

## Vanadium: Global industry markets & outlook

### ARE YOU FACING BIG DECISIONS INVOLVING VANADIUM?

The market for Vanadium is global, and local events can make waves across the world. If you're involved with vanadium in any way, you know that everything's important – both the small details and the big picture. A complete perspective is essential, whether you're preparing a company strategy, planning exploration, bringing new products to market, buying, selling or investing.

### MAKE THE RIGHT CHOICE

Whatever your challenge, this report gives you deep insights to help you make really well-informed recommendations or decisions. It's a detailed account of:

- World production and consumption
- The operations of the major producers
- End-use market applications
- Price trends
- International trade patterns
- Forecasts for supply, demand and prices

### IS THIS REPORT FOR YOU?

Our clients include anyone with an interest in the evolving vanadium market, anywhere in the world. Readers of past reports have come from a wide range of relevant industries – from extraction to end-use, from mines to factories to banks, from existing players to new entrants. And they range from analysts and researchers to operational managers and chief executives.

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## WHAT READERS SAY

*“When we review project or company opportunities, the most important area of review is the marketplace. We have always deferred to Roskill reports and their services for the prime benchmark reference point.”*

Michael Kiernan,  
Consolidated Minerals Limited,  
Australia

*“Roskill has been a key reference to our industry for a long time...the best reference about the market and industries.”*

Bayram AnKarali  
Etimine SA, Turkey

*“One of the few sources available for critical, detailed and reliable information on the industrial minerals markets.”*

Emilio Lobato,  
Technical Marketing Manager,  
Magnesita Refratarios SA, Brazil

## GET ACCURATE ANSWERS FROM INDEPENDENT EXPERTS

- Where are the main commercially exploited vanadium resources?
- How vulnerable is ferrovanadium to substitution by ferroniobium in HSLA steels?
- What percentage of vanadium supply is derived from ashes and residues?
- What impact is the development of the vanadium redox battery likely to have on future demand?
- How has the US anti-dumping action on ferrovanadium affected world trade in vanadium products?
- How will vanadium prices react if some of the proposed new capacity fails to come on line?

## WHY READERS CHOOSE ROSKILL

**We're approachable.** Our sources include a large network of industry contacts: the key players talk to us because we're approachable and because they know us well.

**We're independent.** The information and insights in “Vanadium: Global industry markets & outlook” are completely independent. We're privately-owned and not beholden to anyone. Our expert researchers make a thorough and objective analysis of all available data, from sources across the globe.

**We're expert.** You want facts from people who know what they're talking about. Roskill's experts have been analysing the Vanadium industry for over 30 years and this is our 12th report on this sector.

### **Approachable. Independent. Expert.**

That's why no other report can match the accuracy, depth and expertise of “Vanadium: Global industry markets & outlook”.

## WHAT ELSE CAN WE DO FOR YOU?

We also offer expert bespoke consultancy to help you tackle specific complex challenges, such as feasibility studies, market assessments or due diligence reports.

If you'd like to discuss a project, please email [judith@roskill.co.uk](mailto:judith@roskill.co.uk) or call +44 20 8944 0066.

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## What's included?

Contents: 203 pages, 104 tables, 56 figures plus trade appendix

## Overview

Vanadium prices have shown a high degree of volatility over the last 20 years. However, in the economic downturn in 2009, the price did not fall to the lows experienced between 1998 and 2003. In a prompt response to economic conditions, many producers cut output and limited the fall in price. The recovery in prices for ferrovanadium stalled in mid 2010, but in the longer term prices are forecast to rise, reaching US\$75/kg by 2015.

Over the last decade, China has become both the main producer and main consumer of vanadium. In terms of supply, it now accounts for almost 50% of the global total and planned

expansion over the next two years will consolidate this position. Chinese demand for vanadium grew at 13%pa between 2003 and 2009 in line with its burgeoning steel output. Countries with mature economies have a much higher intensity of use of vanadium in steels than industrialising countries; in 2008, intensity of use in the USA was more than three times as great as that in China. In the next decade the main drivers for growth in vanadium demand will be a combination of strong growth in steel output in BRIC countries and an increasing emphasis in these countries on production of high strength low alloy steels with their higher vanadium content.

World production of vanadium grew by more than 7%pa from 2003 to 2008. Initially, production increases were met by taking up spare capacity at existing operations but from 2006, capacity had to be increased to meet demand. Most of this expansion, however, was also at existing mines and plants, most notably in China. In the next few years additional supply could come from re-opening the mine and plant at Windimurra, a new mine and plant in Brazil, further expansion of slag output in Sichuan as well as an increase in by-product output from uranium processing in the USA and South Africa.

This report gives you a full analysis of the key trends, issues and developments in the market, a clear insight into all areas of the industry and an authoritative analysis of its prospects.

Vanadium production, consumption and market balance (tV)



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## Question?

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