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

YS/T 710.3-2009

Replacing YS/T 256-2000

**Method for chemical analysis of cobalt oxide. Part 3:
Determination of sulphur content. High frequency
combustion-infrared absorption method**

氧化钴化学分析方法 第3部分：硫量的测定 高频燃烧红外吸收法
(English Translation)

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Foreword

YS/T 710 "cobalt oxide chemical analysis method" is divided into six sections.

- Part 1. Determination of cobalt content potentiometric titration;
- Part 2. Determination of sodium content by flame atomic absorption spectrometry;
- Part 3. Determination of the amount of sulfur by high frequency combustion infrared absorption method;
- Part 4. Determination of arsenic content by atomic fluorescence spectrometry;
- Part 5. Determination of silicon content - Molybdenum blue spectrophotometric method;
- Part 6. calcium, cadmium, copper, iron, magnesium, manganese, nickel, lead and zinc content - Inductively coupled plasma atomic emission spectrometry.

This section YS/T Part 3 710.

The partial replacement of YS/T 256-2000 "cobalt oxide" in Appendix C. Compared with YS/T 256-2000 "cobalt oxide" Appendix C, Part the main changes are as follows.

- Using high-frequency combustion infrared absorption method alternative polarography with;
- Complements the precision and quality assurance and control provisions.

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

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1 Scope

YS/T of the provisions of section 710 of the method for the determination of the sulfur content of cobalt oxide.

This section applies to the determination of sulfur in the amount of cobalt oxide.

Measurement range. 0.0050% to 0.100%.

2 Method summary

In the presence of flux, high-frequency induction furnace and the oxygen flow, so that the sample burned at high temperatures, to generate sulfur dioxide gas into the red External absorption cell, after which the instrument automatically measure the absorption of infrared energy to calculate and display the results.

3.1 Scavenger

3.1.1

Anhydrous calcium chloride.

3.1.2

cotton.

3.2 Flux

3.2.1

sulfur, tin, tungsten. + Sn (0.2g + 1.5g).

3.2.2

low-sulfur tin, iron. Sn + Fe (0.20g + 0.40g), iron sulfur content should be 1100 °C high temperature furnace, cooling backup taken placed in the dryer (Valid for two days).

3.4 Standard steel samples

3.4.1

standard steel samples. a sulfur content of 0.0050% to 0.10%.

3.4.2 Standard steel or iron standard sample. a sulfur content of 4 Instrument

High-frequency infrared carbon and sulfur analyzer.

Table 1 instrument reference operating conditions

Oxygen purity oxygen pressure/MPa Oxygen flow L/min Analysis of gas flow L/min Carrying

oxygen pressure valve MPa Oxygen Time/s analysis time/s High purity oxygen from 0.2 to
2.0 4.0 0.25 0.08 1535 Step 5 Analysis

5.1 Instrument Preparation

Recommended by instrument instruments stand ready condition.

5.2 Stability Instrument

5.2.1

to adjust and stabilize the instrument by burning several similar kind of sample to be tested.