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NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA

ICS 27.010

F 01

GB 24500-2020

Replacing GB 24500-2009

**Minimum allowable values of energy efficiency and
energy efficiency grades of industrial boilers**

工业锅炉能效限定值及能效等级

Issued on: May 29, 2020

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**Issued by: State Administration for Market Regulation;
Standardization Administration of the People's Republic of
China.**

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Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This Standard replaces GB 24500-2009, “The minimum allowable values of energy efficiency and energy efficiency grades of industrial boilers”; compared with GB 24500-2009, the main technical changes are as follows:

- Modify the scope of application of the standard (see Chapter 1, Chapter 1 of version 2009);
- Add the definition of gas fired condensing boiler; delete the definition of evaluating values of energy conservation of boilers (see 3.2; 3.2 of version 2009);
- Modify the energy efficiency indicators of coal-fired boilers (layered combustion, fluidized bed combustion); delete the energy efficiency indicators of spreader feeder chain-grate boiler (see Table 1, Table 2; Table 1, Table 2, and Table 3 of version 2009);
- Add the energy efficiency indicators of biomass boilers (see Table 3);
- Modify and supplement the energy efficiency indicators of chamber-fired combustion boilers (oil, gas, coal); add the energy efficiency indicators of gas fired condensing boilers (see Table 4; Table 4 of version 2009);
- Delete the basic requirements (see 4.1 of version 2009);
- Add regulations on the minimum allowable values of energy efficiency of organic heat carrier boilers (see 5.1);
- Add regulations on the minimum allowable values of energy efficiency of electrically heated boilers (see 5.2);
- Add the thermal efficiency test method of gas fired condensing boilers (see Chapter 6).

This Standard was proposed by the Standardization Administration of the People's Republic of China AND the Department of Resource Conservation and Environmental Protection of the National Development and Reform Commission.

This Standard shall be under the jurisdiction of the Standardization Administration of the People's Republic of China.

The drafting organizations of this Standard: China National Institute of Standardization, Machinery Industry Energy Conservation and Resource

Minimum allowable values of energy efficiency and energy efficiency grades of industrial boilers

1 Scope

This Standard specifies the energy efficiency grades, technical requirements and test methods of industrial boiler products.

This Standard applies to stationary boilers that use coal, natural gas, oil, or biomass as the fuel or electricity as a heat source, and water or organic heat carrier as a medium:

- a) Steam boilers whose rated steam pressure is ≥ 0.1 MPa and < 3.8 MPa;
- b) Hot-water boilers whose rated discharge pressure is ≥ 0.1 MPa and rated power is ≥ 0.1 MW;
- c) Organic heat carrier boiler whose rated medium outlet pressure is ≥ 0.1 MPa.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only the dated version applies to this document. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 2900.48, Electrotechnical terminology of boilers

GB/T 10180, Thermal performance test code for industrial boilers

NB/T 47066, Thermal performance test method for condensing boiler

3 Terms and definitions

Terms and definitions determined by GB/T 2900.48 and the following ones are applicable to this document.

3.1 Minimum allowable values of energy efficiency of industrial boilers

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