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

GB/T 19216.2-2021

Circuit integrity test for electric cables or optical fiber cables under fire conditions - Part 2: Test method for fire with shock at a temperature of at least 830 degrees C for cables of rated voltage up to and including 0.6/1 kV and with an overall diameter exceeding 20 mm

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting.

This document is the second part of GB/T 19216 "Line Integrity Test of Cables or Optical Cables under Flame Conditions". GB/T 19216

The following parts have been released.

---Part 1. Supply fire with flame temperature not less than 830 degrees C and impose shock vibration, rated voltage 0.6/1kV and below outer diameter exceeding

Test method for passing 20mm cable;

---Part 2. Supply fire with flame temperature not less than 830 degrees C and impose shock vibration, rated voltage 0.6/1kV and below outer diameter

Test method for cables exceeding 20mm;

---Part 3. Supply fire with flame temperature not less than 830 degrees C and impose shock vibration, rated voltage 0.6/1kV and below cable wear

Test methods carried out in metal pipes;

---Part 11. Separate fire supply with flame temperature of test device not lower than 750 degrees C;

---Part 21. Test procedures and requirements for cables with rated voltages of 0.6/1.0kV and below;

---Part 23. Test procedures and requirements for data cables;

--- Part 25. Test procedures and requirements for optical cables.

The translation method used in this document is equivalent to the use of IEC 60331-2:2018
"Test Line Integrity of Cables under Flame Conditions Part 2

Points. supply fire with flame temperature not lower than 830 degrees C and impose shock vibration, rated voltage 0.6/1.0kV and below, outer diameter not exceeding 20mm

Cable test method."

The Chinese documents that have consistent correspondence with the normatively cited international documents in this document are as follows.

---GB/T 13539.3-2017 Low-voltage fuses Part 3. Supplementary requirements for fuses used by unskilled personnel (mainly

(Fuses for household and similar purposes) Examples of standardized fuse systems A to F (IEC 60269-3:2013, IDT)

---GB/T 16839.1-2018 Thermocouple Part 1. Thermo-EMF specifications and tolerances (IEC 60584-1:2013, IDT)

This document has made the following editorial changes.

---In order to be consistent with the existing standard series, the name of this document is changed to "Line Integrity Test of Cable or Optical Cable under Flame Conditions"

Part 2. Supply fire with flame temperature not lower than 830 degrees C and impose shock vibration, rated voltage 0.6/1kV and below outer diameter not exceeding

Test method for passing 20mm cable";

--- Deleted the informative Appendix B "Guide to Selection of Recommended Test Equipment" in IEC 60331-2:2018 that only contains information on test equipment manufacturers.

then".

Introduction

Fire-resistant wire and cable or fiber optic cable products are widely used in emergency

lines, fire-fighting facilities and fire-fighting and rescue facilities of various construction projects.

When a disaster occurs, it is necessary to ensure the delayed shutdown of important equipment or data backup, to ensure the safe evacuation of various personnel and the normal fire rescue work

Development has a decisive effect on social public safety and reducing fire losses. GB/T 19216 is a fire-resistant wire and cable or optical cable product

A basic evaluation test method for maintaining the integrity of lines under fire conditions. The purpose of GB/T 19216 is to establish for different fire-resistant wires and cables

Or optical cable products and test method standards for different fire test conditions are currently planned to consist of the following 7 parts.

---Part 1. Supply fire with flame temperature not less than 830 degrees C and impose shock vibration, rated voltage 0.6/1kV and below outer diameter exceeding

Pass the test method of 20mm cable. The purpose is to establish that larger diameter wire and cable or optical cable products may be affected by fire.

Fire resistance test methods to flame combustion and shock vibration.

---Part 2. Supply fire with flame temperature not less than 830 degrees C and impose shock vibration, rated voltage 0.6/1kV and below outer diameter

Test method for cables exceeding 20mm. The purpose is to establish that smaller diameter wire and cable or optical cable products may be

Fire resistance test method subject to flame combustion and shock vibration.

---Part 3. Supply fire with flame temperature not less than 830 degrees C and impose shock vibration, rated voltage 0.6/1kV and below cable wear

Test method performed in metal pipes. The purpose is to establish the production of smaller diameter wires and cables or optical cables that are installed and laid through metal pipes.

The fire resistance test method that the product may be subjected to flame combustion and shock vibration in a fire.

---Part 11. The test device is a separate fire supply with a flame temperature of not less than 750 degrees C. The purpose is to establish wire and cable or optical cable production

The product is only subject to the test device requirements of the fire resistance test method of flame combustion in a fire.

--- Part 21. Test procedures and requirements for cables with rated voltages of 0.6/1.0kV and below. The purpose is to establish wire and cable or

Optical cable products are only subjected to flame combustion in a fire. In the fire resistance test method, the rated voltage of 0.6/1.0kV and below is tested.

Inspection procedures and performance requirements.

--- Part 23. Test procedures and requirements for data cables. The purpose is to establish that wire and cable or optical cable products are only affected by fire.

The test procedures and performance requirements of the data cable in the flame resistance test method.

--- Part 25. Test procedures and requirements for optical cables. The purpose is to establish that wire, cable or optical cable products are only exposed to flames in a fire

The test procedures and performance requirements of the optical cable in the burning fire test method.

Part 11, Part 21, Part 23, and Part 25 of GB/T 19216 were formulated in 2003, and they are related to flame temperature.

Test conditions for pure fire supply below 750°C.

GB/T 19216.1, GB/T 19216.2 and GB/T 19216.3, involving the supply of fire with a flame temperature of not less than 830 degrees C and applying shock vibration

The dynamic test conditions are to test power cables, control cables, data cables and optical cables with large and small outer diameters. With refractory power

With the continuous development of wire cable or optical cable technology and the continuous improvement of fire safety requirements, there will be more line integrity test methods in the future

The standards are merged into this series of standards.

Products that pass the tests of this document can be marked on the product.

Line integrity test of cables or optical cables under flame conditions

Part 2. Fire supply with flame temperature not less than 830 degrees C

Apply shock and vibration, rated voltage 0.6/1kV and below

Test method for cables with outer diameter not exceeding 20mm

1 Scope

This document describes the test methods for maintaining the integrity of the circuit when fire-resistant cables are subjected to flame and shock vibration under specified conditions.

This document applies to cables with a rated voltage of 0.6/1kV and below, including metal conductor data and telecommunications with a rated voltage below 80V