Chinastandards.org

ICS 77.080.20
CCS H40

SN

INDUSTRY STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

SN/T 3121-2012

Determination of high cobalt content in Steel. Potentiometric titration method after separation by ion exchange

钢样中高含量钴的测定 离子交换分离电位滴定法

(English Translation)

Issued on: May 7, 2012 **Implemented on: November 16, 2012**

Issued by: General Administration of Customs

Preview: page 1 of 4 shown, 7 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3121-2012

Chinastandards.org

Table of Contents

Foreword

1 Scope

2 Normative references

3 Method summary

4 Reagents

Foreword

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

This standard uses the translation method identical with ISO 11653:1997 "in steel with high content of cobalt by ion exchange separation potential drop Titration. " on a standard text format according to GB/T 1.1-2009 made the following editorial changes.

a) "this International Standard" be replaced by "of this standard."

b) Remove the preface to international standards.

c) Normative documents used in Chinese national standards equivalent standards adopted.

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

This standard was drafted. Gansu People's Republic of China Exit Inspection and Quarantine, Jinchuan Group Limited.

1 Scope

This standard specifies the ion exchange in steel with high content of cobalt separation method for determining the potentiometric titration.

This standard applies to the determination of steel with a high content of cobalt. Measuring range. 5.0% to 17.0%.

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 6379.1 measurement methods and results of Accuracy (trueness and precision) -

Preview: page 2 of 4 shown, 7 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3121-2012

Part 1. General principles and definitions (ISO 5725-1:1994, IDT) 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 (ISO 5725-2:1994, ID) Specifications and test methods for water GB/T 6682 laboratory analysis GB/T 12808 Laboratory glassware single reticle pipette GB/T 20066 Steel and iron - Sampling and determination of the chemical composition of the sample with a sample preparation method

3 Method summary

With a mixed solution of nitric acid and hydrochloric acid to dissolve the sample. Rinse with hydrochloric acid anion exchange column cobalt separated from interfering elements, and perchloric acid Oxidation, blow nitrogen dissolved chlorine and oxygen. Sample in a mixed solution containing ammonium citrate was added to an excess of standard solution of potassium ferricyanide, Then cobalt standard solution titration of excess potassium ferricyanide.

4 Reagents

Unless otherwise stated, the method used reagents were analytical reagents, test water line with two water GB/T 6682 regulations.

4.1
cobalt (>=99.95%).

4.2
potassium ferricyanide [K3Fe (CN) 6].

4.3
citric acid (C6H8O7. H2O).

4.4
perchloric acid (rho = 1.67g/mL).

NOTE: perchloric acid (rho = 1.54g/mL) can also be used. 100mL perchloric acid (rho = 1.67g/mL) corresponds 127mL perchloric acid (rho = 1.54g/mL).

4.5
nitric acid (rho = 1.40g/mL).

4.6
hydrochloric acid (rho = 1.19g/mL).

Aqueous ammonia 4.7 (rho = 0.89g/mL).

Preview: page 3 of 4 shown, 7 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3121-2012

Chinastandards.org

4.8
hydrochloride (75).

4.9
hydrochloride (23).

4.10
hydrochloric acid (12).

Preview: page 4 of 4 shown, 7 in the full document. Complete English PDF, instant download:
https://chinastandards.org/standards/sn-t-3121-2012