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

YS/T 951-2014

**Laterite nickel ores - Determination of moisture content of a
consignment**

红土镍矿 交货批水分含量的测定

(English Translation)

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Foreword

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

This Standard shall be under the jurisdiction of National Technical Committee on Non-ferrous Metals of Standardization Administration of China (SAC/TC243).

Main drafting organization of this Standard. Bayuquan Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, China Inspection and Certification Group Liaoning Co., Ltd., China Nonferrous Metals Industry Standard Metrology and Quality Research Institute.

The drafting organization of this Standard. Shenyang Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, Ningbo Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, Tianjin Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, Nantong Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China, Changshu Entry-Exit Inspection and Quarantine Bureau of the People's Republic of China.

Main drafters of this Standard. Jiang Xiaoguang, Song Chenggang, Zhao Junfeng, Chu Ning, Jiang Li, Li Weigang, Zhu Xiaoyan, Guo Chengwei, Pan

Hongwei, Zhang Xiaodong, Xu Yuyu, Cao Guozhou, Zhang Yanfu, Wang Yanjun, Chen Yu.

Laterite nickel ores - Determination of moisture content of a consignment

1 Scope

This Standard specifies the determination method of moisture content of a consignment of laterite nickel ores.

This Standard is applicable to the determination of moisture content of a consignment of laterite nickel ores.

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.

YS/T 950, Methods for sampling and sample preparation of laterite nickel ores in bulk

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 consignment

A certain amount of ores in one delivery. A consignment may consist of a batch, several batches or partial batches of ores.

3.2 gross sample

A sample that consists of all increments and fully represents all quality characteristics of a batch.

3.3 partial sample

A sample that is composed of partial increments required to form a gross sample.

3.4 increment

A certain amount of ores that are obtained in one operation by a sampling device or a sample reduction device.

3.5 sample

Relatively small amount of ores that are representative and are taken from a batch of ores of which their quality characteristics are to be evaluated.

4 Method summary

In $105^{\circ}\text{C}\pm 5^{\circ}\text{C}$ air flow, dry the test portion to constant weight. By determining the mass loss of test portion, calculate its moisture content.

5.1 Drying pan. stainless-steel or enamel; about 1000g of test portion are placed in the pan and the thickness is about 10mm.

5.2 Blast dryer. equipped with temperature indicator and controller; be able to control the temperature of any point in the cabinet within $105^{\circ}\text{C}\pm 5^{\circ}\text{C}$; the air in the cabinet can conduct cycling and replacement, so as to make test portion completely dried without any loss.

6 Sample

Use the moisture sample that is taken according to the provisions of YS/T 950 and the prepared granularity is not greater than 10.0mm.

7.1 Determination times

According to the preparation method of test portion, based on the number of test portions specified in Table 1, measure the moisture once for each test portion.

7.2 Measurement

After obtaining the moisture sample, according to the number of test portions specified in Table 1, in the dry drying pan (5.1) with a known mass, weigh 1000g of test portion as soon as possible, to the nearest of 0.1g.

8.1 Test portion

The determination result of moisture content of each test portion w_i , expressed in mass fraction, is calculated according to formula (1). Keep the result to two digits after the decimal place.

9 Test report

The test report shall at least contain the following information.

Annex A

(normative)

Determination of moisture content of over-wet or sticky laterite nickel ore consignment

A.1 When the moisture sample is too wet or sticky to sieve, break and divide, it shall pre-dry the moisture sample till it is easy to prepare.

NOTE: It shall carefully distribute the pre-dried test portion, weigh the initial mass of test portion and the mass of pre-dried test portion, so as to ensure the determination precision of pre-dried moisture content.

A.2 Weigh the initial mass of test portion.

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