

SN

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

SN/T 2763.3-2012

**Chemical analysis of nickel laterite ore - Part 3: Determination
of total iron content - Titanium (III) chloride reduction methods**

红土镍矿化学分析方法 第2部分：全铁含量的测定 三氯化钛还原法

(English Translation)

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Foreword

SN/T 3323 "Mill scale" consists of 5 parts:

- Part 1: Determination of ferrous oxide - Potassium dichromate titration;
- Part 2: Determination of sulfur content - High frequency combustion infrared absorption method;
- Part 3: Determination of lead, chromium, cadmium. Inductively coupled plasma atomic emission spectrometry
- Part 4: Determination of arsenic and mercury - Atomic fluorescence spectrometric method;
- Part 5: Determination of iron and silicon, calcium, phosphorus, manganese, aluminium, titanium and magnesium - X-ray fluorescence spectrometric method.

This Part is Part 2 of SN/T 3323.

This Part was drafted in accordance with the rules given in GB/T 1.1-2009.

This Part was proposed by and shall be under the jurisdiction of National Certification and Accreditation Administration Commission.

The drafting organizations of this Part: Tianjin Entry-Exit Inspection And Quarantine Bureau of the People's Republic of China.

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Mill scale - Part 2: Determination of sulfur content - High frequency combustion infrared absorption method

1 Scope

This Part of SN/T 3323 specifies high frequency combustion infrared absorption method, the method to determine the sulfur content in mill scale.

This Part is applicable to the determination of sulfur content in mill scale. The determination range is 0.002%~0.40%.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 2007.1, General rules for the sampling and sample preparation of minerals in bulk - Sampling by manual method

GB/T 2007.2, General rules for the sampling and sample preparation of minerals in bulk - Sample preparation by manual method

3 Method summary

The test material is heated and burned in the oxygen flow of the high-frequency induction furnace. The generated sulfur dioxide is carried by oxygen to the measuring chamber of the infrared analyzer. Detect the infrared absorption energy of sulfur dioxide for specific wavelengths. Its absorption energy is proportional to its concentration. The sulfur content can be measured according to the change in the energy received by the detector.

4 Reagents

Unless otherwise stated, all reagents are analytically pure.

4.1 Pure iron flux: The particle size is less than 1.25mm. The carbon content is less than

0.0005%. The sulfur content is less than 0.0005%.

4.2 Tungsten-tin mixed flux: The ratio is 9:1, the carbon content is less than 0.0010%.

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