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Evaluation method for admixture amount of gypsum in cement

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Table of Contents

Foreword
1 Scope
2 Normative references
3 Terms and Definitions
4 Principles
5 Instruments and Equipment
5.1 Standard test mill

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed by China Building Materials Federation.

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Evaluation method of gypsum content in cement

1 Scope

This document provides the principle of the evaluation method for gypsum content in cement, and specifies the instrumentation, test samples, test methods, evaluation process, Production control and evaluation reports.

This document is applicable to the evaluation of gypsum content in general-purpose Portland cement and can be used as a reference for other types of cement.

2 Normative references

GB/T 176

GB/T 1346

GB/T 5484

GB/T 8074

GB/T 12959

GB/T 17671

GB/T 21372

3 Terms and Definitions

There are no terms or definitions that require definition in this document.

4 Principles

This method uses fixed raw materials (cement clinker, gypsum, mixed materials, etc.) provided by the enterprise to produce a certain type of cement.

The small grinding test is carried out with the same gypsum dosage to test the cement setting time, hydration heat, strength, mortar shrinkage rate, compatibility with water reducer and other properties.

The parameters are calculated and the relationship between them and the gypsum content is established. The optimal gypsum content in cement is evaluated by image evaluation or mathematical fitting evaluation.

Adjust the gypsum content, gypsum type, cement temperature out of the mill, cement fineness, etc. to make the cement hydration exothermic curve of the large mill test consistent with the optimum gypsum content.

The heat release curves of cement hydration in small-mill tests tend to be consistent, which can regulate the cement production process and optimize the performance of large-mill cement.

5.1 Standard test mill

Comply with the requirements of GB/T 21372.