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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 4139-2012

Replacing GB/T 4139-2004

Ferrovanadium

钒铁

(English Translation)

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Foreword

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

This standard replaces GB/T 4139-2004 "FeV." this standard compared with GB/T 4139-2004, the main changes are as follows.

- The FeV50-C, FeV60-C and FeV80-C products into standard grades, while deleted FeV40-A and FeV40-B grades product;
- Modify the carbon content FeV80-B grade product requirements;
- Modify the silicon content FeV50-B grade product requirements;
- Modify the phosphorus content FeV80-B grade product requirements;
- Modified FeV50-B, the sulfur content FeV60-B and FeV80-B grade product requirements;
- Modified FeV50-B and the aluminum content requirements FeV60-B grade products;
- Increased "5mm ~ 15mm" size group, delete the "10mm ~ 150mm" size group, and modify the "10mm ~ 50mm" size group and "10mm ~ 100mm" size group product size requirements;
- Increased provisions by grade group batches.

This revised standard adopts ISO 5451. 1980 "FeV specifications and delivery conditions" (in English).

This standard is based on ISO 5451. 1980 re-drafted. Listed in Appendix A of this standard reg number and ISO 5451. 1980 chapter Article number of the control list.

In using the ISO 5451. 1680, this standard made some changes. About the technical difference is empty in terms of involving their margin with a single vertical line at the white logo. In Appendix B gives a list of these technical differences and the reasons for the reference. For ease of use, to ISO 5451. 1980, this standard also made the following

editorial changes.

--- The "this International Standard" be replaced by "this standard";

"," --- By decimal points instead of ISO 5451. 1980 for use as a decimal point, "";

--- Delete ISO 5451. 1980 Foreword.

The standard proposed by China Iron and Steel Association.

This standard by the national pig iron and ferroalloy Standardization Technical Committee (SAC/TC318) centralized.

This standard was drafted. Pangang Group Steel Vanadium Titanium Co., Ltd., Hebei Iron and Steel Co., Ltd. Chengde Branch, National vanadium and titanium Products Quality Supervision and Inspection Center (chips), Metallurgical Industry Information Standards Institute.

1 Scope

This standard specifies the FeV requirements, test methods, inspection rules and packaging, storage and transportation, marking and certification.

This standard applies to steel or alloy material as an additive vanadium ferrovanadium.

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.

General provisions GB/T 3650 inspection, packing, storage and transportation, marking and certification of GB/T 4010 alloy chemical analysis and preparation of samples GB/T 8704.1 Determination of carbon content ferrovanadium The infrared absorption method and the gas volumetric method GB/T 8704.3 Determination of sulfur content ferrovanadium The infrared absorption method and combustion - neutralization titration method GB/T 8704.5 Determination of vanadium iron vanadium ammonium ferrous sulfate titration and potentiometric titration GB/T 8704.6 Determination of silicon content FeV sulfuric acid dehydration gravimetric method GB/T 8704.7 Determination of phosphorus content of vanadium iron molybdenum blue spectrophotometric method Determination of chromium GB/T 8704.8 vanadium content of Fe, Al Azure S Spectrophotometry and EDTA titration Determination of GB/T 8704.9 ferromanganese vanadium content of potassium periodate photometric and flame atomic absorption spectrometry Sampling and testing methods GB/T 13247 ferroalloy product particle size

3.1 Grades and chemical composition

3.1.1

Press vanadium and vanadium iron impurity content is divided into nine grades, chemical composition shall comply with the requirements in Table 1.

Table 1 Grades and chemical composition

Trademark

Chemical composition (mass fraction) /% C Si PS Al Mn no greater than FeV50-A 48.0 ~ 55.0 0.40 2.0 0.06 0.04 1.5 -FeV50-B 48.0 ~ 55.0 0.60 3.0 0.10 0.06 2.5 -FeV50-C 48.0 ~ 55.0 5.0 3.0 0.10 0.06 0.5 -FeV60-A 58.0 ~ 65.0 0.40 2.0 0.06 0.04 1.5 -FeV60-B 58.0 ~ 65.0 0.60 2.5 0.10 0.06 2.5 -FeV60-C 58.0 ~ 65.0 3.0 1.5 0.10 0.06 0.5 -FeV80-A 78.0 ~ 82.0 0.15 1.5 0.05 0.04 1.5 0.50 FeV80-B 78.0 ~ 82.0 0.30 1.5 0.08 0.06 2.0 0.50 FeV80-C 75.0 ~ 80.0 0.30 1.5 0.08 0.06 2.0 0.50