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

GB/T 16840.1-2008

Replacing GB 16840.1-1997

**Technical determination method for electrical fire evidence -
Part 1: Macroscopic method**

电气火灾痕迹物证技术鉴定方法 第1部分：宏观法

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Foreword

GB/T 16840 "mark evidence of electrical fire technical appraisal method" consists of the following components.

- Part 1. Macro method;
- Part 2. remanence method;
- Part 3. Auger analysis;
- Part 4. Metallographic analysis; This section GB/T 16840 Part 1. This Part replaces GB 16840.1-1997 "electrical fire cause identification technology - Part 1. Macro method." The main difference between this part and GB 16840.1-1997 follows.
- Standard by the mandatory standards to voluntary standards;
- Standard name from "electrical fire cause identification technology - Part 1. Macro method" to "electrical fire technical traces of evidence Kam Setting Method - Part 1. Macro Law ";
- 1 Scope, adjust the original scope of the standard;
- 2 Terms and definitions, while retaining and improving on the original standard, the addition of
- 2.7 samples, a short change
- 2.4 Melt road mark,
- 2.5 second short-circuit weld mark on the contents; Chapter 3
- principle, while retaining the original standard contents, on the part of words edited adjustment;
- Chapter 4 device, adjust the chapter name, and the content has been modified;

1 Scope

GB/T 16840.1-2008 is the Chinese national standard on technical determination method for

electrical fire evidence - part 1: macroscopic method, in the field of environment and health protection, safety. 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 2 July 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 May 2009. Classification: ICS 13.220, CCS C82. 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.

GB/T 16840 provisions of this part of the definition of electrical fire mark evidence the technical appraisal method

--- macroscopic law, principles, instruments, test Thus, the method steps and the criterion. This section applies to the cause of the fire investigation, fire scene to extract copper, aluminum wire melting mark, according to the appearance characteristics or bead cut faces Inside surface morphology identification technology to identify the melting properties.

2 Terms and definitions

The following terms and definitions apply to this section.

2.1 In the external short circuit arc flame or high temperature, the metal surface, especially the formation of copper, aluminum conductor circular, crater-like, nodular, sharp Shaped and other irregular Microfused or full penetration marks.

2.2 Copper, aluminum wire high temperature by the external flame or short arc, bead-like after the end of the wire, the middle or darting formed melt trace.

2.3 Copper, aluminum, lead by the scene of the fire in the fire melted high temperature occur, melting marks on the wire form.

2.4 Under normal environmental conditions, copper, aluminum wire because of their short-circuit failure, melt marks on the wire form.

2.5 Under fire environmental conditions, copper, aluminum wire failure caused by a short circuit in the wire forming melt marks.

2.6 When copper, aluminum wire bead is formed by short circuit in the bead holes inside there.

2.7 Scene of the fire to melt contained traces of conductors. Principle

3 Copper, aluminum wire either fire or short circuit arc thermal effect of high temperature

melting, in addition to all of the loss on ignition, it is generally able to find traces of residual melt, It was the appearance of a representative of the environmental conditions features. A short circuit and a secondary melting marks Melting marks belong to short-circuit the moment the arc melting temperature, melting range with a small, fast cooling features, but

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