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

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Replacing GB/T 30897-2014

Steel slag for sintering

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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 24184-2009 "High-calcium desulfurization slag for sintering flux" and GB/T 30897-2014 "Magnetic separation slag steel for sintering".

This document, titled "Powder," merges and revises two standards, GB/T 24184-2009 and GB/T 30897-2014, except for structural adjustments and editorial changes.

In addition, the main technical changes in this document compared to the original standard are as follows.

- a) The contents of calcium oxide, magnesium oxide, silicon dioxide, phosphorus, and sulfur in the desulfurization residue were adjusted (see Table 1, Table 1 of GB/T 24184-2009);
- b) The requirements for the aluminum oxide content in desulfurization slag have been

increased (see Table 1);

c) The iron content in the magnetically separated steel slag powder was changed (see Table 2, Table 1 of GB/T 30897-2014);

d) Increased particle size requirements (see 4.2);

e) Additional requirements have been added (see 4.4);

f) Factory inspection and type inspection have been added (see 6.2 and 6.3).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Iron and Steel Association.

This document is under the jurisdiction of the National Steel Standardization Technical Committee (SAC/TC183).

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The document replaced by this document has been released in the following versions.

- GB/T 24184, first published in 2009;

- GB/T 30897 was first published in 2014, and this is its first revision. Sintering steel slag

1 Scope

This document specifies the technical requirements, test methods, inspection rules, storage, transportation, and quality certification documents for steel slag used in sintering.

This document applies to desulfurized slag and magnetically separated steel slag powder

used in sintering.

2 Normative references

GB/T 2007.7

GB/T 6730.2

GB/T 38216.4

3 Terms and Definitions

The terms and definitions defined in YB/T 804 and the following terms and definitions apply to this document.

3.1

Desulfurization slag produced by the external desulfurization process of molten iron using calcium-based desulfurizing agents.

3.2 4 Technical Requirements

After being crushed and magnetically separated, steel slag is obtained with a total iron content (mass fraction) greater than or equal to 20% and a particle size less than 10 mm. Steel slag powder.

4.1 Chemical composition

The chemical composition of desulfurization slag used in sintering shall conform to the requirements of Table 1. The chemical composition of magnetically separated steel slag powder used in sintering shall conform to the requirements of Table 2.

Table 1. Chemical composition (mass fraction) of desulfurization residue CaO MgO Al₂O₃ SiO₂ PS ≥ 46.0 ≤ 3.0 ≤ 18.0 ≤ 1 Negotiable between supply and demand parties Table 2 Chemical composition (mass fraction) of magnetically separated steel slag powder Level I II III Total iron (TFe) ≥ 48 ≥ 35 ≥ 20 The phosphorus pentoxide (P₂O₅) content is no more than 2.0%, which can also be negotiated between the two parties.

4.2 Particle size

The particle size range of steel slag used for sintering is 0mm~10mm, with particles larger than 10mm $\leq 10\%$ and particles smaller than 5mm $\leq 10\%$. $\geq 85\%$.

4.3 Moisture content

Moisture content not exceeding 12%.

4.4 Other

The calcium, magnesium, silicon, and sulfur content in the magnetically separated steel slag powder used for sintering shall be negotiated between the supplier and the buyer.

5 Test Methods

5.1 The determination of total iron content shall be carried out in accordance with the provisions of GB/T 38216.4.

5.2 The determination of calcium oxide content shall be carried out in accordance with the provisions of YB/T 6056.

5.3 The determination of magnesium oxide content shall be carried out in accordance with the provisions of YB/T 6057.

5.4 The determination of aluminum oxide content shall be carried out in accordance with the provisions of YB/T 6057.

5.5 The determination of silica content shall be carried out in accordance with the provisions of YB/T 6057.

5.6 The determination of phosphorus content shall be carried out in accordance with the provisions of YB/T 140.

5.7 The determination of sulfur content shall be carried out in accordance with the provisions of YB/T 140.

5.8 Particle size determination shall be carried out in accordance with the provisions of GB/T 2007.7.

5.9 The moisture content shall be determined in accordance with the provisions of GB/T 6730.2.

6.1 Batching

During product quality inspection, the two products, desulfurization slag for sintering and magnetic separation steel slag powder, must be inspected separately in batches of 500 tons.

A batch of less than 500 tons is counted as one batch.

6.2 Factory Inspection

The factory inspection items are chemical composition, particle size, and moisture content.

6.3 Type Testing