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

GB/T 21508-2025

Replacing GB/T 21508-2008

**Performance test method for coal-fired flue gas
desulphurization equipment**

燃煤烟气脱硫设备性能测试方法

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Foreword

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 21508-2008 "Performance Test Methods for Flue Gas Desulfurization Equipment", and is consistent with GB/T 21508-2008. Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The scope has been changed (see Chapter 1, Chapter 1 of the.2008 edition);
- b) The terms and definitions of "load rate" and "desulfurization efficiency" have been removed (see 3.9 of the.2008 edition);
- c) Added terms and definitions for "particulate matter," "reference oxygen content," and "removal efficiency" (see 3.8-3.10);
- d) Test items such as the variation range of lime digestion rate and desulfurization equipment load rate have been deleted (see 5.1 in the.2008 edition);
- e) Added Hg concentration and desulfurization slurry composition testing items (see Chapter 5);
- f) The test method for HCl concentration has been changed (see 6.7, 6.3.4.3 in the.2008 edition);
- g) The test method for HF concentration has been changed (see 6.8, 6.3.4.4 in the.2008 edition);
- h) The test method for particulate matter concentration has been changed (see 6.4,.2008 edition of 6.4);

1 Scope

GB/T 21508-2025 is the Chinese national standard covering proving what a scrubber actually removes - the sampling positions and the measurement of SO₂ in and out, the reagent consumption and the power drawn, the gypsum quality and the wastewater, and the corrections that make a guarantee test comparable. At 21,000 words. It replaces GB/T 21508-2008, with the dry and semi-dry equipment standard GB/T 19229.2-2025. In force from 1 May 2026. Issued on 31 October 2025, it has been in force since 1 May 2026,

replacing GB/T 21508-2008.

This document specifies the testing requirements, testing content, testing methods, and testing reports for the performance testing of coal-fired flue gas desulfurization equipment. This document applies to performance testing of limestone/lime-gypsum wet desulfurization processes and dry/semi-dry desulfurization processes. Other desulfurization processes... The art should be followed as a reference.

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 211 Determination of Total Moisture in Coal

GB/T 3286.1 Chemical analysis methods for limestone and dolomite - Part

1.Determination of calcium oxide and magnesium oxide content using complexing droplets Fixed method and flame atomic absorption spectrometry

GB/T 3286.2 Chemical Analysis Methods for Limestone and Dolomite - Part

2.Determination of Silica Content - Molybdenum Blue Spectrophotometry Gravimetric method and perchloric acid dehydration gravimetric method

GB/T 3286.3 Chemical Analysis Methods for Limestone and Dolomite - Part

3.Determination of Alumina Content - Chromium Azure S Spectrophotometry Measurement method and complexometric titration

GB/T 3286.4 Chemical Analysis Methods for Limestone and Dolomite - Part

4.Determination of Iron Oxide Content (o-phenanthroline spectrophotometric analysis) Photometry and flame atomic absorption spectrometry

GB/T 3286.5 Chemical Analysis Methods for Limestone and Dolomite - Part

5 Determination of Manganese Oxide Content, Periodate Oxidation Spectrophotometry

GB/T 3286.6 Chemical Analysis Methods for Limestone and Dolomite - Part

6.Determination of Phosphorus Content - Phosphomolybdic Blue Spectrophotometric Method

GB/T 3286.7 Chemical Analysis Methods for Limestone and Dolomite - Part

7.Determination of Sulfur Content - Tube Furnace Combustion - Potassium Iodate Drop Deterministic method, high-frequency combustion infrared absorption method and barium sulfate gravimetric method

GB/T 3286.8 Chemical Analysis Methods for Limestone and Dolomite - Part

8 Determination of Loss on Ignition (Gravimetric Method)

GB/T 3286.9 Chemical Analysis Methods for Limestone and Dolomite - Part

9.Determination of Carbon Dioxide Content; Caustic Soda and Asbestos Absorption Gravimetric method

GB/T 5484 Chemical Analysis Methods for Gypsum

GB/T 6904 Determination of pH in Industrial Circulating Cooling Water and Boiler Water

GB/T 6911 Determination of sulfate in industrial circulating cooling water and boiler water

GB/T 7484 Determination of Fluoride in Water - Ion Selective Electrode Method

GB 8978 Integrated Wastewater Discharge Standard

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

GB/T 15453 Determination of chloride ions in industrial circulating cooling water and boiler water

GB/T 16157 Determination of particulate matter and sampling methods for gaseous pollutants in exhaust gas from stationary sources GBZ /T 192.1 Determination of dust in workplace air - Part

1.Total dust concentration DL/T 323 Method for determining the activity of quicklime used in dry flue gas desulfurization