



# **Global and China Zirconium Industry Report, 2011**

**Feb. 2012**

## STUDY GOAL AND OBJECTIVES

This report provides the industry executives with strategically significant competitor information, analysis, insight and projection on the competitive pattern and key companies in the industry, crucial to the development and implementation of effective business, marketing and R&D programs.

## REPORT OBJECTIVES

- ◆ To establish a comprehensive, factual, annually updated and cost-effective information base on market size, competition patterns, market segments, goals and strategies of the leading players in the market, reviews and forecasts.
- ◆ To assist potential market entrants in evaluating prospective acquisition and joint venture candidates.
- ◆ To complement the organizations' internal competitor information gathering efforts with strategic analysis, data interpretation and insight.
- ◆ To suggest for concerned investors in line with the current development of this industry as well as the development tendency.
- ◆ To help company to succeed in a competitive market, and

## METHODOLOGY

Both primary and secondary research methodologies were used in preparing this study. Initially, a comprehensive and exhaustive search of the literature on this industry was conducted. These sources included related books and journals, trade literature, marketing literature, other product/promotional literature, annual reports, security analyst reports, and other publications.

Subsequently, telephone interviews or email correspondence was conducted with marketing executives etc. Other sources included related magazines, academics, and consulting companies.

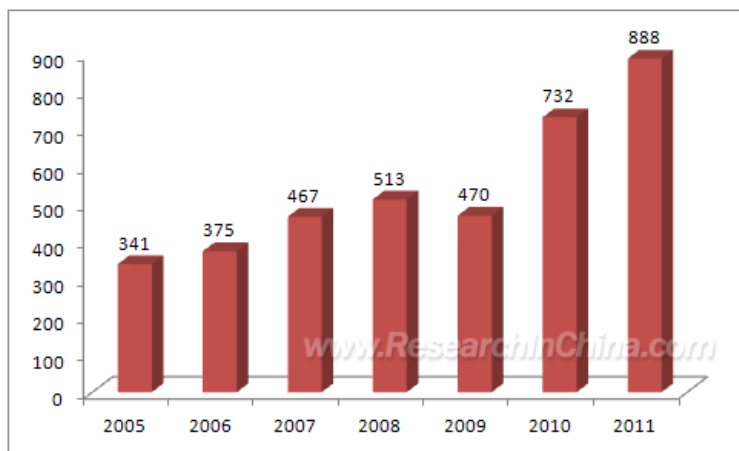
## INFORMATION SOURCES

The primary information sources include China Custom and Wind.

## Abstract

Since 2010, as the boom of China zirconium product industry picks up, its demand for upstream zircon sand raw materials has also experienced fast growth. Due to the tight supply of domestic zircon sand, in 2011, China's import volume of zircon sand hit 888 kilotons, a YoY increase of 21.3%, among which, Australia and South Africa were the major sources of imports.

**Import Volume of Zircon Sand in China, 2005-2011 (Unit: kiloton)**



Source: General Administration of Customs, ResearchInChina

Zirconium products are chiefly divided into two categories, first, zirconium chemicals predominated by zirconium silicate, zirconia, etc., mainly applied in ceramics, refractory materials and other fields, accounting for over 90% of zirconium consumption; second, zirconium metal, merely sharing 3-4% of zirconium consumption for the present, of which, 90% used in the arena of nuclear reactor and special nuclear materials, being high-end products of the zirconium industry.

### Zirconium Silicate

Zirconium silicate is an upstream primary product and mainly finds application in ceramic products. The capacity of zirconium silicate in China was close to 400 kilotons in 2010; and more than 40 manufacturers are mainly concentrated in major ceramic production areas such as Fujian, Guangdong and Shandong.

### **Zirconium Oxychloride**

As a significant zirconium intermediate product, Zirconium Oxychloride has been mainly in producing zirconium dioxide, zirconium sulfate, zirconium carbonate and other zirconium chemicals. In 2011, there were a total of over 20 zirconium oxychloride manufacturers in China, with total industrial capacity surpassing 260 kilotons. Since 2011, as export increases, the product price has also seen sustained growth, till May 2011, the price gap between zirconium oxychloride and zirconium sand had soared to RMB15,000/ton from RMB8,000/ton.

### **Zirconium Dioxide**

Zirconium dioxide, as a sort of important zirconium chemical, gets chiefly utilized in ceramics, glass, refractory materials, etc. In recent years, the capacity of zirconium dioxide in China has seen dramatic expansion, especially in high-purity zirconium dioxide. Key domestic producers include Guangdong Orient Zirconic Ind Sci & Tech Co., Ltd., Changzhou Baolong Chemicals Co., Ltd., Zhejiang Shenghua Biok Biology Co., Ltd., Zibo Guangtong Chemical Co., Ltd., etc., of which, the 6-kiloton high-purity zirconium dioxide project built by Guangdong Orient Zirconic Ind Sci & Tech in 2009 went into operation in 2011.

### **Zirconium Sponge**

Zirconium sponge basically refers to industrial-grade zirconium sponge and nuclear-grade zirconium sponge, both of which are considered as the high-end product in the zirconium industry chain. In China, industrial zirconium sponge plays a leading role in domestic production of zirconium sponge. In 2011, the total capacity of domestic industrial- and firearms-grade zirconium sponge reached 2.2 kilotons, involving five major manufacturers, namely, Chaoyang Parkson Titanium Industry Co., Ltd., Baoti Huashen Titanium Industry Co., Ltd., CITIC Jinzhou Metal Co., Ltd., etc. In the field of nuclear zirconium sponge, Guangdong Orient Zirconic Ind Sci & Tech possesses annual capacity of 150 tons, and State Nuclear Baoti Zirconium Industry Co., Ltd. has implemented the first working procedure for its nuclear-grade zirconium production line, while others all remain in the project construction stage.

### Preface

#### 1. Overview of Zirconium Industry

- 1.1 Features of Zirconium Metal
- 1.2 Application of Zirconium Products
- 1.3 Industrial Chain

#### 2. Development of Zirconium Industry Worldwide

- 2.1 Reserve and Distribution of Zirconium Resources Worldwide
- 2.2 Supply and Demand of Zirconium Sand Worldwide
- 2.3 Supply and Demand of Metal Zirconium Worldwide

#### 3. Development Environment of Chinese Zirconium Industry

- 3.1 Reserves and Distribution of Zirconium Resources in China
- 3.2 Management System of Chinese Zirconium Industry
- 3.3 Major Policies and Regulations of Chinese Zirconium Industry

#### 4. Development of Zirconium Product Segments in China

- 4.1 Traditional Zirconium Product
  - 4.1.1 Zirconium Silicate
  - 4.1.2 Zirconium Oxychloride
  - 4.1.3 Zirconium Dioxide
- 4.2 Zirconium Metal Products
- 4.3 Emerging Zirconium Products

#### 5. Import and Export of China Zirconium Industry

- 5.1 Import
- 5.2 Export

#### 6. Key Enterprises in China

- 6.1 Guangdong Orient Zirconic Ind Sci & Tech Co., Ltd
  - 6.1.1 Profile
  - 6.1.2 Operation
  - 6.1.3 Investment
- 6.2 Sino Dragon New Energy Holdings Limited
  - 6.2.1 Profile
  - 6.2.2 Operation
  - 6.2.3 Investment
- 6.3 Zhejiang Shenghua Biok Biology Co., Ltd.
  - 6.3.1 Profile
  - 6.3.2 Operation
- 6.4 Jiangxi Kingan Hi-tech Company Limited
  - 6.4.1 Profile
  - 6.4.2 Operation
  - 6.4.3 Investment
- 6.5 Baoti Huashen Titanium Industry Co., Ltd.
  - 6.5.1 Profile
  - 6.5.2 Operation
- 6.6 CITIC Jinzhou Metal Co., Ltd.
  - 6.6.1 Profile
  - 6.6.2 Operation
- 6.7 Zibo Guangtong Chemical Co., Ltd.
  - 6.7.1 Profile
  - 6.7.2 Operation
- 6.8 Shandong Shenzhou Zirconium Industry Co., Ltd.
  - 6.8.1 Profile
  - 6.8.2 Operation
- 6.9 Aohan Huatai Metal Industry Co., Ltd.
  - 6.9.1 Profile
  - 6.9.2 Operation
- 6.10 Others
  - 6.10.1 Shanghai Gaotai
  - 6.10.2 State Nuclear Baoti Zirconium Industry Co., Ltd.

- 
- Main Applications of Zirconium Products
  - Zirconium Industrial Chain
  - Zirconium Resource Reserve Distribution Worldwide in 2010
  - Output of Zirconium Sand by Country, 2010
  - Global Leading Zirconium Sand Suppliers, 2010
  - Consumption Structure of Zirconium Sand by Region Worldwide, 2010
  - Worldwide Capacity of Sponge Zirconium by Country, 2010
  - Major Industrial Policies on the Development of Chinese Zirconium Industry
  - Distribution of Zirconium Silicate Output in China, 2009
  - Price of Foshan Zirconium Silicate, 2006-2012
  - Demand for Zirconium from Downstream Sectors in China, 2010
  - Consumption of Zirconium Silicate (Including Zirconium Oxide and Granule Zircon) in Chinese Ceramic Industry, 2005-2015E
  - Capacity of Main Zirconium Oxychloride Manufacturers in China, 2011
  - Export Volume of Zirconium Oxychloride in China, 2005-2011
  - Consumption Structure of Zirconium Dioxide in China, 2010
  - Output of Major Zirconium Dioxide Manufacturers in China, 2009
  - Capacities of Main Zirconium Sponge Manufacturers in China, 2011
  - Capacity Planning of Main Nuclear-grade Zirconium Sponge Manufacturers in China, 2010
  - Demand of Nuclear-grade Zirconium Sponge in China, 2000-2015E
  - Import Volume of Zircon Sand in China, 2005-2011
  - Structure of Zircon Sand Import Volume in China (by Country), 2011
  - Price of Imported Zircon Sand Concentrate in China, 1997-2011
  - Export Volume of Zirconium Chemicals in China, 2006-2011
  - Export Volume of Zirconium Metal and Zirconium Metal Product in China, 2006-2011
  - Production Bases and Leading Products of Orient Zirconic

- 
- Capacities of Main Zirconium Products of Guangdong Orient Zirconic Ind Sci & Tech Co., Ltd, 2011
  - Operating Revenue and Net Income of Guangdong Orient Zirconic Ind Sci & Tech Co., Ltd, 2007-2011
  - Operating Revenue Structure of Guangdong Orient Zirconic Ind Sci & Tech Co., Ltd. (by Product), 2008-2011
  - Expansion Projects of Orient Zirconic, 2011-2012
  - Operating Revenue and Net Income (Loss) of Asia Zirconium, 2007-2011
  - Revenue of Asia Zirconium by Divisions, 2009-2011
  - Operating Revenue and Net Income of Shenghua Biok, 2007-2011
  - Operating Revenue of Shenghua Biok by Product, 2008-2011
  - Capacity of Zirconium Products of Kingan Hi-tech, 2010
  - Operating Revenue and Total Profit of Kingan Hi-tech, 2004-2008
  - Operating Revenue and Operating Income of Huashen Titanium, 2009-2010
  - Operating Revenue and Total Profit of Jinzhou Metal, 2004-2008
  - Operating Revenue of Guangtong Chemical, 2004-2009

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