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Recycling of Platinum Group Metals – a Global Technology, Industry And Market Analysis

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Abstracts

The platinum group metals (PGMs), platinum, palladium and rhodium, have significant catalytic properties. Additionally, platinum metals possess natural beauty which makes them a valuable jewelry item in many parts of the world. Future demand for PGMs is expected to be heavily influenced by the automobile industry, while jewelry demand for platinum is expected to see significant growth among the key economies of Asia, such as China. Demand for platinum metals in industrial applications is also expected to rise along with the growing global economy.

Rising PGM prices which have occurred in recent decades have led to an increase in the recycling of these metals, which are used in automobile catalytic converters and electronic components. The recycling of PGMs usually starts with scrap refiners that collect scrap material such as waste catalytic converters and electronic parts that contain PGMs to extract the valuable metals. Other refiners usually buy the recovered PGM material to further upgrade the quality of the recycled material.

The demand for recycled platinum metals is expected to continue to increase in the coming years as new technologies which rely on the catalytic properties of PGMs, such as fuel cells, become more widely used the world over.

STUDY GOAL AND OBJECTIVES

This report has been prepared to focus on the many new developments that have been taking place in the PGM refining industry. Many of the market application sectors are mature, while others are growing at a good pace. Secondly, there are new applications for PGMs on the horizon, such as new electronic devices and fuel cell technology. These have created the need to make a proper analysis of market and business issues,

trends in PGM recycling, and U.S. markets as well as foreign competition.

This report has been prepared to:

Provide an overview of the various platinum refinery industries and markets, their recycling processes and applications;

Identify the technical and business issues related to the commercial recovery of platinum metals;

Understand the market idiosyncrasies among the various platinum metals;

Analyze the global economic and technological trend impacting the demand for recycled platinum metals;

Determine the current size and future growth of the U.S. markets for platinum metal refining;

Identify and profile all U.S. refiners and suppliers of recycled platinum; and

Identify the foreign refiners of PGMs.

CONTRIBUTIONS OF THE STUDY

This study covers the technical and industry overviews, materials, current and emerging production methods, business and industry issues, current and emerging applications, and an extensive market analysis. Current size and future growth of the U.S. markets are estimated for 2013 and 2018.

SCOPE AND FORMAT

This report reviews the platinum metals refining industry, the types of platinum materials, their applications, and current and anticipated demand for specific metals. For each material segment, the report provides an analysis of material and product types in that category, processing technologies, properties, applications, the U.S. markets and foreign competition.

The qualitative and quantitative judgments embodied in this report are a valuable

contribution to the current knowledge of platinum metals, their production processes, applications and markets. Moreover, this study has been conducted at a vital stage when new applications hold the potential to revolutionize the application areas.

This is a consequence of the expanding utilization of electronic components – computers, fuel cells etc. – that often require the catalytic properties of platinum group metals. This current study identifies all such applications.

TO WHOM THE STUDY CATERS

This report is directed to companies that are interested in developments in this field, such as:

- Companies involved in the recovery, processing and supplying of precious metals,
- Refiners and suppliers of platinum metals,
- Manufacturers and suppliers of systems and subsystems which incorporate platinum metals,
- Manufacturers and suppliers of materials used in the refining of precious metals,
- Importers and suppliers of precious metals,
- Users of platinum group metals, and
- Precious metal recovery companies interested in diversification.

REPORT SUMMARY

The platinum group metals (PGMs) recycling industry has sustained growth in the last decade and is likely to continue this growth into the next decade because of the increasing value of PGMs and an expansion of technologies which depend on their physical properties. Economic growth in China, India Brazil and elsewhere has fostered a global increase in the use of automobiles, electronic devices and jewelry, all of which use recycled platinum metals. Additionally, within the industry, there has been growing innovation over the past decade in the technologies of PGM recycling.

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The global market is expected to undergo about 8.2% growth. Worldwide growth has the potential to expand from $6 billion in 2013 to about $9 billion by 2018.

Other Major findings of this report:

The Asian region offers the greatest opportunities for growth, a trend that is expected to continue through 2018. Asia is expected to exhibit growth that exceeds some of the world's most vibrant markets in the Americas and Europe by expanding at a rate of approximately 9.2% annually.

The Americas recycled platinum metals market, led by the U.S., is expected to grow at a good rate in the coming years, while at the same time being one of the world's key sources of recycled platinum metals. Between the years of 2013 to 2018, demand in the Americas will increase by a rate of some 7.5%.

This study also reveals that Europe will likely experience positive growth, estimated at 7.7%. The magnitude of the demand for these recycled precious metals in Europe in the year 2018 is expected to be significantly greater than the current European community market size.

Total demand in the emerging market regions of Middle East and Africa, added up to roughly $267.6 million in the Middle East and about $207.3 million in Africa during the year 2013, Additionally, we expect that during the coming five years, these emerging markets will see a strong surge in the demand for recycled platinum metals.

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COMPANY PROFILES

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