BS EN ISO 7526:2020

BSI Standards Publication

Ferronickels – Determination of sulfur content – Infrared absorption method after induction furnace combustion

bsi.

National foreword

This British Standard is the UK implementation of EN ISO 7526:2020. It is identical to ISO 7526:2020. It supersedes BS 6783-7:1986, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee I/-, Miscellaneous standards materials and chemicals.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPEAN STANDARD

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English Version

Ferronickels - Determination of sulfur content - Infrared absorption method after induction furnace combustion (ISO 7526:2020)

Ferronickels - Détermination de la teneur en soufre - Méthode par absorption dans l'infrarouge après combustion dans un four à induction (ISO 7526:2020)

Ferronickel - Bestimmung des Schwefelgehalts - Infrarot-Absorptionsverfahren nach der Verbrennung im Induktionsofen [Routineverfahren] (ISO 7526:2020)

This European Standard was approved by CEN on 15 November 2019.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

This document (EN ISO 7526:2020) has been prepared by Technical Committee ISO/TC 155 "Nickel and nickel alloys" in collaboration with Technical Committee CEN/SS M14 “Nickel” the secretariat of which is held by CCMC.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2020, and conflicting national standards shall be withdrawn at the latest by September 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 27526:1991.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 7526:2020 has been approved by CEN as EN ISO 7526:2020 without any modification.

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 155, *Nickel and nickel alloys*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/SS M14, *Nickel*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 7526:1985), which has been technically revised. The main changes compared with the previous edition are as follows:

— the scope has been limited to ferronickels only;

— the former Clauses 5 and 7 have been technically revised;

— the former Annexes A and C have been deleted;

— the precision data have been updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

INTERNATIONAL STANDARD **ISO 7526:2020**

Ferronickels – Determination of sulfur content – Infrared absorption method after induction furnace combustion

1 Scope

This document specifies an infrared absorption method after combustion in an induction furnace for the determination of the sulfur content in ferronickels in the range of 0,002 % to 0,12 %.

The method is applicable to normal production operations. It uses commercially available equipment, which is calibrated using steel and/or ferronickel certified reference materials (CRMs).

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Principle

Combustion of a test portion in a high-frequency induction furnace at high temperature in a current of pure oxygen, and in the presence of accelerators and fluxes.

Transformation of sulfur into sulfur dioxide.

Measurement by infrared absorption of the sulfur dioxide carried by the current of oxygen.

5 Reagents

During the analysis, use only reagents of recognized analytical grade.

5.1 Oxygen, high purity (mass fraction minimum 99,5 %).

An oxidation catalyst [copper(II) oxide or platinum] tube heated at 600 °C, followed by appropriate carbon dioxide and water absorbents, shall be used when the presence of organic contaminants is suspected in the oxygen.

5.2 Inert ceramic (attapulgus clay), impregnated with sodium hydroxide and having particle sizes from 0,7 mm to 1,2 mm for the absorption of carbon dioxide.

5.3 Magnesium perchlorate [$Mg(ClO_4)_2$], having particle size from 0,7 mm to 1,2 mm for the absorption of moisture.