

China Silicon Carbide Industry Report, 2014-2017

Jan. 2015

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 Company Reports, and National Bureau of Statistics of China etc.








Abstract

As a major producer and exporter of silicon carbide, China contributes about 80% to the global silicon carbide capacity. In 2013, China exported 286,800 tons of silicon carbide after the abolition of the export quota system, up 73.8% year on year. From January to November of 2014, China's silicon carbide export volume amounted to 289,800 tons.

In 2014, there were more than 200 silicon carbide smelting enterprises in China with the annual capacity of over 2.20 million tons, including over 1.20 million tons of green silicon carbide and about 1 million tons of black silicon carbide. However, the rapid capacity expansion in the previous two years and the sluggish photovoltaic industry (one of main downstream sectors) led to a low capacity utilization rate. As the photovoltaic industry warms up as well as refractories, ceramics, LED and other industries grow steadily, China's silicon carbide capacity utilization rate is expected to rise.

In China, major silicon carbide producers consist of Xindaxin Materials, Longhai Silicon, Lanzhou Heqiao, Yicheng New Material, Ningxia Jinjing and so forth. Among them, Xindaxin Materials acquired 100% stake of Yicheng New Material on April 27, 2013 to become China's largest silicon carbide blade material production and recycling company; at present, its silicon carbide capacity is up to 210,000 tons / a and its wafer cutting mortar recycling capacity hits above 60,000 tons / a.

Major Products and Capacities of Silicon Carbide Enterprises in China, 2014

Enterprise Name	Capacity	Major Product
 新大新材	210,000 tons	Green silicon carbide micro powder, black silicon carbide micro powder, silicon carbide ceramics
新疆龙海硅业	120,000 tons	Green silicon carbide
 河桥	100,000 tons	Black silicon carbide particle sand, black silicon carbide fine powder, high-density large-crystal black silicon carbide, black silicon carbide section sand
 金晶	55,000 tons	Black silicon carbide, silicon carbide sand, silicon carbide micro powder, silicon carbide refractory powder
 宁夏东方锆业股份有限公司 NINGXIA ORIENT ZIRCONIUM INDUSTRY CO., LTD.	30,000 tons	Green silicon carbide micro powder, black silicon carbide micro powder, section sand and mixed powder
 宁夏天富热电股份有限公司 NINGXIA TIANFU THERMAL ELECTRICITY CO., LTD.	70,000 pieces	2 inch, 3 inch, 4 inch, 6 inch single crystal silicon carbide wafer
 SICC	20,000 pieces	2 inch, 3 inch, 4 inch single crystal silicon carbide wafer
河北同光晶体	50,000 pieces (expected)	2 inch, 4 inch single crystal silicon carbide wafer
 瀚天天成 电子材料(厦门)有限公司	---	3 inch, 4 inch, 6 inch silicon carbide epitaxial wafer

Source: China Silicon Carbide Industry Report, 2014-2017 by ResearchInChina

Although China silicon carbide industry has a large scale and sufficient capacity, the silicon carbide products of the industry are mainly low-end primary products, while fine deep-processed products with high added value are in short supply. Now, only Tianfu Energy, SICC, Hebei Tongguang and EpiWorld can mass-produce silicon carbide wafers in China..

Tianfu Energy relies on its subsidiary -- TankeBlue to produce 70,000 pcs/a silicon carbide monocrystalline products with the sizes of 2 inches, 3 inches and 4 inches. SICC mainly produces 2-inch, 3-inch and 4 inch silicon carbide monocrystalline substrates with the capacity of 20,000 pcs/ a. Hebei Tongguang has realized the mass production of 2-inch silicon carbide wafers and will produce 4-inch products in large scale before May 2015 with the estimated annual capacity of 50,000 pieces. The Sino-US joint venture EpiWorld focuses on the production of 3-inch and 4 inch silicon carbide epitaxial wafers. In May 2014, EpiWorld's 6-inch silicon carbide epitaxial wafers were successfully developed and put into production formally.

The report covers the following aspects:

- Operating environments for China silicon carbide industry, including international environment and domestic macro environment and policies;
- Overview of China silicon carbide industry, embracing status quo, market supply and demand, competition pattern, import & export, price trend and development trends;
- Development of upstream and downstream sectors of silicon carbide in China (anthracite, quartz sand, coal tar, wear-resistant materials, refractories, ceramics, LED, etc.);
- Operation and silicon carbide business of 15 silicon carbide manufacturers in China.

1 Overview of Silicon Carbide Industry

- 1.1 Definition and Classification
- 1.2 Properties and Applications
- 1.3 Basic Market Features

2 Operating Environment of China Silicon Carbide Industry

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