



Designation: A102 – 04

Standard Specification for Ferrovandium¹

This standard is issued under the fixed designation A102; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope*

- 1.1 This specification covers one grade of ferrovandium.
- 1.2 The values given in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

- 2.1 *ASTM Standards*:²
 - A1025 Specification for Ferrous Alloys and Other Alloying Materials, General Requirements
 - E365 Test Method for the Determination of Vanadium in Ferrovandium and Vanadium Alloying Additives³

3. General Conditions for Delivery

- 3.1 Materials furnished to this specification shall conform to the requirements of Specification A1025, including any supplementary requirements that are indicated in the purchase order. Failure to comply with the general requirements of Specification A1025 constitutes nonconformance with this specification. In case of conflict between the requirements of this specification and Specification A1025, this specification shall prevail.
- 3.2 Although ferrovandium is ordered by total net weight, the customary basis of payment is per pound of contained vanadium.

4. Chemical Composition

- 4.1 The material shall conform to the requirements as to chemical composition specified in Table 1.

¹ This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel and Related Alloys and is the direct responsibility of Subcommittee A01.18 on Castings.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Withdrawn. The last approved version of this historical standard is referenced on www.astm.org.

TABLE 1 Chemical Requirements^A

Element	Composition, %
Vanadium, ^B	75-85
Carbon, max	0.75
Silicon, max	1.5
Aluminum, max	2.0
Sulfur, max	0.08
Phosphorus, max	0.08

^AFor the purposes of determining conformance with this specification, the reported analysis shall be rounded to the nearest unit in the last right-hand place of figures used in expressing the limiting value, in accordance with the rounding method of Practice A1025.

^BFor the purposes of determining the vanadium content of any shipment, vanadium shall be reported to the nearest 0.1 %, applying the same rounding procedure as prescribed in Footnote A.

- 4.2 The manufacturer shall furnish an analysis of each shipment showing the percentage of each element specified.

5. Size

- 5.1 The grade is available in sizes as listed in Table 2.

NOTE 1—The sizes listed in Table 2 are typical as shipped from the manufacturer's plant. Ferrovandium has a friability code number of "1". It is a tough material, susceptible to little, if any, breakage during shipment or handling.

6. Chemical Analysis

- 6.1 The chemical analysis of the material shall be made in accordance with the procedure for ferrovandium as described in Test Methods E365 or alternative methods which will yield equivalent results. For elements other than vanadium the chemical analysis shall be agreed upon by the purchaser and supplier.

6.2 If alternative methods of analysis are used, in case of discrepancy, Test Methods E365 shall be used for referee.

6.3 Where no method is given for the analysis for a particular element, the analysis shall be made in accordance with a procedure agreed upon by the manufacturer and the purchaser.

*A Summary of Changes section appears at the end of this standard.