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

GB/T 10066.6-2018

Replacing GB/T 10066.6-2008

**Test methods for electroheating and electromagnetic processing
installations -- Part 6: Test methods for the determination of power
output of industrial microwave heating installations**

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Foreword

GB/T 10066 "Test methods for electrothermal and electromagnetic treatment devices" has 12 parts.

--- 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. Electrothermal devices 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 heating device.

This part is the sixth 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 10066.6-2008 "Test methods for electric heating devices - Part 6. Industrial microwave heating device output

Method of measurement. Compared with GB/T 10066.6-2008, the main technical changes except editorial changes are as follows.

--- The name and scope of the standard is extended to electromagnetic treatment devices

and equipment including materials;

--- Added 22 terms such as "microwave heating device" and "vacuum microwave drying device";

--- Removed "Device Type and Output Power", "5 Output Power Test Load" and "6 Test Description", adjusted to new chapters and

Capacity "4 microwave power measurement method" "5-volume thermal power measurement" "6 microwave workload power measurement" "7 effective microwave power

Determination ""8 efficiency measurement" "9 standby power consumption";

--- Added "Appendix A Thermodynamic Properties of Water".

This section uses the redrafting method to modify the IEC 61307.2011 "Measurement Method for Output Power of Industrial Microwave Heating Devices".

This section has more structural adjustments than IEC 61307.2011. This section and IEC 61307.2011 are listed in Appendix A.

The chapter number is compared to the list.

The technical differences between this part and IEC 61307.2011 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 60050-841 with GB/T 2900.23 equivalent to the international standard;

* Replace IEC 60519-6 with GB 5959.6 equivalent to the international standard;

* Replace IEC 60050-726 with GB/T 14733.2 equivalent to the international standard;

--- In order to facilitate the understanding of this part, six terms such as "microwave heating device" have been added;

--- According to the commonly used measuring method for domestic open containers, the "7.3 open container water load heating and vaporization measurement method" was added;

--- In order to facilitate the understanding of this part, the "8.3 microwave heating equipment electrical efficiency" "8.4 microwave heating device heating efficiency" was added.

This section also made the following editorial changes.

--- Modified the standard name;

--- Added a note in the "scope";

--- Added informative Appendix A "Structural changes in this section compared to IEC 61307.2011";

--- Added informative Appendix B "Thermal properties of water";

--- Added reference IEC 60398.2015.

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 drafted by. Guiyang Xinqi Microwave Industry Co., Ltd., Kunming University of Science and Technology, Xi'an Electric Furnace Research Institute Co., Ltd., Eagle Collar

Aviation high-end equipment technology Qinhuangdao Co., Ltd., National Electric Furnace Quality Supervision and Inspection Center.

1 Scope

This part of GB/T 10066 specifies the microwave available output power, working load power and effective for determining industrial microwave heating equipment.

Power, as well as test methods for the electrical efficiency of microwave heating equipment and the heating efficiency of microwave heating equipment.

This section only applies to industrial microwave heating equipment and devices with frequencies ranging from 300MHz to 300GHz.

Note. The frequency specified for microwave heating in the world is (915+/-25)MHz, (2450+/-50)MHz, (5800+/-75)MHz and (22125+/-

125) MHz, the first two bands are commonly used.

The industrial microwave heating equipment involved in this section is required to operate under normal load.

This section does not apply to household or similar use (included in GB 4706.21), commercial (included in GB 4706.90) or experimental

(included in GB 4793.6) electrical appliances.

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/T 2900.23-2008 Electrotechnical terminology industrial electric heating device (IEC 60050-841.2004, IDT)

Safety of electric heating devices - Part 6. Safety specification for industrial microwave heating equipment (GB 5959.6-2008,

IEC 60519-6.2002, IDT)

GB/T 14733.2-2008 Telecommunications terminology transmission line and waveguide (IEC 60050-726. 1982, IDT)

IEC 60050-221.1990 International Electrotechnical Vocabulary Chapter 221. Magnetic Materials and Components (International Electrotechnical

Vocabulary-Chapter221. Magneticmaterialsandcomponents)

Amendment 1 (1993)

Amendment 2 (1999)

Amendment 3 (2007)

3 Terms and definitions

The following terms and definitions as defined in GB 5959.6 and GB/T 2900.23-2008 apply to this document.

3.1

Microwave heating equipment microwaveheatingequipment

A device used to generate microwave energy and transfer it to a microwave work load for heating.

Typically includes a microwave generator or microwave generator assembly with a circulator (if used), a microwave application or microwave cavity, internal connection

Connect cables and waveguides.

Note. GB/T 2900.23-2008, definition 841-29-06, has been modified.

3.2

Microwave heating device microwaveheatinginstalation

A kit consisting of a microwave heating device and its electrical and mechanical attachments necessary for operation and use.