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

GB/T 4797.8-2008

**Classification of environmental conditions -- Environmental
conditions appearing in nature -- Fire exposure
(English Translation)**

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Foreword

GB/T 4797 standard consists of the following eight sections.

- Temperature and humidity
- Altitude and depth of pressure and water pressure
- biological
- Solar radiation and temperature
- Precipitation and wind
- Dust, sand, salt spray
- Earthquake vibration and shock
- Fire exposure

This part of GB/T 84797 Part of.

This section identical with IEC 60721-2-8:1994 "Classification of environmental conditions - Part 2. Fire exposed." this part of the normative documents cited in part not yet converted to the equivalent national standards adopted, in reference to these regulatory documents when the member is still IEC/ISO number listed.

For ease of use, this section made the following editorial changes.

- Deleted international standards foreword;
- Increase the national standard foreword;
- The term "this part of IEC 721" with the words "GB/T 4797 this part" or "this part";

--- On paper long figure caption, and is reduced, the original title of the text captions include the relevant content;

--- Fig. 6 "S = 18m²", according to the figure text, corrected to "S = 16m²".

This part of the National Electrical and Electronic Products Environmental conditions and environmental tests for Standardization Technical Committee (SAC/TC8) and focal points.

This section is drafted. Guangzhou Electric Apparatus Research Institute, Shanghai Institute of Industrial Automation Instrumentation.

1 Scope

GB/T 4797 this part of the qualitative and quantitative description of the fire in the building, development and spread of environmental conditions, and the major solid Given the use of electrical products related.

This section considers the conditions before the flashover, conditions are also taken into account after.

2 Normative references

The following documents contain provisions which, through reference in this part of the GB/T 4797, constitute provisions of this part. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

Test fire of building products - Test methods (ISO 5657 under a radiant heat source GB/T 14523-2007 reaction to fire 1997, IDT) ISO 5658-2:1996 Reaction to fire flame spread test - Part 2. Flame spread on vertically spaced horizontal building products ISO 5660-3:2003 Reaction to fire tests heat release rate, smoke production rate and mass loss rate - Part 3. Measurement Guide ISO/T R5924. 1989 Reaction to fire tests of building materials combustion fumes (dual chamber test) ISO 9705:1993 fire tests of full-size room facing product test ISO 19702:2006 test burn toxic wastes using FTIR gas analysis of combustion exhaust gases and vapors Analysis Guide

3 Overview

In a space, when combustible get enough energy when the fire occurred, such as a lighted cigarette or electrical short circuit ignited material or the material itself produce this energy (spontaneous combustion). The determining factors are the combustion process (see Figure 1).

--- Characteristics of the energy source;

--- Type of exposure and geometric characteristics of the material;

--- Heat exposure time.

After the fire ignition will generate heat, partly used to maintain and further combustion, partly by radiation and convection pass around other materials and production Products, and products of these materials may also be heated combustion, resulting in fire diffusion (see Figure 2). Flammable materials within the building usually gaseous lead Burning.

The space in the event of fire, depending on the development and spread of flame (see Figure 1).

--- Fuel or combustion position, size and placement of burning material in the space distribution, continuity, porosity and burn Combustion characteristics;

--- Aerodynamic conditions within the space;

--- Space shape and size;

Thermodynamics --- space.

If the installation of fire-fighting equipment, fire growth process is affected by the design of fire-fighting equipment and the ability to work (such as a sprinkler system).

Development of fire generally include complex interactions thermodynamics, aerodynamics and chemical processes. Typically, radiation, convection and flame Spread is the main physical factors.

In the growth stage of the flame at the top of the building will form a layer of hot air. Under certain conditions, this layer of hot air may lead from the further development of the fire, which leads to all the fire load in most caught fire. produce flashover.

GB/T 4797.8-2008/IEC 60721-2-8:1994