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

GB 5959.4-2008

Replacing GB 5959.4-1992

**Safety in electro-heat installations -- Part 4: Particular
requirements for safety resistance heating installations**

电热装置的安全 第4部分：对电阻加热装置的特殊要求

(English Translation)

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Foreword

This part of all except art in Chapter 16 of the mandatory content.

GB 5959 "electric safety devices" has the following 13 sections.

--- Part 1. General requirements (GB 5959.1-2005, IEC 60519-1:2003, IDT);

--- Part 2. Particular requirements for arc furnace apparatus (GB 5959.2-2008, IEC 60519-4:2006, IDT);

--- Part 3. Particular requirements for induction and conduction heating apparatus and an induction melting apparatus (GB 5959.3-2008, IEC 60519-3:2005, IDT);

--- Part 4. Particular requirements (GB 5959.4-2008, IEC 60519-2:2006, IDT) resistance heating means;

--- Part 4.1. Particular requirements for resistance heating means for heating and melting glass --- means (GB 5959.4.1-2004, IEC 60519-21:1998, IDT);

Safety regulations plasma apparatus (GB 5959.5-1991, eqv IEC 60519-5.. 1980) --- first portion 5;

--- Part 6. Safety Specification Industrial microwave heating apparatus (GB 5959.6-2008, IEC 60519-6:2002, IDT);

--- Part 7. Particular requirements for the apparatus having the electron gun (GB 5959.7-2008, IEC 60519-7:2008, IDT);

--- Part 8. Particular requirements for electroslag remelting furnace (GB 5959.8-2007, IEC 60519-8:2005, IDT);

--- Part 9. Particular requirements (GB 5959.9-2008, IEC 60519-9:2005, IDT)

high-frequency dielectric heating apparatus;

--- Part 10. for industrial and commercial heating systems special requirements (IEC 60519-10:2005, to be transformed) resistor profiling;

--- Part 11. electromagnetic stirring of the liquid metal, transport or pouring special requirements (GB 5959.11-2000 device, idt IEC 60519-11:1997);

--- Part 13. Particular requirements for the heating apparatus having an explosive atmosphere (GB 5959.13-2008).

In addition to this standard an outer part 13, are used to develop each of IEC 60519 part "safe heating apparatus" corresponds. This is Part of 4 GB 5959.

This section is equivalent to using IEC 60519-2:2006 "Safety electrothermal Part 2. Particular requirements for resistance heating equipment" (section Third Edition, in English).

For ease of use, for IEC 60519-2:2006, made in this section, the following editorial changes. The term --- "this International Standard" by "this section";

--- standard name by a "safe heating apparatus Part 2. Particular requirements for resistance heating device," the name is changed;

--- deleted international standards foreword.

This partial replacement GB 5959.4-1992 "Safety fourth portion heating device. General requirements for resistance furnace", the latter as compared with the main To technological change as follows.

a) 6.12.1 as new. Proposed requirements for immersion heaters maximum permissible rated voltage.

b) 6.14 to add requirements for a vacuum oven operating voltage.

--- 9.6.7 added a leakage current, touch current and protective conductor current level of safety considerations and references GB/T 12113-2003 and IEC 60479-1:2005.

--- 15 nameplate, marking and technical documentation is new.

--- Check the heating device 16, in operation, use and maintenance

a) 16.2.2.1 on the leakage current, add a reference to the provisions of Chapter 4706.1-2005 16 GB;

b) 16.2.2.3 with new information about the contact line current protection and current indicators and current content to human and animal effects, And were cited GB/T 12113-2003 and IEC 60479-1:2005. This section should be used in conjunction with GB 5959.1-2005.

2 Normative references

Terms of the following documents constitute provisions of this section by reference in this part of GB 5959. For dated references, All subsequent amendments (excluding corrections) or revisions do not apply to this section, however, encouraged to reach an agreement under this section Whether the parties to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 2900.23-2008 Electrotechnical term industrial heating means (IEC 60050-841:2004, IDT)

GB 4208-2008 shell protection (IP code) (IEC 60529:2001, IDT)

GB 4706.1-2005 and similar household electrical appliances Part 1: General requirements (IEC 60335-1:2001, IDT)

GB 5959.1-2005 electric safety devices - Part 1: General requirements (IEC 60519-1:2003, IDT)

Safety Part 2 GB 5959.2-2008 electrothermal. Particular requirements for arc furnace apparatus (IEC 60519-4:2006, IDT)

Part 3 GB 5959.3-2008 Safety heating means. Laid induction and conduction heating apparatus and an induction melting apparatus Specific requirements (IEC 60519-3:2005, IDT)

Safety Part 41 GB 5959.41-2004 heating means. resistance heating means for heating and melting glass --- means Particular requirements (IEC 60519-21:1998, IDT)

GB 5959.8-2007 Safety Section 8 electrothermal. Particular requirements for electrosag remelting furnaces (IEC 60519-8:2005, IDT)

GB/T 10066.1-2004 Test Method heating apparatus Part 1: Common Part (IEC 60398:1999, MOD)

Measurement GB/T 12113-2003 touch current and protective conductor current (IEC 60990:1999, IDT)

GB 16895.2-2005 Electrical installations of buildings Part 4-42. Security Protection against thermal effects (IEC 60364-4-42. 2001, IDT)

GB/T 13870.1-2008 current effects on human beings and livestock Part 1: Common Part (IEC 60479-1:2005, IDT)

GB/T 17045-2008 Protection against electric shock device and a generic device (IEC 61140:2001, IDT)

IEC 60364-4-41:2005 low voltage electrical installations Part 4-41. 1 safety Protection against electric shock)

IEC 60519-10:2005 Safety Part heating means 10.

1) adopt standard case. Part 4-41 GB 16895.21-2004 building electrical devices. safety against electric shock (currently valid) (to IEC 60364-4-41:2001, IDT).

3 Terms and Definitions

GB 5959.1-2005 and GB/T 2900.23-2008 and the following terms and definitions apply to this section.

3.6

The upper layer of the solidified bath melted first auxiliary heating means

3.16

In the current flowing through the protection line

3.7

A furnace for melting the solid charge

3.1

Direct resistive heating member which contacts with the charge and the current is transferred to the charge.

3.2 The electrical energy into heat for a conductor

Note: The term "heat conductor" often use "heating resistor" alternate.

3.3

The molten glass in the bath the thermal current directly flows generated by the oven to achieve, in which the electrode is immersed in the bath furnace.

3.4 Salt bath furnace is mainly used as the heat transfer fluid

Note: direct heating or indirect heating may be achieved. Direct heating of the heating element assembly (the heater) was placed in a salt bath (the heater or electrodes immersed Salt bath); indirect heating of the heating element assembly (the heater) is placed outside the cylindrical body or the crucible.

3.5

In a metal cylinder or a crucible filled with sodium or potassium nitrite or nitrate salt bath, or a mixture of these salts consisting of a salt bath Bath furnace.