

ICS 29.060

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

中华人民共和国国家标准

GB/T 3048.9-2007

Replace GB/T 3048.9-1994, GB/T 3048.15-1992

**Test methods for electrical properties of electric
cables and wires-Part 9: Spark test of insulated
cores**

电线电缆电性能试验方法

第 9 部分：绝缘线芯火花试验

Issued on December 03, 2007

Implemented on May 01, 2008

**Issued by General Administration of Quality Supervision, Inspection
and Quarantine of the People's Republic of China**

**Standardization Administration of the People's Republic of
China**

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Foreword

GB/T 3084 *Test methods for electrical properties of electric cables and wires* divided into 14 parts are as follows:

- Part 1: General;
- Part 2: Test of electrical resistivity of metallic materials;
- Part 3: Test of volume resistivity of semi conducting rubbers and plastics;
- Part 4: Test of DC resistance of conductors;
- Part 5: Test of insulation resistance;
- Part 7: Tracking resistance test;
- Part 8: AC voltage test;
- Part 9: Spark test of insulated cores;
- Part 10: Spark test of extruded protective sheaths;
- Part 11: Test for dielectric dissipation factor;
- Part 12: Partial discharge test
- Part 13: Impulse voltage test
- Part 14: DC voltage test
- Part 16: Surface resistance test

This part is part 9 of GB/T 3084.

This part will replace GB/T 3048.9-1994 *Test methods for electrical properties of electric cables and wires—Part 9: Spark test of insulated cores* and GB/T 3048.15-1992 *Electric cables and wires-D.C. spark test method for insulated cores*. This revision makes modifications to this part based on GB/T 1.1-2000 *Directives for Standardization-Part 1: Rules for the Structure and Drafting of Standards*.

The main changes in this part with respect to GB/T 3048.4-1994 and GB/T 3048.15-1992 are listed below:

- The title of the standard in Chinese has been changed to “*电线电缆电性能试验方法 第9部分:绝缘线芯火花试验*”;
- The title of the standard in English has been changed to “*Test methods for electrical properties of electric cables and wires—Part 9: Spark test of insulated cores*”;
- The general structure and layout of this part have been changed according to GB/T

1.1-2000:

- 1) Clause 1 is “scope” (Clause 1 in GB/T 3048.9-1994 and GB/T 3048.15-1992 edition; Clause 1 in this edition);
 - 2) Clause 2 is “normative references” (Clause 2 in GB/T 3048.9-1994 edition; none in GB/T 3048.15-1992 edition, Clause 2 in this edition);
 - 3) Clause 3 is “terms and definitions” (none in GB/T 3048.9-1994 and GB/T 3048.15-1992 edition, Clause 3 in this edition)
 - 4) Clause 3 is “testing equipment” (Clause 3 in GB/T 3048.9-1994 edition; Clause 3 in GB/T 3048.15-1992 edition, Clause 4 in this edition);
 - 5) Clause 5 is “sample preparation” (none in GB/T 3048.9-1994 edition and GB/T 3048.15-1992 edition; Clause 5 in this edition);
 - 6) Clause 6 is “test procedure” (Clause 4 and 5 in GB/T 3048.9-1994 edition; Clause 3 and 4 in GB/T 3048.15-1992 edition; Clause 6 in this edition);
 - 7) Clause 7 is “test result and calculation” (Clause 6 in GB/T 3048.9-1994 edition; Clause 5 in GB/T 3048.15-1992 edition and Clause 7 in this edition);
 - 8) Clause 8 is “calibration of test equipment” (Clause 7 in GB/T 3048.9-1994 edition non in GB/T 3048.15-1992 edition).
 - 9) Clause 9 is “test record” (none in GB/T 3048.9-1994 edition and GB/T 3048.15-1992, clause 9 in this edition);
- The part including requirements is deleted from Clause 1 “scope” (Clause 1 in GB/T 3048.15-1992; Clause 1 in this edition);
 - Relevant standards are supplemented in Clause 2 “normative references” (Clause 2 GB/T 3048.9-1994; none in GB/T 3048.15-1992; Clause 2 in this edition);
 - Clause 3 “terms and definitions” is added (none in GB/T 3048.9-1994 and GB/T 3048.15-1992; Clause 3 in this edition);
 - The regulations on DC high voltage power supply ripples in Clause 4 “testing equipment” are changed (2.1 in GB/T 3048.15-1992, 4.4.2 in this edition);
 - The test voltage is changed from the specified value to the recommended value in Clause 6 “test procedure” (Clause 4 in GB/T 3048.9-1994 and Clause 3 in GB/T 3048.15-1992; Clause 6 in this edition);

- Clause 9 “test record” is added, specifying the specific contents the test records should write down (none in GB/T 3048.9-1994 and GB/T 3048.15-1992; Clause 9 in this edition).

This part is proposed by China Electrical Equipment Industrial Association.

This part is under the jurisdiction of National Technical Committee on Wire and Cables of Standardization Administration of China.

Draft unit of this part: Shanghai Cable Research Center.

Main drafters of this part: Wang Shude, Yu Zhenming, Xia Kairong, Zhang Zhaohuan.

This part replaces the following historical editions issued:

- GB 3048.9-1983 and GB 3048.9-1983-1994
- GB/T 3048.15-1992.

Test methods for electrical properties of electric cables and wires-Part 9: Spark test of insulated cores

1 Scope

As for the spark test of insulated cores (electric wires), this part of GB/T3048 stipulates its terms and definitions, test facilities, specimen preparation, test procedures, test result and assessment, calibration of test facilities and test records.

This part is suitable for testing the insulating layer quality of insulated cores of rubber and plastic insulated electric cables and wires and it can be used to implement the intermediate test and routine test of electric cables and wires. It cannot be used to test the insulation products of conducting cores made of non-conducting materials.

This part includes power frequency spark test and direct current spark test. That is to say, the test is implemented with power frequency spark machine and direct current spark machine.

This part shall be used together with GB/T3048.1.

2 Normative references

The articles contained in the following documents have become articles of this part when they are quoted in this part of GB/T 3048. For the dated documents so quoted, all subsequent modifications (including all corrections) or revisions made thereafter do not apply to this standard. However, the parties that reach an agreement according to this standard are encouraged to study whether the latest versions of these documents may be used. For the undated documents so quoted, the latest versions (including all modification sheets) apply to this document.

GB/T 2900. 10-2001 Electrotechnical vocabulary--Electric cables (idt IEC 60050 (461): 1984)

GB/T 3048. 1 Test methods for electrical properties of electric cables and wires--Part 1:General

JB/T 4278.10 Verification procedure for test equipment of rubber plastic wire and cable.
Part 10: Spark tester

3 Terms and definitions

For the purpose of this part of GB/T 3048, the terms and definitions given in GB/T

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