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Ferrovanadium — Specification and conditions of delivery

Ferro-vanadium — Spécifications et conditions de livraison

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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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

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 132, *Ferroalloys*.

This second edition cancels and replaces the first edition (ISO 5451:1980), which has been technically revised.

The main changes are as follows:

— the normative references have been updated;

— the designation and chemical composition of ferrovanadium have been revised;

— the particle size of ferrovanadium has been revised;

— the constitution of consignment has been revised;

— the contradictory analysis and arbitral analysis procedures have been revised.

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.

Introduction

Ferrovanadium is an alloy containing vanadium and iron obtained by reduction. It is usually used as vanadium additive in steelmaking and casting process.

This document was developed in response to worldwide demand for minimum specifications for ferrovanadium traded internationally. The requirements of the previous edition (ISO 5451:1980) such as chemical composition and particle size specifications are revised to meet the demand of different uses, promote the rational utilization of resources, reduce carbon emissions and create wealth for the society.

Ferrovanadium — Specification and conditions of delivery

1 Scope

This document defines the specification and conditions of delivery for ferrovanadium usually supplied for steelmaking and foundry use.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4552-2, *Ferroalloys — Sampling and sample preparation for chemical analysis — Part 2: Ferrotitanium, ferromolybdenum, ferrotungsten, ferroniobium, ferrovanadium*

ISO 8954-1, *Ferroalloys — Vocabulary — Part 1: Materials*

ISO 8954-2, *Ferroalloys — Vocabulary — Part 2: Sampling and sample preparation*

ISO 8954-3, *Ferroalloys — Vocabulary — Part 3: Sieve analysis*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8954-1, ISO 8954-2 and ISO 8954-3 apply.

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

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

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

4 Information for ordering

Orders for ferrovanadium shall include the following information:

a) quantity;

b) constitution of consignment;

c) chemical composition in accordance with the designations given in Table 1;

d) particle size ranges in accordance with the classes given in Table 2;

e) necessary requirements for analysis reports, packing, etc., as appropriate.