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INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3367-2012

Determination of titanium, aluminum, silicon, phosphor, copper and manganese content in ferrotitanium. Inductively coupled plasma atomic emission spectrometry

钛铁中钛、铝、硅、磷、铜、锰含量的测定 电感耦合等离子体原子发射光谱法

(English Translation)

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Foreword

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

This standard is proposed and managed by the National Certification and Accreditation Administration Committee.

This standard was drafted. People's Republic of China Liaoning Province Exit Inspection and Quarantine.

1 Scope

This standard specifies the ilmenite titanium, aluminum, silicon, phosphorus, copper, manganese content determined by the method by inductively coupled plasma atomic emission spectrometry.

This standard applies to the determination of titanium in ferrotitanium, aluminum, silicon, phosphorus, copper, manganese content. Determination of elements in the range shown in Table 1.

Table 1 Determination of elements content range%

Determination of elements in the range of determination of elements content range Titanium 10.0 to 50.0 P 0.03 to 0.12 Cu 15.0 Al 0.2 ~ 0.01 ~ 0.30 0.2 to 8.0 Si 0.1 to 4.0 Mn

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.

Preparation of standard solution of GB/T 602 Determination of impurities in chemical reagents GB/T 4010 alloy chemical analysis and preparation of samples JJG015 inductively coupled plasma atomic emission spectrometer test procedures

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3 Method summary

Using a closed microwave system with hydrochloric acid, nitric acid, hydrofluoric acid digestion sample, adding boric acid solution remaining hydrofluoric acid complex, inductively coupled Plasma Atomic Emission Spectrometry response intensity measured elements and determine its content according to the calibration curve.

4 Reagents

Unless otherwise stated, use only confirmed in the analysis of analytical grade reagents and deionized water or equivalent purity.

4.1
hydrochloric acid (rho1.19g/mL). pure class distinctions.

4.2
nitrate (rho1.42g/mL). pure class distinctions.

4.3
Hydrofluoric acid (rho1.12g/mL).

4.4
sulfate (rho1.84g/mL). pure class distinctions.

4.5
high purity iron. iron content greater than 99.98%.

4.6
sulfuric acid solution (595). 5mL of sulfuric acid (4.4) was dissolved in 95mL of water.

4.7
boric acid solution (50g/L). said 5g excellent pure boric acid dissolved in 100mL of water.

4.8
iron matrix solution (8mg/mL). Weigh 0.8g (accurate to 1mg) high purity iron (4.5), add 30mL of hydrochloric acid (4.1) and 5mL nitric

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