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

GB 5959.9-2008

Replacing GB 5959.9-1989

**Safety in electro-heat installations -- Part 9: Particular
requirements for high-frequency dielectric heating installations**

电热装置的安全 第9部分：对高频介质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 41. Particular requirements for resistance heating means for heating and melting glass --- means (GB 5959.41-2004, 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 electrosag 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). This is Part 9 GB 5959's.

This section is equivalent to using IEC 60519-9:2005 "Safety of electric heating means 9. To special high-frequency dielectric heating apparatus Seeking "(second edition, in English).

For ease of use, for IEC 60519-9:2005, made in this section, the following editorial changes.

--- "This standard" be replaced by "this section";

--- deleted international standards foreword and preface;

--- account of the requirements and high-frequency dielectric heating apparatus for the personal protection of the integrated electromechanical equipment, employing

IEC 60519-9:2005, which is extended to the special requirements of the relevant persons and comprising the necessary mechanical safety devices.

This partial replacement GB 5959.9-1989 "Safety of electric equipment Part 9: Particular requirements for high-frequency dielectric heating apparatus", The main technical changes compared with the latter as follows (listed only project name).

- text "This standard" to "this Part";
- full article by article number and title of the basic IEC 60519-9:2005 corresponds to revise, write the first chapter 1,2,3 title by GB/T 1.1 Regulations;
- to increase the range. "Note. Press CISPR11" electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio frequency equipment Limits and Method ", specify some preferred primary frequency of ISM (ISM) frequency. ";
- increased range "GB 5959.1-2005" Safety first portion of the electrothermal device. General Requirements "refers to a segment voltage work Frequency supply voltage. In some circuits in high-frequency dielectric heating apparatus (built-in transformers as generator), DC, or AC Have higher RF voltage values. ";
- increasing the normative references;
- delete the original "3.1 to 3.9" 9 terms and definitions;
- increase "medium heating means 3.1, 3.2 (medium) is applied, a 3.3 standard tools" three terms and definitions;
- "4.5 clearance and creepage distances" corresponding to the original is deleted in the standard 5.4 "intermediate";
- "4.6 Internal Electrical connection" after deleting the original corresponding to the standard injection 5.5.2;
- "4.7 capacitor" Added Note 2, Note 3, 4 content and IEC 60204-1 cited by deleting the reference to the GB 3984;
- "RFI suppression 4.10" corresponding to the original standard 5.9, 4.10.1 requirements increase;
- "indirect contact protection 5.3 pairs of" high-frequency voltage without increasing the frequency "heat capacitor or the working electrode is typically only 50Hz/60Hz or DC voltage component (thermal plastic timely prevention apparatus burnt except low pressure). In the event of failure (insulation breakdown Wear), 50Hz/60Hz or DC voltage that may appear on the heating or working electrode of the capacitor. Therefore, it is recommended by a The inductance of the capacitor electrode is grounded or (if there is no such an inductance in the actual circuit). "Claim;
- 5.4.1 Add "Note. In some cases, when a high-frequency electrode voltage exceeding 10kV magnitude, the arc may be generated (in the electrical heating A surrounding space of the container and the electrode arcing). This arc power capacity of 0.5kW of magnitude, there is usually less than the high frequency With power. Thus, the arc does not cause the overcurrent device operation. To eliminate the arc, there may need to manually cut off and close the high Frequency voltage. ";

6.3 --- increase "manufacturer shall specify the conditions of this test (such as inductors, material and shape of the short-circuit element).";

Increase --- 6.4 "Note. Some devices may reach temperatures member at its maximum load or minimum load actually used value. Therefore, the load test may be necessary. The overload test to find out parasitic oscillation is helpful. ";

--- increase the "References."

This part of the jurisdiction of the National Electric Industry Standardization Technical Committee (SAC/TC121) equipment. This section was drafted. Furnace Co., Ltd. Xi'an Institute.

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

3 Terms and Definitions

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

3.3

Screwdriver, adjustable wrench, flat wrenches and pliers and other simple tools

3.1

It means consisting of a dielectric and the dielectric heating applicator generator, high frequency transmission line (if any).

3.2 Or by the heating of the capacitor fixing and positioning system with a working electrode, an impedance matching circuit (if it is not disposed in the generator), the need

Protection and shielding means and transfer means, the supply and ventilation thereof.