

ICS 71.100.10
CCS H 21

YS

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

YS/T 438.1-2013

Replacing YS/T 438.1-2001

**Methods for physical performance determination of sandy
alumina. Part 1: Determination of size distribution-sieving
method**

砂状氧化铝物理性能测定方法 第1部分：筛分法测定粒度分布
(English Translation)

Issued on: January 1, 1970

Implemented on: January 1, 1970

Issued by: Ministry of Industry and Information Technology

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Foreword

YS/T 438 "sandy alumina determination of physical performance" is divided into five sections.

- Part 1. Determination of particle size distribution by sieving;
- Part 2. Determination of the abrasion index;
- Part 3. Determination of angle of repose;
- Part 4. Determination of specific surface area;
- Part 5. Determination of alpha- alumina content of X- ray diffraction.

This is Part 1.

The partial replacement of YS/T 438.1-2001 "sandy alumina determination of physical performance screening method for the determination of particle size distribution." this part is YS/T 438.1-2001 revision compared with the YS/T 438.1-2001, the main changes are as follows.

- Increased precision;
- Increased quality assurance and control of the content;
- Analysis sieve set from the original five reduced to three;
- Drying temperature of the sample "300 °C ± 10 °C" amended to "105 °C ± 5 °C".

This section drafted in accordance with GB/T 1.1-2009 given rules.

The non-ferrous metal part by the National Standardization Technical Committee (SAC/TC243) centralized.

This part mainly drafted by. Aluminum Corporation of China Guangxi Branch, Luoyang Xiangjiang Wanji Aluminum Co., Ltd.

1 Scope

This section provides a method for sandy alumina measuring particle size distribution by dry sieving.

This section applies to the determination of particle size distribution of sand-like alumina.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

ISO 3310 test sieve

3 Method summary

Fitted with a sandy alumina sample analysis sieve set on the vibrating sieve machine vibration sieve, until the end of the grading, measured for different particle sieve residue level Mass calculated particle size distribution of the sample.

4 Instrument

4.1

Analysis sieve set. a diameter of 200mm, the effective height of 50mm; sieve set shall comply with ISO 3310 quality test sieves.

4.1.1

Analysis of 45 μ m diameter mesh sieve.

4.1.2

Analysis of 75 μ m diameter mesh sieve.

4.1.3

The diameter of 150 μ m mesh sieve analysis.

4.1.4

sieve sieve cover and chassis.

4.2

ultrasonic cleaner.

4.3

Oven. Maximum temperature 300 °C.

4.4

balance. the largest weighing 100g, a sense of the amount of 0.01g.

4.5

strike type vibration sieve machine. shaking frequency 221 times/min, rapping frequency 147 times/min, radius of gyration 12.5mm.

4.6

brittle brush.

5 Sample

5.1

sample drying 2h at 105 °C ± 5 °C, brought out in the dryer to cool to room temperature before use.

5.2

should be measured in duplicate samples were taken.

6 Measuring step

6.1

Analysis sieve (4.1) prepared.