



Global and China Carbon Fiber and CFRP Industry Report, 2016-2020

Jan. 2016

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

Carbon fiber is the new-generation reinforced fiber and made into carbon fiber composites (including the most widely used CFRP) by adding of resins, metals, ceramics, concrete and other materials, mainly used in the fields of aerospace, automobiles, wind power, pressure vessels, sports and leisure .

The global carbon fiber industrialized products center on PAN-based carbon fiber, which accounts for over 90% of the total output of carbon fiber. In 2015, the global capacity of PAN-based carbon fiber totaled about 142,000 tons, of which small-tow carbon fiber occupied about 70%.

The global carbon fiber capacity is mainly contributed by Japan, Europe and the United States. In 2015, the world's top five companies -- Toray, Teijin, SGL, Mitsubishi Rayon and Formosa Plastics shared 60% of the global carbon fiber capacity together; particularly, Toray's carbon fiber capacity attained 40,000 tons (including Zoltek's 13,000 tons), equivalent to 28% of the global total capacity.

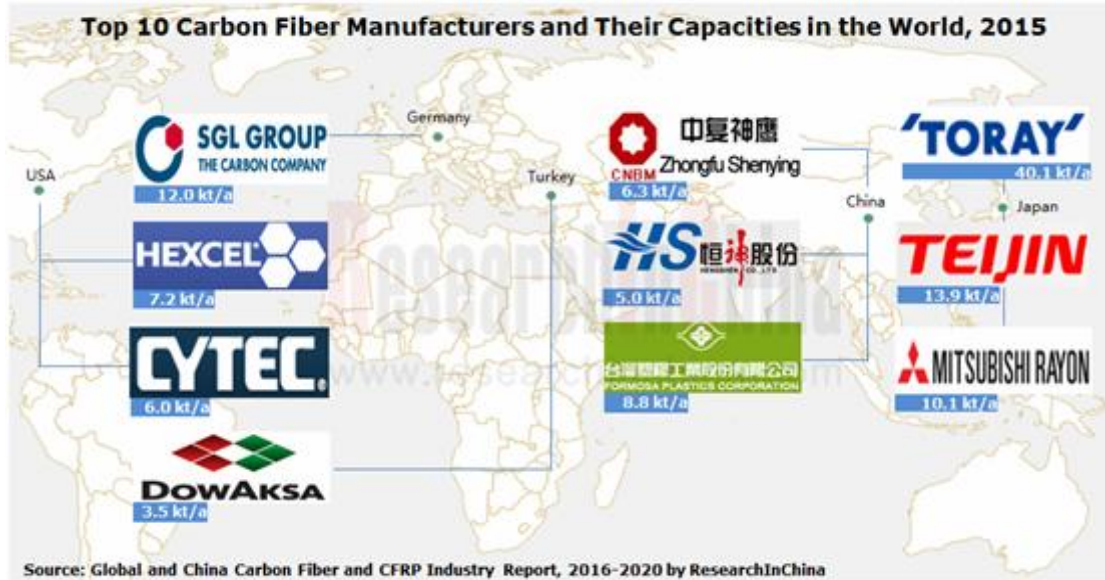
The global carbon fiber demand amounted to 59,000 tons in 2015. 22%, 62% and 16% of carbon fiber were applied to aerospace, industries, and sports & leisure respectively. Specifically, the demand from industries grew fastest, especially from automobiles, wind power, pressure vessels and other market segments. By 2020, 72% of the global carbon fiber will be used in industries, of which 23% will be adopted by automobiles and 21% by wind power.

We take the automotive industry as an example: In the wake of automotive lightweight, more and more carbon fiber composite materials will be utilized in automobiles. Currently, BMW, Benz, Ferrari, Lamborghini, General Motors, Ford and other automakers have already got involved in the field of carbon fiber materials. The fast-growing SGL and BMW cooperate to make use of carbon fiber materials in the body structure of BMW i3, i8 and all -new 7 Series. The global market size of automotive carbon fiber composites hit about USD1.58 billion in 2015, and is expected to maintain the high growth rate of around 30% in the next few years.

China carbon fiber industry started late. Now, it is only sophisticated at T300 carbon fiber production processes, makes breakthroughs in T700 and T800 technologies and realizes small-lot production. However, the Chinese producers hold backward technologies and pay high production costs; coupled with the declining international carbon fiber price in recent three years, Chinese carbon fiber enterprises are confronted with operating difficulties with a low operating rate. In 2015, China's output of carbon fiber only reached about 4,000 tons, and the self-sufficiency ratio was less than 20%.

In 2015, there were more than 30 Chinese carbon fiber manufacturers, but only Hengshen Co., Ltd and Zhongfu Shenying achieved the respective output of above 1,000 tons, while the carbon fiber devices of some enterprises were in a shutdown state. In China, Zhongfu Shenying holds the largest carbon fiber capacity, namely 6,300 tons, of which 2,100 tons were gained in 2015. Hengshen Co., Ltd is the first carbon fiber and composite materials enterprise on NEW OTCBB (Over the Counter Bulletin Board), with a complete industrial chain ranging from carbon fiber precursor to terminal composites.

China's demand for carbon fiber has always remained robust and will still ascend at the growth rate of over 15% in the next five years. The favorable national policies and huge market potentials have allured a number of listed companies to step in the field of carbon fiber and composite materials, for instance, Beijing Kangde Xin Composite Material has made layout for auto-related carbon fiber composite materials and studied carbon fiber components of new energy vehicles in cooperation with BAIC BJEV; by virtue of its technological advantages in stamping and molding, Haiyuan Automatic Equipments Co., Ltd. has raised RMB600 million for R & D and production of carbon fiber body parts of new energy vehicle.



Global and China Carbon Fiber and CFRP Industry Report, 2016-2020 mainly covers the followings:

- Supply and demand, competition pattern, cost and price analysis, market size, demand forecasting, etc. of the global carbon fiber industry;
- Supply and demand, competition pattern, price analysis, import and export, demand forecasting, etc. of Chinese carbon fiber industry;
- Development, market size and forecasting of the global carbon fiber precursor and carbon fiber composites industries;
- Applications, market size and forecasting of carbon fiber composites in the areas of aerospace, automobiles, wind energy, sports and leisure;
- Applications, market size and forecasting of carbon fiber composites in the areas of aerospace, automobiles, wind energy, sports and leisure;

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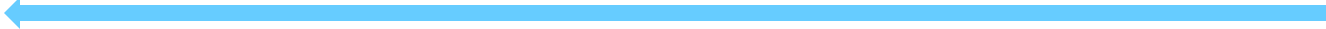
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