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# GB

NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA

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## GB/T 6645-2008

Replacing GB/T 6645-1986

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### Granulated Electric Furnace Phosphorous Slag Used for Cement

用于水泥中的粒化电炉磷渣

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China.

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## Foreword

This Standard replaces GB/T 6645-1986 Granulated Electric Furnace Phosphorous Slag Used for Cement Production.

In comparison with GB/T 6645-1986, this Standard has the following main changes:

- NOTE is added to the definition of granulated electric furnace phosphorous slag (Chapter 2 in Version 1986; Chapter 3 in this version);
- Radioactive indexes and corresponding inspection methods of phosphorous slag are added (4.6 in this version; 5.7 in this version);
- Inspection rules specifically stipulate the determination rules of exit-factory inspection and type inspection of phosphorous slag (Chapter 4 in Version 1986; 6.5 in this version);
- Appendix A in the previous standard is modified into determination method of bulk weight of granulated electric furnace phosphorous slag; Appendix B in the previous standard is deleted.

Appendix A in this Standard is normative.

This Standard was proposed by China Building Materials Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Cements of Standardization Administration of China (SAC/TC 184).

The responsible drafting organization of this Standard: China Building Materials Academy.

The participating drafting organizations of this Standard: Yunnan Building Material Research & Design Institute, Yunnan Ruian Building Material Investment Co., Ltd.

The main drafters of this Standard: Yan Bilan, Wangxin, Wang Meiyi, Wu Xiujun, Jiang Lizhen, Liuchen, Li Changhua, Ma Dongmei.

This Standard was issued for the first time in 1986. This is the first amendment.

# Granulated Electric Furnace Phosphorous Slag Used for Cement

## 1 Scope

This Standard specifies the terms, definitions, technical requirements, test methods and inspection rules of granulated electric furnace phosphorous slag used for cement.

This Standard is applicable to granulated electric furnace phosphorous slag used for cement mixture.

## 2 Normative References

Through the quotation in this Standard, clauses in the following documents become clauses in this Standard. In terms of references with a specific date, all the subsequent modification sheets (excluding corrected content) or revised versions are not applicable to this Standard. However, all parties that reach an agreement in accordance with this Standard are encouraged to explore the possibility of adopting the latest versions of these documents. In terms of references without a specific date, the latest versions are applicable to this Standard.

GB 175 Common Portland Cement

GB/T 6003.2 Test Sieves of Perforated Metal Plate

GB 6566 Limits of Radionuclides in Building Materials

JC/T 1088 Methods for Chemical Analysis of Granulated Electric Furnace Phosphorous Slag

## 3 Terms and Definitions

The following terms and definitions are applicable to this Standard.

### **Granulated Electric Furnace Phosphorous Slag**

When electric furnace method is adopted to prepare yellow phosphorus, molten material, whose primary element is calcium silicate, is obtained. Through quenching granulation, it becomes granulated electric furnace phosphorous slag (phosphorous slag, for short).

**NOTE:** a small amount of calcium and silicon-aluminum materials, which are proved to be

Phosphorous slag, which is discharged every half a month, shall be deemed as one batch here. Sample can be taken continuously; or an equivalent amount of sample can be taken from over 20 different parts and the total amount of the sample shall be at least 20 kg. After thoroughly mixing the sample, use quartering method to quarter the sample to 5 kg for tests. During sampling, eliminate 150 mm ~ 200 mm surface layer.

## **6.2 Exit-factory Inspection**

The supply side of phosphorous slag shall conduct the inspection of phosphorous slag in accordance with the requirements in 4.1 ~ 4.5. The exit-factory inspection report shall be provided to the user of phosphorous slag together with phosphorous slag.

## **6.3 Type Inspection**

Under one of the following circumstances, type inspection shall be conducted in accordance with all the requirements in Chapter 4:

- When there are changes in raw materials and production process;
- Type inspection shall be conducted once a year in normal production.

## **6.4 Determination Rules**

**6.4.1** If a product fails to comply with any item in exit-factory inspection in accordance with this Standard, it shall be deemed as disqualified. Thus, it cannot be used as admixture in cement production.

**6.4.2** If a product fails to comply with any item in type inspection in accordance with this Standard, it shall be deemed as disqualified.

# **7 Transportation and Storage**

In bulk transportation, phosphorus slag shall not be mixed with other materials. Wagon or compartment must be cleaned up, so as to avoid the mixture with foreign substances. In terms of storage, foreign substances shall not be mixed with phosphorus slag.

# **8 Requirements of Usage**

When a cement enterprise starts using phosphorous slag provided by the supply side, it shall conduct acceptance inspection in accordance with all the requirements in Chapter 4. In normal usage, cement enterprise shall conduct the inspection at least once a year.

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