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

GB/T 16840.5-2012

**Technical determination methods for electrical fire evidence -
Part 5: Method of recognizing and collecting the physical
evidence of electrical fire**

电气火灾痕迹物证技术鉴定方法 第5部分：电气火灾物证识别和提取方法

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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 assay;
- Part 3. Auger component analysis;
- Part 4. Metallographic analysis;
- Part 5. electrical fire evidence identification and extraction methods;
- Part 6. SEM microstructure analysis. This is Part 5 GB/T 16840 in. This section according to the rules GB/T 1.1-2009 given compilation. This section presents the People's Republic of China Ministry of Public Security. This part of the National Technical Committee of Standardization Technical Committee Fire Fire Investigation (SAC/TC113/SC11) centralized. This section is responsible for drafting unit. Shenyang Fire Research Institute Ministry of Public Security. Participated in the drafting of this section. Shanghai Public Security Fire Department, the Beijing Municipal Public Security Fire Department, Jilin Province Public Security Fire Corps. The main drafters of this section. Zhao Long, Zhang, Gao Wei, Di Man, Xie Fugen, Lian-iron, Li Jianlin, Meng Mountain, Gold River Long, Liu Shu-jun, Wang Xinming, Xia Dawei, Qi Zi Bo. This section first release. Electrical fire technical traces of evidence identification methods Part 5. Electrical fire evidence identification and extraction methods

1 Scope

GB/T 16840.5-2012 is the Chinese national standard on technical determination methods for electrical fire evidence - part 5: method of recognizing and collecting the physical evidence of electrical fire, 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 31 December 2012 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 October 2013. Classification: ICS 13.220.20, 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.

This section GB/T 16840 specifies the electrical fire mark evidence and forensic sampling methods. This section applies to electrical fires or fires in electrical equipment marks an inquest, and laboratory extraction of the sample pre-treatment; this section also It applies to electrical equipment inspection techniques to identify electrical faults.

2 Terms and definitions

The following terms and definitions apply to this section.

- 2.1 Short circuit to ground traces earthshortcircuitmark Electrical lines or conductors shorted to ground fault occurs and the residual traces.
- 2.2 Arc burning marks arcscathemark Arc is a high temperature and high electrical conductivity of free gas, trace since the arc formed by the action.
- 2.3 Mechanical friction marks frictionalmark In the scene of the fire due to mechanical friction force formed marks.
- 2.4 External force traces outsideforcemark In the scene of the fire due to external mechanical force to form traces.
- 2.5 Insulation discharge traces insulationfaultmark Due to deterioration of insulation or over-voltage spark discharge, melting or charring leaving marks on the insulator.
- 2.6 Burn marks insulationinternalheatmark insulating Conductor outer insulation overcurrent heat acting on its inner surface ablation, residual traces of carbonization.

3 Sample identification marks

- 3.1 trace metal shorts Trace metal shorts having the following characteristics.
 - Short circuit traces (melting marks) and wire matrix obvious transition zone, clear boundaries;
 - No signs of short circuit formed by annealing phenomenon;
 - Short circuit can process the metal splashing, create a more regular small metal bead, and the bead surface wider distribution;

--- Short circuit traces on a wire or other conductor can generally find the corresponding point;

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