

ICS 29.020
CCS K09



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

GB/T 22697.2-2008

**The risk assessment for the temperatures of hot surfaces of
electrical equipments to be touched - Part 2: Burn thresholds**

电气设备热表面灼伤风险评估 第2部分：灼伤阈值

Issued on: December 31, 2008

Implemented on: November 1, 2009

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

Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and definitions 4 hot surface temperature factor	1
4.1 body temperature factor	1
4.2 equipment surface material	1
5.2 Threshold selection burns	2
5.3 surface appearance 3 6 burns threshold data	3
6.1 contact time 1s ~ 10s burns threshold of	3
4 Appendix A (informative) thermal properties of certain materials	8

Foreword

GB/T 22697 "Electrical Equipment of hot surfaces Risk Assessment" is divided into three parts.

--- Part 1. General;

--- Part 2. burn threshold;

--- Part 3. protective measures. This section is GB/T Part of 222,697. Referring to the development of this part of the CENELEC Guide 29.2007 "Electrical equipment and easy contact with hot surfaces of the risk assessment." This section should be GB/T 22697.1 "hot surfaces of electrical equipment risk assessment - Part 1. General" supporting the use. Appendix A of this section is an informative annex. This part of the National Electrical Safety Standardization Technical Committee (SAC/TC25) and focal points. This part mainly drafted by: Electrical Machinery Industry Beijing Technology and Economy Institute, Shanghai Electrical Apparatus Research Institute (Group) Co., Ltd. Shanghai Institute of electric tools. The main drafters of this section. Li Feng, Ji Yu Hui, Liu Jiang, Fang Xiaoyan, Libang Association, leather bag, has hung Yan, Zhang Liang. This section first release. Electrical equipment of hot surfaces Risk Assessment Part 2. burns threshold

1 Scope

GB/T 22697.2-2008 is the Chinese national standard on the risk assessment for the temperatures of hot surfaces of electrical equipments to be touched - part 2: burn thresholds, 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 31 December 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 November 2009. Classification: ICS 29.020, CCS K09. 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 presents the hot surface temperature of the electrical equipment of factors affecting data burn threshold factor and burns threshold. This section applies to hot surfaces of electrical equipment selection and risk assessment to determine the burn threshold. Burns hot surface features of the device are not considered within the threshold of this section.

2 Normative references

The following documents contain provisions which, through reference

GB/T 22697 in this section constitute provisions of this section. For dated references, All subsequent amendments (excluding corrections) or revisions do not apply to this section, however, encourage an agreement under this section Parties to study the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 22697.1-2008 Electrical equipment of hot surfaces Risk assessment - Part 1. General

3 Terms and Definitions

Terms and definitions GB/T 22697.1-2008 established in this section apply to GB/T 22697 of.

4 Hot surface temperature factor

4.1 body temperature factor Electrical equipment burns depends on human skin after contact with hot temperature and surface temperature of the duration, in practice not only Determination of skin temperature and electrical equipment in contact with hot surfaces in a simple manner. This section does not consider human skin temperature, only prompt electrical When the device is in contact with the hot surface of the skin, the risk of burns may occur. Hot surface temperature of electrical equipment can be used with the appropriate test simply measured.

4.2 equipment surface material Hot surfaces in contact with the process of human skin electrical equipment, resulting in the risk of burns depends on the material composition of

the surface equipment, skin and equipment Surface in continuous contact time. Figure 1 depicts the above relationship, and reveals similar thermal performance thresholds and burns also several groups of similar material, tables Surface temperature, surface composition and material relationship with the duration of exposure of the skin.

4.3 burns and burns temperature threshold Burns on the threshold curve represents a certain point, when skin contact with hot surfaces of electrical equipment, in the case of a certain contact time, the Now superficial skin burns and surface temperature of the electrical equipment does not occur between the skin burns. Electrical equipment surface temperature in less burn threshold curve does not usually cause burns, the surface temperature of human skin burns at the threshold Above the curve will cause skin burns occur. FIG 1 only burns threshold descriptive data, for better understanding, FIG. 1 can not be accurately described burns threshold electrical equipment Value, the threshold value should be accurate burns Figures 2 to 6 in Table 2 and selected. If the contact time is very short, depicted in Fig. 1 to 6 in the burn threshold curve is not continuous, but discrete curve. That the case is considered When the contact time is short, the skin begins to burn and burns do not occur between the temperature limit is not perfect but the fact obtained. Burns threshold depends on the following factors. the point of contact of the skin thickness, the skin surface moisture (perspiration), the skin debris contamination (such as oil), then Touch tightness. When the contact time is very long, it is determined burns threshold uncertainty than in the case of short contact time is less, you can specify the exact threshold burns value. Burns difference threshold different group of materials in contact with a very long time the situation will disappear.