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

GB/T 10066.1-2019

**Test methods for electroheating and electromagnetic
processing installations -- Part 1: General**

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Foreword

GB/T 10066 "Test methods for electrothermal and electromagnetic treatment devices" is divided into the following sections.

- Part 1. General part;
- Part 3. Heart induction furnace and centerless induction furnace;
- Part 31. Determination of the output power of generators of high frequency induction heating devices;
- Part 4. Indirect resistance furnace;
- Part 5. Plasma equipment for electrothermal and electrochemical;
- Part 6. Method for determining the output power of industrial microwave heating devices;
- Part 7. Electric heating equipment with electron guns;
- Part 8. Electroslag remelting furnace;
- Part 9. Determination of output power of high frequency dielectric heating devices;
- Part 10. Direct electric arc furnace;
- Part 11. Submerged arc furnace;
- Part 12. Infrared electric heating device.

This part is the first part of GB/T 10066.

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

This part replaces GB/T 10066.1-2004 "Test methods for electric heating equipment - Part 1. General part", and GB/T 10066.1-

Compared with.2004, the main technical changes are as follows.

--- The scope is extended to electromagnetic treatment devices and equipment including materials (see Chapter 1);

--- Revised the normative reference documents and the guiding terms and related content of terms and definitions (see Chapters 2 and 3);

--- Added comparisons, working loads, numerical simulations, energy (power) consumption and energy, including test boundaries, equipment or devices related to energy systems

Effectiveness, the scope of the expected operation, and the terms of the surface performance of the treated work and related test methods, correspondingly increase the chapter

Or change the name of the original chapter;

--- Removed the "Measurement of Electromagnetic Compatibility" and "Measurement of Exhaust Gas (including Dust)" and its test methods (see.2004)

Versions 7.2.5 and 7.2.7);

--- Added informational appendix on energy efficiency assessment and mapping, energy efficiency and energy assessment (see Appendix B, Appendix C and

Appendix D).

This section uses the redrafting method to modify the use of IEC 60398.2015 "Electrical and electromagnetic treatment equipment general performance test methods."

Compared with IEC 60398.2015, this part adds 4.8, 6.6, 6.8, 8, 9.2~9.16, 9.24, 9.25 to the structure.

Prolonged.

The technical differences between this part and IEC 60398.2015 and their reasons are as follows.

---About the normative reference documents, this part has made technical adjustments to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

* Replace IEC 60519-1 with GB/T 5959.1-2019 equivalent to the international standard;

* Added reference to GB 5226.1;

--- Added the terminology and definition of "equipment capacity" for the convenience of standard users (see 3.1.3);

--- Increased requirements for test instruments (see 4.8);

- Added "measurement of ambient temperature" in order to meet the actual needs of the country (see 6.6);
- Added "measurement of vacuum" (see 6.8);
- Added "test project" (see Chapter 8), in order to be more operational;
- Regarding the test method, in order to ensure the integrity of the test project, to adapt to the technical conditions of China, the specific adjustments are as follows.
- * Added "Measurement of surface temperature of heated components" test (see 9.12);
- * Added "Measurement of coolant flow" test (see 9.13);
- * Added "Measurement of coolant temperature rise" test (see 9.14);
- * Added "thermal test of the movement or action of the moving mechanism" (see 9.15);
- * Added "Measurement of Working Vacuum" test (see 9.16);
- * Added "Sound Level Measurement" test (see 9.24);
- * Added "Appearance inspection after hot test" test (see 9.25).

This section also made the following editorial changes.

--- In order to be consistent with China's standard system, change the name of this part to "Test methods for electrothermal and electromagnetic treatment devices - Part 1.

Use part".

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).

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1 Scope

This part of GB/T 10066 specifies industrial devices and equipment for determining various types of electrothermal (EH) or material electromagnetic treatment (EPM).

The main performance parameters and basic test procedures, test conditions and test methods for the main operating characteristics.

This section applies to the commissioning of the above-mentioned devices and equipment, the verification of design improvements or energy-related tasks, including the determination of energy use.

Or energy efficiency benchmarks and marking. Some of the concepts in this section can be used directly as key performance indicators.

This section does not apply to electric cooking and electric heating devices for household and similar purposes; nor is it suitable for heating and brazing in domestic and industrial rooms.

Equipment and appliances for welding, welding or other similar purposes and for heating and heating roads, bridges, parking lots or any form of space

Electric heating equipment.

The detailed test methods for special types of electrothermal or material electromagnetic treatment equipment and devices are outside the scope of this section, and in their corresponding

It is specified in the special test method. This section can be used as a test method for all future special types of electrothermal or material electromagnetic treatment equipment or devices.

General reference.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB 5226.1 Mechanical electrical safety machinery and electrical equipment - Part 1. General technical conditions (GB 5226.1-2008,

IEC 60204-1.2005, IDT)

GB/T 5959.1-2019 Safety of electrothermal and electromagnetic treatment systems - Part 1. General requirements (GB/T 5959.1-2019,

IEC 60519-1.2015, IDT)

GB/T 23331 Energy Management System Requirements (GB/T 23331-2012, ISO 50001.2011, IDT)

ISO /IEC 13273-1 General terms for energy efficiency and renewable energy - Part 1. Energy efficiency (Energy efficiency)