEC /T R260695-2-4/2.1994, IDT)

3 Sample

Test specimens from the finished wire and cable or a cord, about 455mm.

4 Sample processing

Before testing, samples, devices and ambient air should reach thermal equilibrium (23.0 ± 5.0) °C at temperature (process at least 16h), the entire test During the ambient air temperature should be stabilized at (23.0 ± 5.0) °C.

5 Test Equipment

5.1 ignition source Ignition source shall comply with the provisions of GB 4.2.1 /Z5169.15-2001 laboratory burner, in accordance with GB /Z5169.15-2001 Approved Method

4.4 provides for burner calibration. Arbitration test, the test should be used for technical grade methane gas (purity of at least 98.0%), the nominal calorific value 37.3MJ/m³. Allowed to make Other levels of methane, natural gas, coal gas or propane, regardless of the circumstances, should be able to provide calibration gas flame. Blowtorch flame should be calibrated at least once every two weeks. Such as the use of arbitration is not a test of technical grade methane, a day before the test to deal with spray Lamp flame calibration. When filling gas tank or any gas exchange device is changed, calibration response blowtorch flame.

5.2 blowtorch base is fixed with a wedge Blowtorch base is fixed with a wedge should be able to torch base is fixed, and burner tube and the sample in the same vertical plane (see Figure 1). The wedge Sub torch lamp can be transferred from a vertical position to a vertical position and the fire position for 20 ° angle. When in position for the fire, and I flat tube