



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

GB/T 5959.41-2019

**Safety in electroheating installations -- Part 41: Particular
requirements for resistance heating equipment -- Heating and
melting glass equipment**

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Foreword

GB/T 5959 has the following 14 parts.

--- GB/T 5959.1 Safety of electrothermal and electromagnetic treatment devices - Part 1.General requirements;

--- GB 5959.2 Safety of electric heating devices - Part 2.Particular requirements for electric arc furnace installations;

--- GB 5959.3 Safety of electroheating devices - Part 3.Particular to induction and conductive heating devices and induction melting devices

Claim;

--- GB 5959.4 Safety of electric heating devices - Part 4.Particular requirements for electric resistance heating devices;

--- GB/T 5959.41 Safety of electric heating devices - Part 41.Particular requirements for electric resistance heating, glass heating and melting

Chemical device

- GB 5959.5 Safety of electroheat installations - Part 5.Particular requirements for plasma installations;
- GB 5959.6 Safety of electric heating devices - Part 6.Safety specification for industrial microwave heating equipment;
- GB 5959.7 Safety of electroheating devices - Part 7.Particular requirements for devices with electron guns;
- GB 5959.8 Safety of electric heating devices - Part 8.Particular requirements for electroslag remelting furnaces;
- GB 5959.9 Safety of electric heating devices - Part 9.Particular requirements for high-frequency medium heating devices;
- GB/T 5959.10 Safety of electroheat installations - Part 10.Particular requirements for resistance and heat tracing systems for industrial and commercial use;
- GB/T 5959.11 Safety of electric heating devices - Part 11.Particular requirements for liquid metal electromagnetic force devices;
- GB/T 5959.12 Safety of electric heating devices - Part 12.Particular requirements for infrared electric heating devices;
- GB 5959.13 Safety of electric heating devices - Part 13.Particular requirements for electric heating devices with an explosive atmosphere.

This part is part 41 of GB/T 5959.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part replaces GB 5959.41-2004 "Safety of electric heating equipment - Part 41.Resistance heating devices - Glass heating and melting

The special requirements of the chemical device, compared with GB 5959.41-2004, the main technical changes are as follows.

- cited GB 5959.1-2005 and GB 5959.4-2008;
 - Quoted the terms and definitions in GB/T 2900.23-2008;
 - Inspections that will avoid contact with live parts are changed to regular inspections at least every 6 months (see 16.3.11,.2004 edition)
- 15.3.101).

This part uses the translation method equivalent to IEC 60519-21.2008 "Safety of electric heating devices - Part 21.

Special requirements for glass heating and melting equipment.

The documents of our country that have a consistent correspondence with the international documents referenced in this part are as follows.

--- GB/T 16895.21-2011 Low-voltage electrical installations - Part 4-41. Protection against electric shock (IEC 60364-4-41).

2005, IDT)

This section has made the following editorial changes.

--- The standard name is changed to "Safety of electric heating devices - Part 41. Particular requirements for resistance heating devices - Glass heating and melting Device".

This part was proposed by China Electrical Equipment Industry Association.

This part is under the jurisdiction of the National Technical Committee for Standardization of Industrial Electric Heating Equipment (SAC/TC121).

This section was drafted by: Xi'an Electric Furnace Research Institute Co., Ltd., Kunming University of Science and Technology, Xi'an Zhongye New Materials Co., Ltd., National Electric Furnace

Volume Supervision and Inspection Center.

1 Scope and purpose

Replace the following chapter 1 of GB 5959.4-2008.

This section applies to indirect resistance heating equipment operating in the 1st voltage section and the 2nd voltage section for glass heating and melting.

These special requirements are equally applicable to devices where current flows through the electrodes through direct resistance heating and melting of the heated material.

The purpose of this section is to specify the safety requirements for indirect and direct resistance heating equipment for glass heating and melting.

Note. The removal of liquid glass or similar material at the discharge port is part of the production process and is not part of the operation of the electric heating device.

This section also applies to the safety requirements of electrical parts combined with electrical heating and other heating methods such as liquid fuel heating.

Due to process reasons, these requirements do not apply to direct resistance heating equipment for GB 5959.3, GB 5959.2 and GB 5959.8.

2 Normative references

This chapter of GB 5959.4-2008 is applicable.

3 Terms and definitions

This chapter of GB 5959.4-2008 is applicable, but is supplemented as follows.

supplement.

3.101

Glass melting furnace (indirect resistance heating)
glass-meltingfurnace(indirectresistanceheating)

A furnace in which the glass is melted by indirect resistance heating.

3.102

Potpot potfurnace

Indirect electric heating is used to melt the glass batching melting equipment in a container called "??", which is made of refractory material and

Placed in the furnace.

3.103

Feeder Filingmachine

A machine that incorporates glass ingredients into a glass melting furnace.

3.104

Reclaimer extractionmachine

A machine for taking out molten glass from a glass melting furnace.

3.105

Discharge point extractionpoint

An opening in the glass melting furnace through which the molten glass is taken out.

Note. The molten glass can be removed manually using a glass worker's tool or removed with a reclaimer. For the crucible furnace, the discharge port is also used as a feed port or a sampling port.

3.106

Grounding electrode earthingelectrode

An electrode mounted in a glass bath and connected to an equipotential system.