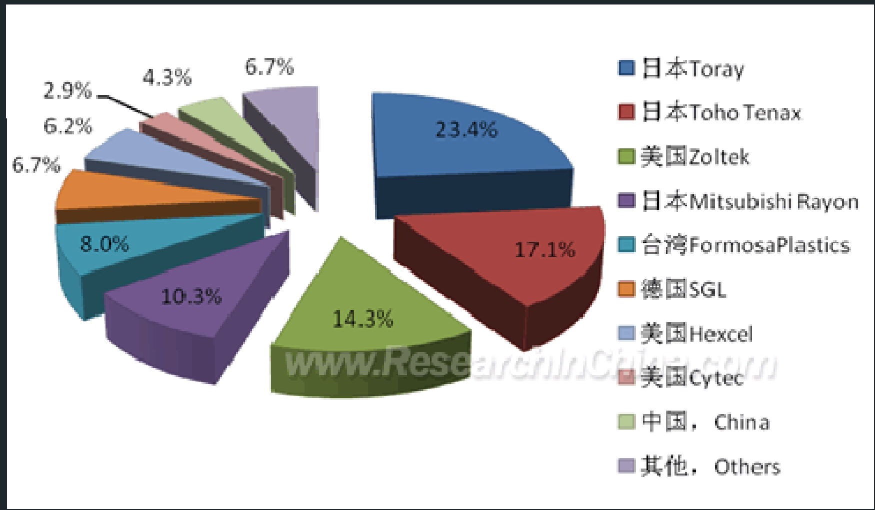
Global and China Carbon Fiber Industry Report, 2009-2010

Currently, the technology and production of carbon fiber worldwide is still under the control of Japan and the USA owing to the complicated production process, high technical content, and the politically restricted introduction of technologies and equipment. There are now less than 20 countries and regions that can realize the industrialization of carbon fiber and no more than 12 enterprises that are capable of mass-production around the globe. Toray (Japan), Toho Tenax (Japan), Zoltek (USA), and Mitsubishi Rayon (Japan) rank the global Top 4 manufacturers by the capacity of carbon fiber, accounting for 23.4%, 17.1%, 14.3% and 10.3% respectively of the global total capacity, while Chinese enterprises occupy only 4.3%.

Capacity Percentage of Carbon Fiber Manufacturers Worldwide, 2009
(Based on the Capacity of Carbon Fiber Tow)



Source: ResearchInChina

Globally, the production of carbon fiber is mostly dominated by PAN-based carbon fiber, the capacity of which in 2009 accounted for 96% or so of the global total capacity of carbon fiber. Japan's Toray, Toho Tenax, and Mitsubishi Rayon are mainly engaged in the production of small-tow (≤24K) PAN-based carbon fiber, amounting to 70.5% of the global total capacity of small-tow carbon fiber in 2009; while America's Zoltek mainly deals with large-tow (>24K) PAN-based carbon fiber and its capacity took 49.1% of the global total capacity of large-tow carbon fiber in 2009.

The entire market of pitch-based carbon fiber is not so big but rather centralized in production. Japan's Kureha enjoyed the highest capacity of pitch-based carbon fiber by 1.45 kilotons in 2009, approximating 65% market share, followed by America's Cytec of about 17.9%.

China has taken the industrialization of carbon fiber technology as a strategic task, however, the overall level is far behind that of the developed countries and the entire industry is still at the stage of initial development. Along with the breakthroughs in carbon fiber industrialized technologies, the successively released policies for carbon fiber industry development, and the stimulation of the huge gap between supply and demand in domestic market, China has launched a lot of research projects concerning carbon fiber and kiloton industrialization projects. Up to the end of 2009, China had formed the annual capacity of 7.81 kiloton PAN precursor and 3.31 kiloton carbon fiber, but the actual output of carbon fiber was just over 900 tons with the import dependency ratio as high as 83.9%.

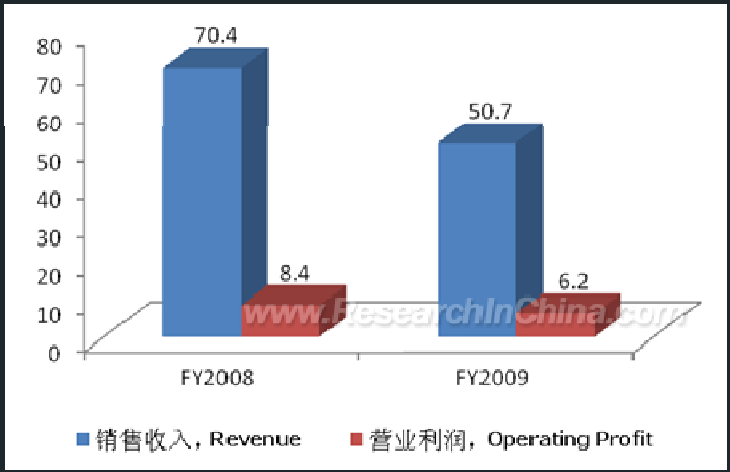
Till June 2010, the capacity of carbon fiber projects planned to be built or under construction in China recorded 60 kilotons or so, hereinto, the capacity of the projects planned to go into operation at the end of 2010 (including those went into operation before June 2010) exceeded 7 kilotons. Nevertheless, only a small number of projects can successfully go into operation and realize stable production now that there is a lack of core industrialization technology with independent intellectual property rights in Chinese carbon fiber industry, but this heralds the development opportunity of the carbon fiber industry in China.

This report lays emphasis on the current development, supply & demand, competition pattern, price trend as well as the development trend of global and China carbon fiber industry. Moreover, it also casts light on the operation and development of 18 manufacturers worldwide such as Japan’s Toray, Toho Tenax, and Mitsubishi Rayon, America’s Zoltek, and China’s ZhongFu ShenYing.

Take Toray ranking world’s No.1 in terms of overall competitiveness of carbon fiber as an example. Its revenue of carbon fiber business mainly stems from aviation & spaceflight, industry and sports fields, occupying 44.2%, 36.7% and 19.1% respectively of the total revenue of carbon fiber business in FY2009.

The economic crisis led to the postponed orders from aviation and sports fields for carbon fiber, and the revenue and operating profit of Toray's carbon fiber business both plunged in FY2009, of which, the former fell to JPY50.7 billion, down 28% from the prior year, and the latter registered JPY6.2 billion, down 26.2% from a year earlier.

Revenue and Operating Profit of Toray's Carbon Fiber Business, FY2008-FY2009 (Unit: JPY bn)



Source: Annals of Toray, ResearchInChina

Along with the rapid recovery of global carbon fiber market, Toray accelerates to perform the carbon fiber prepreg supply contract with Boeing B787 and respectively signs carbon fiber supply contract with EADS (European Aeronautic Defense and Space Company, the parent company of Airbus SAS) and Daimler in 2010. Meanwhile, Toray is continuously expanding its capacity of carbon fiber in order to meet the market demand of carbon fiber for aviation and industry in the future. According to its schedule, the annual capacity of carbon fiber of Toray will hit 25 kilotons and the market share will reach 38% by the end of 2010. In addition, on April 22, 2010, Toray announced that it would take 11 years to fulfill the carbon fiber investment plan of KRW480 billion in South Korea via Toray Saehan, its subsidiary in South Korea.

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How to Buy

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<tr><th>Product details</th><th>How to Order</th></tr>
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Single user 2,200 PDF
Enterprisewide 3,300 PDF
Publication date: Aug. 2010</td><td>By email:
report@researchinchina.com
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86-10-82601570
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