

Rhenium:

Global Industry Markets & Outlook

ARE YOU FACING BIG DECISIONS INVOLVING RHENIUM?

The market for rhenium is global, and local events can make waves across the world. If you're involved with rhenium 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, bringing product to market, buying, selling or investing.

MAKE THE RIGHT CHOICE

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

- World production and consumption
- Five year price forecasts
- End-use market applications
- Demand projections
- International trade patterns
- The operations of the major producers
- Potential new and expansion projects

IS THIS REPORT FOR YOU?

Our clients include anyone with an interest in the evolving rhenium 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 consumers to banks, from existing players to new entrants. And they range from analysts and researchers to operational managers and chief executives.

To order your report, visit www.roskill.com/rhenium or call +44 20 8417 0087 now.

WHAT READERS SAY

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

Michael Kiernan,
Consolidated Minerals Limited

“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

- What are the long term prospects for the supply of rhenium?
- In the event of significantly greater demand for rhenium would producers be able to meet demand?
- What is the likelihood of further price volatility?
- Where and in what are the main markets for rhenium?
- What is the outlook for rhenium markets and where are the likely growth areas?
- Would a greater availability of rhenium stabilize the market and expand its superalloy applications?

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 “Rhenium: 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 iron ore industry for over 30 years and this is our 9th report on this sector.

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.

Approachable. Independent. Expert.

That's why no other report can match the accuracy, depth and expertise of “Rhenium: 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 robert@roskill.co.uk or call +44 20 8417 0087.

What's included?

Contents: 117 pages, 57 tables, 22 figures plus trade appendix

OVERVIEW

By the beginning of 2013, the rhenium market had experienced three years of relative calm after considerable volatility from the end of 2006 to 2009 when the spot price peaked at almost US\$12,000/kg, with steeply rising demand for use in aerospace superalloys. Since the end of 2009 the spot price has remained below US\$5,000/kg and was being quoted between US\$3,500 and US\$3,700/kg in January 2013.

Despite some concerns in the industry regarding future supply, Roskill believes that primary and secondary resources are sufficient to allow producers and potential producers to keep pace with demand. This should mean continuing stability in the rhenium market, and security of supply for consumers at acceptable prices.

The new Roskill report on rhenium uses our comprehensive database to provide estimates of mine production of rhenium contained in molybdenum concentrates, most of which is not credited to the miner and much of which is not recovered. The report also assesses global rhenium resources in copper-molybdenum ores.

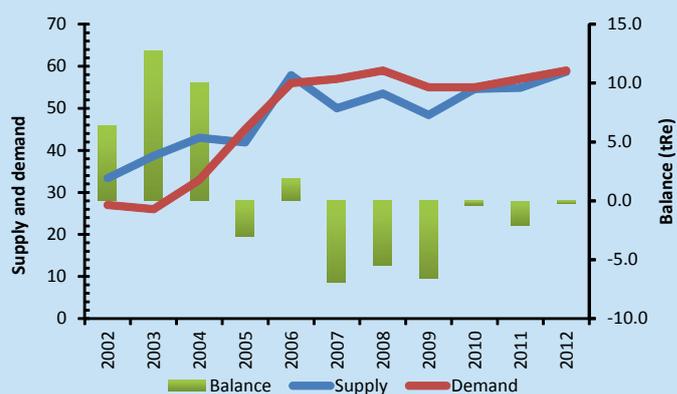
Rhenium imparts creep resistance to superalloy gas turbine blades used at extreme temperatures in aero engines and industrial gas turbines. Because of fears concerning security of supply, rhenium prices have had periods of great volatility thereby discouraging alloy makers from relying on the metal. This report provides a perspective on the rhenium market, giving both potential and existing producers and consumers the wherewithal on which base their decisions.

In the early 2000s the rhenium market was probably over-supplied as output continued to rise despite a decline in the build-rate of aero engines between 2002 and 2005. From 2007 to 2009 rhenium production was lower, yet demand from the aerospace industry was increasing. As a result, surpluses that had built up in the early 2000s were quickly used.

Between 2009 and 2012 rhenium supply has probably been in rough balance with demand. With a better understanding of the market dynamics, producers should be more able to tailor future output to demand.

In addition to its invaluable contribution to the stability of superalloys and the safety of aero jet engines, rhenium is used in reforming catalysts in the production of high octane petroleum additives. It is also used as a promoter in catalysts in gas-to-liquid operations, which, although small currently, may assume much greater importance in the long term in light of the rapid expansion of shale gas output in the USA and elsewhere.

World: Supply and demand from 2002 to 2012 (tRe)



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| 2. HISTORY, PROPERTIES, OCCURRENCE AND RESOURCES OF RHENIUM | 5. CURRENT AND POTENTIAL RHENIUM PRODUCING COUNTRIES AND COMPANIES | 8. MARKET OUTLOOK FOR RHENIUM TO 2018 |
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