

# **Permanent Magnet Market, By Types (NdFeB, Ferrite, SmCo, Alnico), End User Industry (Consumer Electronics, General Industrial, Automotive, Medical Technology, Environment & Energy, Aerospace & Defense, Others) & Geography - Trends & Forecast To 2018**

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## **Abstracts**

Rising demand for miniaturization coupled with advancement in technology that leads to the availability of better quality ferrite magnets and neo magnets with lesser dysprosium content, together, will drive the permanent magnets market to \$18.8 billion by 2018. Asia-Pacific is the fastest growing markets for permanent magnets. Developing economies such as China and India are act as a growth engine for many industries that include automotive, consumer electronics, and medical technologies. These growing industries drive the growth of permanent magnets in the region. The market here is expected to experience highest revenue growth during the next five years.

The factors that drive growth in the permanent magnets market include high demand from current & emerging applications, development, and modernization of infrastructure, increased demand for efficiency & miniaturization, and initiatives of associations & regulatory bodies. The factors that hinder the growth of this market are the fluctuating costs of raw materials, lack of quality control across developing countries, and huge investments required in R&D and technology.

China is the leading manufacturer of low cost permanent magnets. The Chinese producers were able to produce low cost permanent magnets owing to government support and subsidies, cheap labor cost, and the presence of only a few environment & health policies. It was practically impossible for all permanent magnet producers outside

China to offer permanent magnets at a lower cost, and operate profitably, which resulted in a closure of permanent magnet plants outside China. China in turn became the leading producer of permanent magnets. Moreover, China has also developed an exclusive full scale competitive advantage on rare earth elements (REE) mining technology, production technology, processing technology, and human capital.

But, the permanent magnet market is growing with increasing number of applications in several industries. Quite a few associations and government authorities are taking the initiative for further research and development of permanent magnets to expand the technological know-how and applications of permanent magnets. For example, IEEE Magnetics (U.S.) focuses on basic development, designs, and applications of magnetic devices. The National Institute of Standards and Technology (NIST) (U.S.) focuses on the development of measurements, standards, and technology to improve the productivity of the product. Most of the companies have been focusing mainly on R&D in order to develop new and improved products. The companies have extensively applied expansion (either geographic or capacity expansion) as a growth strategy for this market, to increase their market share.

SmCo magnets can be used for the widest temperature range, followed by Alnico magnets. But their magnetic properties are not that high. Ferrite magnets are the cheapest permanent magnets, hence they are consumed in the largest proportion, but their usage is limited by an operable temperature range and lower magnetic energy product. The NdFeB magnet has confined usage in high temperature applications. But in combination with cobalt and dysprosium its temperature properties are enhanced and used widely in applications where miniaturization is an important design criterion.

The permanent magnets market is analyzed in terms of revenue (\$million) and consumption (KT) for all regions, and their respective major countries. Revenues from each region have been broken down by major end-user industries, namely, consumer electronics, general industrial, automotive, medical technology, environment & energy, aerospace & defense, and other end-user industries. Also, the types of permanent magnets that are identified and included are NdFeB, Ferrite, SmCo, and Alnico.

For this report, various secondary sources such as encyclopedia, directories, technical handbooks, company annual reports, industry association publications, metals & mining magazine articles, magnet magazine articles, world economic outlook, trade websites, and databases have been referred to identify and collect information useful for this extensive commercial study of the permanent magnets market. The primary sources - experts from related industries and suppliers – have been interviewed to obtain and

verify critical information as well as to assess the future prospects and market estimations.

This report analyzes various marketing trends and establishes the most effective growth strategy in the market. It identifies market dynamics such as drivers, restraints, opportunities, burning issues, and winning imperatives. Major companies such as Adams Magnetic Products Co.(U.S.), Anhui Earth-Panda Advance Magnetic Material Co. Ltd (China) , Arnold Magnetic Technologies (U.S.), Bunting Magnetics Co. (U.S.), Daido Steel Co. Ltd (Japan), Eclipse Magnetics Ltd (U.K.), Electron Energy Corporation (U.S.), Goudsmit Magnetics Group (The Netherlands), Hangzhou Permanent Magnet Group (China), Hitachi Metals Ltd (Japan), JPMF Guangdong Co. Ltd (China), Lynas Corporation Ltd (Australia), Molycorp Magnequench (Sinagapore), Ningbo Yunsheng Co. Ltd (China), Ninggang Permanent Magnetic Materials Co. Ltd (China), Shin-Etsu Chemical Co. Ltd (Japan), TDK Corporation (Japan), Tengam Engineering Inc.( U.S.), Thomas & Skinner Inc. (U.S.), Vacuumschmelze GmbH & Co. KG (Germany);have also been profiled in this report.

## **Scope of the report**

### **On the basis of geography:**

Asia-Pacific

North America

Europe

The Middle East & Africa

Latin America

### **On the basis of end-user industries**

Consumer electronics

General industrial

Automotive

Medical technology

Environment & energy

Aerospace & defense

Other end user industry

**On the basis of types:**

NdFeB

Ferrite

SmCo

Alnico

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