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

GB/T 28296-2012

Pig iron containing nickel

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Foreword

This document was issued on 11 May 2012 by the State Administration for Market Regulation; Standardization Administration of the PRC and takes effect on 1 February 2013.

It is a GB/T standard: recommended rather than compulsory, but it is the text a Chinese reviewer applies when assessing a submission.

1 Scope

GB/T 28296-2012 specifies nickel pig iron, a material that exists for an economic reason. Stainless steel needs nickel, and nickel from refined metal is expensive; smelting lateritic nickel ore in a blast or electric furnace instead yields an iron-nickel alloy that a stainless mill can charge directly. China built this industry at scale, and it changed the world nickel market. But the product is defined by the ore and the furnace rather than by a refining step, so its composition varies far more than refined nickel does, and the impurities that come with it - sulfur, phosphorus, carbon, silicon and chromium - are exactly the elements a steelmaker must account for in the charge. A standard is what lets it be bought and sold on stated composition rather than on inspection of each cargo. This standard specifies the technical requirements, test methods and inspection rules for pig iron containing nickel, together with the requirements for packaging, storage, transport, marking and the quality certificate. Under CCS H42, it is written for nickel pig iron producers, for stainless steelmakers, and for the traders and inspection agencies handling the material.

This Standard specifies the technical requirements, test methods, inspection rules, as well as packaging, storage, transportation, marking and quality certificate of pig iron containing nickel.

This Standard is applicable to pig iron containing nickel used as nickel element additive in steelmaking, casting or alloy materials.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 3650 The General Rules for Inspection, Packing, Storing, Transportation, Marking and Certification of Ferroalloy

GB/T 13247 Methods for Sampling and Testing the Grain Size of Ferroalloys Products

GB/T 21931.1 Nickel, Ferronickel and Nickel Alloys - Determination of Carbon Content - Infrared Absorption Method after Induction Furnace Combustion

GB/T 21931.2 Nickel, Ferronickel and Nickel Alloys - Determination of Sulfur Content - Infrared Absorption Method after Induction Furnace Combustion

GB/T 21931.3 Nickel, Ferronickel and Nickel Alloys - Determination of Phosphorus Content - Phosphovanomolybdate Molecular Absorption Spectrometric Method

GB/T 21933.1 Ferronickel - Determination of Nickel Content - The Dimethylglyoxime Gravimetric Method

GB/T 21933.2 Ferronickel - Determination of Silicon Content - Gravimetric Method

3 Technical Requirements

3.1 Designation and Chemical Composition

3.1.1 In accordance with the nickel content, pig iron containing nickel is divided into twelve designations. Each designation is divided into two grades in accordance with its impurity content. The chemical composition of the product shall comply with the The quality inspection and acceptance inspection of pig iron containing nickel shall comply with the stipulations of GB/T 3650.

5.4 Sampling and Acceptance Inspection of Grain Size

The sampling and acceptance inspection of the grain size of pig iron containing nickel

shall comply with the stipulations of GB/T 13247.

6 Packaging, Storage, Transportation, Marking and

Quality Certificate

6.1 Packaging

The products are packed in bags or bulk, and the net weight of each bag is 1,000 kg.

If the demand-side has special requirements for packaging, the supply-side and the demand-side shall have further negotiation.

6.2 Storage, Transportation, Marking and Quality Certificate

The storage, transportation, marking and quality certificate of the products shall comply with the stipulations of GB/T 3650. If the demand-side has special requirements for storage, transportation and marking, the stipulations of the contract shall be abided by.

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