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

GB/T 28056-2025

Replacing GB/T 28056-2011

Specification for heat recovery boilers

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1 Scope

GB/T 28056-2025 is the Chinese national standard covering the boiler that raises steam from waste gas - the thermal design against a gas stream whose flow and temperature the process dictates, the fouling and the soot blowing, the corrosion below the acid dew point, and the pressure part design and inspection. Issued on 5 October 2025, it has been in force since 1 May 2026, replacing GB/T 28056-2011.

This document specifies the product model, general requirements, design, manufacturing and inspection, painting, packaging, marking and accompanying documents, and safety procedures for waste heat boilers. Installation, acceptance, and operation. This document applies to waste heat boilers using water as the working fluid, including gas-fired steam combined cycle boilers, oxygen converter waste heat boilers, cement kiln waste heat boilers, and... The design, production, and inspection of waste heat boilers in the chemical industry shall be carried out with reference to other waste heat boilers.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 1576 Industrial Boiler Water Quality

GB/T 2900.48 Electrical Terminology - Boiler

GB 3096 Environmental Quality Standard for Noise

GB/T 10863 Thermal test methods for flue-type waste heat boilers

GB/T 12145 Water and steam quality of thermal power generating units and steam power equipment

GB 12348 Emission Standard for Environmental Noise at the Boundary of Industrial Enterprises

GB 13223 Emission Standard of Air Pollutants for Thermal Power Plants

GB/T 16507.2 Water-tube boilers - Part

3 Structural design

GB/T 16507.4 Water-tube boilers - Part

4 Manufacturing, Inspection and Acceptance

GB/T 26281 Calculation Method for Heat Balance, Thermal Efficiency and Comprehensive Energy Consumption of Cement Rotary Kilns

GB/T 26282 Method for Determination of Heat Balance in Cement Rotary Kiln

GB 50016 Code for Fire Protection Design of Buildings

GB 50041 Boiler Room Design Standard

GB 50049 Design Code for Small Thermal Power Plants

GB 50160 Fire Protection Design Standard for Petrochemical Enterprises

GB 50242 Code for Acceptance of Construction Quality of Building Water Supply, Drainage and Heating Engineering

GB 50273 Standard for Construction and Acceptance of Boiler Installation Engineering

GB 50588 Design Standard for Waste Heat Power Generation in Cement Plants

GB 55037 General Code for Fire Protection of Buildings DL/T 468 Guidelines for Selection and Use of Power Plant Boiler Fans

5 Manufacturing

GB/T 16507.6 Water-tube boilers - Part

6 Inspection, testing and acceptance

GB/T 16508.2 Boilers with Shells - Part

7 Manufacturing and Inspection

8.Painting, packaging, marking, and accompanying documents 7.

9 Installation and Acceptance 8 10 running

8 Appendix A (Normative) Manufacturing and Acceptance Standards for Major Boiler Components

20 Reference 23

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1.Structure and Drafting Rules of Standardization Documents". Drafting. This document supersedes GB/T 28056-2011 "General Technical Conditions for Flue-Type Waste Heat Boilers" and GB/T 28057-2011 "Oxygen Converter Waste Heat Boilers". Technical conditions for waste heat boilers, GB/T 30576-2014 Technical conditions for waste heat boilers in cement kilns and GB/T 30577-2014 Combined Gas-Steam Boiler Technical Conditions "Technical Conditions for Combined Circulating Waste Heat Boilers". This document is based on GB/T 28056-2011 and integrates GB/T 28057-2011. The contents of GB/T 30576-2014 and GB/T 30577-2014.Compared with GB/T 28056-2011, except for structural adjustments and editorial changes... Aside from the modifications, the main technical changes are as follows:

- a) The term "waste heat boiler" and its definition have been added (see 3.1);
- b) The term "waste heat utilization rate" and its definition have been changed, and the calculation formula has been deleted (see 3.4, GB/T 28056-2011).
- c) Added the terms chemical industry waste heat boiler, module interface, extended heating surface, shielding tube and their definitions (see 3.10, 3.16~). 3.18);
- d) Requirements for the designation of gas-fired combined cycle waste heat boilers have been added (see 4.2);
- e) The guarantee condition for waste heat utilization rate was changed from "operating under design parameters" to "operating under rated parameters", and the condition was deleted. "Not lower than the guaranteed value specified in the technical agreement" (see 5.2, 5.1.2 of GB/T 28056-2011);

- f) The deviation range requirement for superheated steam temperature has been changed, adjusting the superheated steam temperature from 450°C to 475°C (see Table 3). Table 3 of GB/T 28056-2011);
- g) Data on flue gas temperature for direct atmospheric emissions has been removed (see Table 4 of GB/T 28056-2011);
- h) Design requirements for special cases have been removed (see 5.2.6 of GB/T 28056-2011);
- i) The requirement for boiler overhaul intervals has been removed (see section 5.2.13 of GB/T 28056-2011);