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YS

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

YS/T 575.12-2007

Replacing YS/T 575.12-2006

**Methods for chemical analysis of bauxite - Part 12:
Determination of vanadium pentoxide content -
N-benzoy-N-phenylthyroxy lamine photometric method**

铝土矿石化学分析方法 第12部分：五氧化二钒含量的测定 苯甲酰苯胺光度法
(English Translation)

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Foreword

YS/T 575-2007 "chemical analysis of bauxite -" Is the YS/T 575-2006 (formerly GB/T 3257-1999) amendments A total of 24 parts.

- Part 1. aluminum oxide content - EDTA titration
- Part 2. silica content - Gravimetric - molybdenum blue spectrophotometry
- Part 3. Determination of silica content molybdenum blue photometric
- Part 4. iron oxide content - Potassium dichromate titration
- Part 5. Determination of iron oxide content phenanthroline spectrophotometry
- Part 6. Determination of titanium dioxide content di Zhao DAM spectrophotometry
- Part 7. calcium oxide content - Flame Atomic Absorption Spectrometry
- Part 8. magnesium oxide content - Flame Atomic Absorption Spectrometry
- Part 9. potassium hydroxide, sodium oxide content - Flame Atomic Absorption Spectrometry
- Part 10. Determination of manganese oxide content by flame atomic absorption spectrometry
- Part 11. chromium oxide content - Flame Atomic Absorption Spectrometry
- Part 12. Determination of vanadium pentoxide content of benzoyl phenylhydroxylamine photometric method
- Part 13. Determination of zinc content by flame atomic absorption spectrometry
- Part 14. Determination of total rare earth oxide Tribromoarsenazo spectrophotometry
- Part 15. Determination of gallium oxide content of rhodamine B extraction spectrophotometry

- Part 16. Determination of phosphorus pentoxide molybdenum blue photometric
- Part 17. Determination of sulfur content - Combustion - iodometric method
- Part 18. Determination of total carbon content - Combustion - non-aqueous titration
- Part 19. Determination of burning weight reduction method
- Part 20. pre-dried sample preparation
- Part 21. Determination of organic carbon titration
- Part 22. Analysis of samples moisture intrudes content - Gravimetric method
- Part 23. Determination of the chemical composition of the X-ray fluorescence spectrometry
- Part 24. Determination of carbon and sulfur content infrared absorption method this is Part 12.

The partial replacement of YS/T 575.12-2006 (formerly GB/T 3257.12-1999).

This section is amended to YS/T 575.12-2006, compared with YS/T 575.12-2006, the main changes are as follows.

- The drying temperature of the sample unified $110\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$;
- Increased precision.

The non-ferrous metal part by the National Standardization Technical Committee and centralized.

This part of the Aluminum Corporation of China Zhengzhou Research Institute is responsible for drafting.

This section drafted by the Aluminum Corporation of China Zhengzhou Research Institute.

1 Scope

This section provides the determination of vanadium pentoxide content in bauxite.

This section applies to the determination of bauxite vanadium pentoxide content measurement range. 0.005 to 0.400%.

2 Principle of the method

First sample sintered sodium peroxide, after a short melting the frit dissolved in water, filtered, iron and titanium hydroxide to remove iron and titanium.

The filtrate was acidified and diluted. An aliquot of the solution was treated with potassium permanganate oxidation of all of the vanadium to pentavalent state. Hydrochloric acid

solution and then extracted with benzene vanadium Formyl-phenylhydroxylamine complex into chloroform. Extraction spectrophotometric determination of the amount of vanadium by the spectroscopic.

3 Reagents

3.1

sodium peroxide.

Note: Sodium peroxide should be protected against moisture, once agglomeration that is not available.