

ICS 27.010
CCS F 01



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

GB/T 33652-2025

Replacing GB/T 33652-2017

**Technical regulation of energy consumption test for cement
manufacturing**

水泥制造能耗测试技术规程

Issued on: October 31, 2025

Implemented on: May 1, 2026

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions

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 replaces GB/T 33652-2017 "Technical Specification for Energy Consumption Testing in Cement Manufacturing". Compared with GB/T 33652-2017, except for the following. Aside from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The system partitioning in the test scope diagram has been changed (see Chapter 4, Chapter 3 of the 2017 edition);
- b) The test boundaries for the "Raw Material Preparation System," "Cement Preparation System," and "Pulverized Coal Preparation System" have been modified (see 6.2.1.1, 6.2.1.2, and 6.2.1.3 (5.2.2.1, 5.2.2.2, and 5.2.2.3 in the 2017 version);
- c) The test boundaries for the clinker calcination and exhaust gas treatment system have been modified, and an explanation has been added regarding the exclusion of calcination energy consumption (see 6.3.1, 2017). Version 5.3.1);
- d) The calculation methods for coal consumption and electricity consumption of comparable clinker calcination systems have been removed (see section 5.3.4 of the 2017 edition). 5.3.6);
- e) The requirements for energy consumption testing of cement packaging and shipping systems have been changed, and the relevant requirements for energy consumption testing of auxiliary production systems have been removed (see...). 6.5.2 (Version 5.5.2 from 2017);
- f) Added requirements for energy consumption testing of co-processing systems, alternative fuel systems, desulfurization and denitrification systems, and auxiliary production systems (see 6.6~). 6.9);

- g) The calculation of energy consumption per unit product has been added (see Chapter 7);
- h) The test report template content has been changed, and the requirements for energy consumption test results have been modified (see Chapter 8, Chapter 6 of the.2017 edition);
- i) The formula for calculating the actual raw-to-cooked conversion factor of wet raw meal has been changed (see Appendix C, Appendix C of the.2017 edition);

1 Scope

GB/T 33652-2025 is the Chinese national standard covering how the measurement is actually made in a cement plant - the test period and the steady operation required during it, the metering points for coal, power and heat, the sampling and analysis of the fuels, and the calculation to comparable consumption. Issued on 31 October 2025, it has been in force since 1 May 2026, replacing GB/T 33652-2017.

This document specifies the testing scope, general requirements, technical requirements, unit product energy consumption calculation, and test report for energy consumption in cement manufacturing. This document applies to energy consumption testing and calculation in the production of general-purpose silicate cement and clinker. It does not cover energy consumption for other cement types and clinker manufacturing. This document provides reference for energy consumption testing and calculation.

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 176 Chemical Analysis Methods for Cement

GB/T 212 Industrial Analysis Methods for Coal

GB/T 213 Method for Determination of Calorific Value of Coal

GB/T 384 Determination of calorific value of petroleum products

GB/T 1345 Cement Fineness Test Method - Sieve Analysis

GB/T 2565 Method for Determination of Grindability Index of Coal - Hadgrove Method

GB/T 8074 Method for Determination of Specific Surface Area of Cement - Blaine Method

GB/T 16157 Determination of particulate matter and sampling methods for gaseous pollutants in exhaust gas from stationary sources

GB 16780 Energy Consumption Limits per Unit Product of Cement

GB/T 17671 Test method for strength of cement mortar (ISO method)

GB/T 21372 Silicate Cement Clinker

GB/T 23331 Energy Management System Requirements and Usage Guidelines

GB/T 24851 Requirements for the Configuration and Management of Energy Measuring Instruments in the Building Materials Industry

3 Terms and Definitions

The terms and definitions defined in GB 16780, GB/T 26281 and GB/T 26282 apply to this document.