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# International Standard 5451

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## Ferrovandium — Specification and conditions of delivery

*Ferro-vandium — Spécifications et conditions de livraison*

**First edition — 1980-12-01**

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been set up 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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 5451 was developed by Technical Committee ISO/TC 132, *Ferroalloys*, and was circulated to the member bodies in November 1979.

It has been approved by the member bodies of the following countries :

Australia	Germany, F.R.	Romania
Austria	India	South Africa, Rep. of
Brazil	Italy	Sweden
Canada	Japan	United Kingdom
China	Norway	USA
Czechoslovakia	Poland	USSR
France	Portugal	Yugoslavia

No member body expressed disapproval of the document.

# Ferrovandium — Specification and conditions of delivery

## 1 Scope and field of application

This International Standard specifies requirements and conditions of delivery for ferrovandium usually supplied for steelmaking and foundry use.

## 2 References

ISO 565, *Test sieves — Woven metal wire cloth and perforated plate — Nominal sizes of apertures.*

ISO 3713, *Ferrolloys — Sampling and preparation of samples — General rules.*<sup>1)</sup>

ISO 6467, *Ferrovandium — Determination of vanadium content — Potentiometric method.*<sup>1)</sup>

## 3 Definition

**3.1 ferrovandium** : A master alloy of iron and vanadium with a minimum vanadium content of 35,0 % by mass, and a maximum vanadium content of 85,0 % by mass, obtained by reduction.

## 4 Information for ordering

Orders for ferrovandium 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.

## 5 Requirements

### 5.1 Constitution of consignment

Ferrovandium shall be delivered in consignments constituted by one of the following methods.

#### 5.1.1 Tapped lot method

A consignment constituted by the tapped lot method consists of a ferrovandium mass of one melt (or one part of a continuous tap).

#### 5.1.2 Graded lot method

A consignment constituted by the graded lot method consists of a number of melts (or parts of continuous taps) of one ferrovandium designation.

The vanadium content of the melts (or parts of continuous taps) constituting the consignment shall not differ from each other by more than 3 % absolute.

#### 5.1.3 Blended lot method

A consignment constituted by the blended lot method consists of a number of melts (or parts of continuous taps) of one ferrovandium designation, which have been crushed to a particle size less than 50 mm and thoroughly mixed.

The content of the main constituent of the melts (or parts of continuous taps) constituting the consignment may vary between the minimum and maximum limits specified for the appropriate ferrovandium designation.

### 5.2 Chemical composition

**5.2.1** The chemical composition of ferrovandium shall be as specified in table 1. The limits stated correspond to particle size ranges in classes 1 to 5 in accordance with table 2.

<sup>1)</sup> At present at the stage of draft.