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

YS/T 1047.4-2015

**Methods for chemical analysis of copper magnetite - Part 4:
Determination of sulfur content - High frequency combustion
with infrared absorption method**

铜磁铁矿化学分析方法 第4部分：硫量的测定 高频燃烧红外线吸收光谱法
(English Translation)

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Foreword

YS/T 1047-2015 "Methods for chemical analysis of copper magnetite" is divided into 11 sections.

--- Part 1. Determination of copper content of 2,2'-quinoline spectrophotometry and flame atomic absorption spectrometry;

--- Part 2. Determination of total iron content of dichromate method;

--- Part 3. Copper and iron - Determination of the amount of sodium thiosulfate titration;

--- Part 4. Determination of the amount of sulfur by high frequency combustion infrared absorption spectroscopy;

--- Part 5. Determination of phosphorus content titration;

--- Part 6. copper, total iron, silica, alumina, calcium oxide, magnesium oxide, titanium oxide, manganese and phosphorus contents - wave Long-dispersive X-ray fluorescence spectrometry;

--- Part 7. copper, manganese, aluminum, calcium, magnesium, titanium and phosphorus content - Inductively coupled plasma atomic emission spectrometry;

--- Part 8. silicon dioxide content - Gravimetric method;

--- Part 9. Determination of metallic iron content of sulfonic acid spectrophotometry;

--- Part 10. Determination of the amount of ferrous oxide dichromate method;

--- Part 11. Determination of the amount of magnetic iron dichromate method.

This is Part 4.

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 section is responsible for drafting unit. People's Republic of China Bayuquan Exit Inspection and Quarantine.

1 Scope

YS/T 1047 This section specifies the determination of copper magnetite sulfur content.

This section applies to the determination of copper magnetite sulfur content. Measurement range (mass fraction) 0.50% - 7.00%.

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.

GB/T 6379.2 measurement methods and results of Accuracy (trueness and precision) - Part 2. Determine the standard measurement method to repeat of the basic methods of reproduction GB/T 6730.3 chemical analysis of iron gravimetric method for the determination of hygroscopic moisture in analytical samples GB/T 10322.1 iron ore sampling and sample preparation methods JJG395 Dingtian fixed sulfur analyzer

3 Method summary

The sample is heated in an induction furnace in an oxygen stream of combustion, the oxygen produced by the sulfur dioxide contained in the measuring chamber to the infrared analyzer dioxide Sulfur absorption of a specific wavelength of infrared energy, which is proportional to its quality absorbance, the absorbance obtained sulfur quality.

4 Reagents

Unless otherwise indicated in the analysis using only recognized as analytical reagents.

4.1

anhydrous magnesium perchlorate. particle size 0.7mm ~ 1.2mm.

4.2

Alkali Asbestos. granular.

4.3

pure tungsten flux. a sulfur content of less than 0.0005%.

Iron 4.4 Flux. a sulfur content of less than 0.0005%.

4.5

Potassium. reference reagents. Before use at 105 °C drying 2h, placed in a desiccator.

4.6

Standard substance. certified reference material (CRM) or reference material (RM) with the same type of sulfur content in the sample similar.

5 Instruments

5.1

frequency induction infrared carbon and sulfur analyzer. meet JJG395 requirements.

5.2

porcelain crucible. the high-frequency induction infrared carbon and sulfur analyzer (5.1) match, oxygen-rich atmosphere at 1200 °C burning 2h, placed in the dryer Standby.

5.3

Weighing scoop. a non-magnetic stainless steel or demagnetized.