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

GB 5959.2-2008

Replacing GB 5959.2-1998

**Safety in electro-heat installations -- Part 2: Particular
requirements for arc furnace installations**

电热装置的安全 第2部分：对电弧炉装置的特殊要求

(English Translation)

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Foreword

All technical content of this portion is mandatory.

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 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 2 GB 5959's.

This section is equivalent to using IEC 60519-4:2006 "Safety electrothermal Part 4. Particular requirements for arc furnace unit" (Third Version, English version).

For ease of use, for IEC 60519-4:2006, made in this section, the following editorial changes. The term --- "this International Standard" by "this section";

--- standard name by a "glow Safety Section 4. Particular requirements for arc furnace means" to now;

--- deleted international standards foreword.

This partial replacement GB 5959.2-1998 "Safety second portion electrothermal apparatus. Particular requirements for electric arc furnace", as compared with the latter The main changes are as follows.

--- structural adjustment 5959.1-2005 consistent with GB;

--- EAF increases defined classification section and a second voltage at the third voltage the device may segment (4.2.2);

--- In Chapter 6 increased regulations affect the electromagnetic interaction;

--- adds a predetermined direct contact with live parts (9.2.3) in Chapter 9;

--- specified in Chapter 11, "tilt rail circuit is not as the return" (11.4.3);

--- increased provisions for DC arc furnace in Chapter 16. This section should be used in conjunction with GB 5959.1-2005. Appendix A and Appendix B of this section is normative.

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)

IEC 60073:2002 people - computer interface, marking and identification with the basic principles and the principles of safety equipment and instructions encoded regulator principle

IEC 60204-1:2005 Safety of machinery Electrical Equipment Part 1. General requirements 1)

IEC 60364-4-41:2005 low-voltage electrical equipment Part 4-41. Safety shock protection 2)

IEC 60364-4-43:2001 building electrical equipment - Part 4-43. Protection for safety overcurrent protection 3)

IEC 60479-1:2005 Current Effect on human and livestock - Part 1. General characteristics 4)

CISPR11.2006 Industrial, scientific and medical (ISM) radio frequency equipment electronic disturbance characteristics - Limits and methods of measurement 5)

3 Terms and Definitions

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

1) Description adopt standard. GB 5226.1-2002 Part 1 Safety of machinery electrical equipment. General requirements (currently valid version) (IEC 60204-1:2000, IDT).

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

3) Description adopt standard. GB 16895.5-2000 Electrical installations of buildings Part 4: Safety Chapter 43. Protection against overcurrent (current valid version) (IEC 60364-4-43. 1977, IDT).

4) Description adopt standard. GB/T 13870.1-1992 effect a current through the first portion

of the human body. Common part (currently valid version) (NeqIEC 60479-1. 1984).

5) adopt standard Description. GB 4824-2004 industrial, scientific and medical (ISM) radio frequency equipment electromagnetic disturbance characteristics - Limits and methods of measurement (currently valid version This) (CISPR11.2003, IDT).

4 Voltage electric equipment according to the classification section

In addition to these supplements, according to GB 5959.1-2005 Chapter 4 requirements.

4.1 Adds

The open circuit voltage nominal supply voltage section is determined by the line connected to the electrode.

4.2.2 Increase

Direct voltage exceeds a second voltage arc furnace section may be, greater than 1000V AC (or DC 1500V), less than 1500V AC (Or the DC 2100V). It should be under the following conditions.

- a) Under the premise to meet operational requirements, the voltage power supply device according to a standard design exceeds 1000V AC (or DC 1500V);
- b) the expected targets and actual accessory device according to the nominal voltage required to meet 15.3;
- c) insulated conductor of a large current to meet the minimum requirements of the relevant standards.

5 Electric equipment by frequency classification section

In addition to these supplements, according to GB 5959.1-2005 Chapter 5 requirements.

5.1 Addition

In terms of electromagnetic interference characteristics, the DC frequency of zero.

6 General requirements

In addition to these requirements, according to GB 5959.1-2005 6 and Appendix B.

6.1.1 Alternative

A third segment is replaced by the following.

Voltage exceeds the voltage of the second section (1000V AC) voltage and the third section