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 Fiber Glass Industry Association, and National Bureau of Statistics of China etc.
Abstract

In 2011, the global glass fiber supply hit 4.88 million tons, and the demand reached 4.66 million tons. Driven by the demand in emerging markets, the global supply is expected to grow by more than 8% to 5.30 million tons, and demand will amount to 4.94 million tons at a growth rate of 6% in 2012.

With the transfer of the industry, China has become the world's largest producer of glass fiber. In 2011, China produced 3.72 million tons of glass fiber, accounting for 76% of the global total. China's glass fiber output will grow to 4.30 million tons in 2012, sharing 81% of the global output. As 16 Chinese fiberglass kilns enter the cold repair period as well as the backward capacity is eliminated, China's glass fiber capacity will reduce by 250,000 tons or so in 2013. With the new realization of new capacity and the rebounding of downstream demand, the production will resume its growth during 2014-2015.

Like the global glass fiber industry, Chinese glass fiber market is also featured with high concentration, most of the capacity is concentrated in China Fiberglass Co., Ltd., Chongqing Polycomp International Corporation and Taishan Fiberglass Inc.. In 2012, these three companies altogether contribute 43% to the total glass fiber capacity in China. As the new capacity puts into production, it is expected that the capacity of the three companies will account for 49% of China's glass fiber capacity in 2015.

Revenue of Major Glass Fiber Companies in China, 2011

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Revenue (RMB mln)</th>
<th>Main Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>China Fiberglass Co., Ltd.</td>
<td>5,038</td>
<td>Twistless roving, chopped strand, electronic-grade glass fiber yarn</td>
</tr>
<tr>
<td>Chongqing Polycomp International Corporation</td>
<td>3,358</td>
<td>Twistless roving, chopped yarn, chopped strand mat</td>
</tr>
<tr>
<td>Taishan Fiberglass Inc.</td>
<td>2,600</td>
<td>Twistless roving, electronic-grade textile yarn</td>
</tr>
<tr>
<td>Jiangsu Jiuding New Material Co., Ltd.</td>
<td>649</td>
<td>Textile spun yarn, glass fiber products</td>
</tr>
<tr>
<td>Jiangsu Changhai Composite Materials Co., Ltd.</td>
<td>444</td>
<td>Glass fiber yarn, chopped strand, wet mat, Composite separator</td>
</tr>
<tr>
<td>Xingtai Jinniu Fiber Glass Co., Ltd.</td>
<td>427</td>
<td>Alkali-free glass fiber yarn</td>
</tr>
<tr>
<td>Zhuhai Fuhua Composite Materials Co., Ltd.</td>
<td>151</td>
<td>Textile spun yarn, processed glass cloth used for printed circuit boards</td>
</tr>
<tr>
<td>Sinoma Jinjing Fiberglass Co., Ltd.</td>
<td>134</td>
<td>Alkali-free glass fiber yarn, composite separator</td>
</tr>
</tbody>
</table>

China Fiberglass Co., Ltd. is the largest glass fiber manufacturer in China, with main products including twistless roving, chopped strand and electronic-grade glass fiber yarn. To avoid the anti-dumping policies of other countries against China, China Fiberglass has expanded its operations in overseas markets and successively established companies in Singapore, France, Japan, South Africa and other nations since 2010. In January 2012, China Fiberglass made investment for construction of an alkali-free glass fiber wiredrawing production line in Egypt; in October 2012, it built a 100,000 t/a alkali-free glass fiber wiredrawing production line in the United States. The foreign market layout helps China Fiberglass evade trade protectionism and raise overseas market share.

Taishan Fiberglass Inc, as the third largest glass fiber enterprise in China, has the similar product line to China Fiberglass, and it focuses on twistless roving and electronic-grade textile yarn. However, unlike China Fiberglass, Taishan Fiberglass enhances its exploration of domestic Chinese market, especially emerging application fields. In April 2012, Taishan Fiberglass obtained the S-1 HM high-performance glass twistless roving capacity of US-based AGY. Such twistless roving is mainly used for wind power generation. In the arena of wind power, Taishan Fiberglass has such regular customers as Sinomatech Wind Power Blade Co. Ltd., Lianyungang Zhongfu Lianzhong Composites Group, etc..

The report covers the followings:

- Global glass fiber supply and demand, competition pattern, and forecast for 2013-2015;
- China’s glass fiber supply and demand, competition pattern, import and export, as well as forecast for 2013-2015;
- Development of glass fiber products in China, as well as competitive landscape of major market segments;
- Development of Chinese glass fiber downstream market, demand for glass fiber in 2011-2015;
- Development, capacity construction and development strategy of major glass fiber manufacturers in China and beyond.
1. Overview of Glass Fiber Industry
   1.1 Definition and Classification
      1.1.1 Definition
      1.1.2 Classification
   1.2 Application
   1.3 Production Process
   1.4 Industrial Characteristics

2. Development of Global Glass Fiber Industry
   2.1 Status Quo
   2.2 Supply and Demand
      2.2.1 Overall Market
      2.2.2 Twistless Roving
      2.2.3 Textile Yarn
   2.3 Competition Pattern

3. Development of China Glass Fiber Industry
   3.1 Status Quo
   3.2 Policies
   3.3 Operation
   3.4 Supply and Demand
      3.4.1 Supply
      3.4.2 Demand
   3.5 Competition Pattern
   3.6 Industry Barriers
   3.7 Development Trend

4. Development of China Glass Fiber Products Industry
   4.1 Status Quo
   4.2 Major Companies
   4.3 Market Segments
      4.3.1 Chopped Strand Mat
      4.3.2 Wet Mat
      4.3.3 Composite Separator

5. Import & Export of China Glass Fiber Industry
   5.1 Import
   5.2 Export
      5.2.1 Export Volume
      5.2.2 Impact of Anti-dumping

6. Upstream and Downstream of China Glass Fiber Industry
   6.1 Upstream
   6.2 Downstream
      6.2.1 Construction and Infrastructure
      6.2.2 Automobile Manufacturing
      6.2.3 Electronics and Electronic Appliance
      6.2.4 Wind Power
      6.2.5 Yacht
      6.2.6 FRP Pipe

7. Foreign and Taiwan-funded Companies
   7.1 Owens Corning
      7.1.1 Profile
      7.1.2 Operation
   7.1.3 Glass Fiber Business
   7.1.4 Development in China
   7.2 PPG Industries
      7.2.1 Profile
      7.2.2 Operation
      7.2.3 Glass Fiber Business
      7.2.4 Development in China
   7.3 Johns Manville
      7.3.1 Profile
      7.3.2 Glass Fiber Business
   7.4 AGY
      7.4.1 Operation
      7.4.2 Glass Fiber Business
   7.5 PFG Fiber Glass Corporation

8. Major Chinese Companies
   8.1 China Fiberglass Co., Ltd.
   8.2 Chongqing Polycomp International Corporation
   8.3 Taishan Fiberglass Inc.
   8.4 Xingtai Jinniu Fiber Glass Co., Ltd.
   8.5 Sinoma Jinjing Fiberglass Co., Ltd.
   8.6 Jiangxi Dahua Fiberglass Group Co., Ltd.
   8.7 Jiangsu Changhai Composite Materials Co., Ltd.
   8.8 Jiangsu Jiuding New Material Co., Ltd.
   8.9 Zhuhai Fuhua Composite Materials Co., Ltd.
   8.10 Qinhuangdao Fangyuan Glass Co., Ltd.
   8.11 Shanghai Grace Fabric Co., Ltd.
   8.12 Kingboard Fiber Glass Co., Ltd (Lianzhou)
Selected Charts

• Schematic Diagram of Glass Fiber
• Classification of Glass Fiber Products (by Alkali Content)
• Classification and Applications of Glass Fiber Products (by Diameter)
• Applications of Glass Fiber
• Cycle of Global Glass Fiber Industry
• Global Glass Fiber Demand and Supply, 2008-2016
• Global Glass Fiber Demand by Region, 2012
• Twistless Roving Output of Major Regions in the World, 2012
• Textile Yarn Output of Major Regions in the World, 2012
• Capacity and Share of Leading Glass Fiber Companies in the World, 2012
• Major Glass Fiber Products and Production Processes in China
• Policies Concerning China Glass Fiber Industry
• Total Assets of China Glass Fiber Industry, 2005-2012
• Revenue and Total Profit of China Glass Fiber Industry, 2005-2012
• Gross Margin of China Glass Fiber Industry, 2005-2012
• China’s Glass Fiber Output, 2006-2015
• Glass Fiber Output of Major Regions in China, 2011-2012
• Demand for Glass Fiber in Major Fields in China, 2011-2015
• Competition Pattern of Chinese Glass Fiber Market, 2012 & 2015
• Capacity of Major Glass Fiber Companies in China, 2012 & 2015
• Output of Glass Fiber Reinforced Plastic Products in China, 2009-2015
• Output of Glass Fiber Reinforced Plastic Products in Major Regions of China, 2011-2012
• Major Glass Fiber Product Manufacturers in China and Beyond
• Main Applications of Chopped Strand Mat
• Market Share of Chinese Chopped Strand Mat Enterprises, 2009

Room 502, Block 3, Tower C, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080 Phone: +86 10 82600828 ● Fax: +86 10 82601570 ● www.researchinchina.com ● report@researchinchina.com
• Capacity and Product Characteristics of Top 4 Chopped Strand Mat Companies in China
• Main Applications of Wet Mat
• Market Share of Chinese Wet Mat Companies, 2009
• Capacity and Products of Top 4 Wet Mat Companies in China
• Main Applications of Composite Separator
• Market Share of Major Composite Separator Manufacturers in China, 2009
• Import Volume of Glass Fiber and Products in China, 2005-2012
• Import Value of Glass Fiber and Products in China, 2005-2012
• Average Import Unit Price of Glass Fiber and Products in China, 2005-2012
• Export Volume of Glass Fiber and Products in China, 2007-2012
• Export Value of Glass Fiber and Products in China, 2007-2012
• Average Export Unit Price of Glass Fiber and Products in China, 2005-2012
• Average Export Unit Price of Major Glass Fiber and Products, 2010-2012
• Anti-dumping Investigation of Foreign Countries on Chinese Glass Fiber, 2009-2011
• Production Cost of Glass Fiber
• Downstream Demand Structure of China Glass Fiber Industry, 2011
• Demand of Wall Insulation Materials for Glass Fiber in China, 2011-2015
• Demand of Waterproof Materials for Glass Fiber in China, 2011-2015
• Development Trend of Building Windows and Doors
• Demand of Windows and Doors for Glass Fiber in China, 2011-2015
• Application of Glass Fiber Reinforced Materials in Automotive Sector
• Demand of Automobile Manufacturing for Glass Fiber in China, 2011-2015
• Main Applications of Glass Fiber Cloth CCL
• Application of Glass Fiber in Printed Circuit Board
• China’s CCL Output, 2000-2015
• Demand of CCL for Glass Fiber in China, 2011-2015
Selected Charts

- Demand of Wind Power Blades for Glass Fiber in China, 2005-2015
- Cases of Shipbuilding with Glass Fiber Composite Materials in Foreign Countries
- Demand of Yacht Manufacturing for Glass Fiber in China, 2011-2015
- Performance of FRP Pipe, Carbon Steel Pipe and Cast Iron Pipe
- Demand of Oil Pipelines for Glass Fiber in China, 2011-2015
- Net Sales and EBIT of Owens Corning, 2008-2012
- Net Sales of Owens Corning, 2012-2015E
- Net Sales of Owens Corning by Business, 2008-2012
- Composite Business Net Sales and EBIT of Owens Corning, 2010-2012
- Composite Business Net Sales of Owens Corning by Market, 2012
- Distribution of Owens Corning’s Companies in China
- Revenue and Total Profit of Owens Corning (Hangzhou), 2007-2009
- Types and Applications of PPG's Glass Fiber Products
- PPG's Net Sales and Net Income, 2007-2012
- PPG's Net Sales, 2012-2015E
- PPG's Net Sales (by Region), 2010-2011
- PPG’s Net Sales (by Product), 2009-2012
- Revenue and Total Profit of PFG Fiber Glass (Kunshan), 2007-2009
- AGY’s Net Sales and Gross Profit, 2007-2012
- AGY’s Net Sales in Major Regions, 2009-2011
- Glass Fiber Capacity of PFG Fiber Glass Corporation, 2010
- Revenue and Gross Margin of China Fiberglass, 2007-2012
- Proportion of Glass Fiber Products Exported by China Fiberglass, 2007-2012
- Capacity of China Fiberglass, 2005-2015
- Glass Fiber Production Bases and Capacity of China Fiberglass, 2011
Selected Charts

- Total assets, Revenue and Net Income of CPIC, 2007-2011
- CPIC’s Glass Fiber Capacity, 2005-2012
- CPIC’s Capacity by Product, 2011
- Revenue and Total Profit of Taishan Fiberglass, 2007-2011
- Glass Fiber Capacity of Taishan Fiberglass, 2005-2012
- Capacity and Output of Jinniu Fiber Glass, 2009-2011
- Total assets, Revenue and Net Income of Jinniu Fiber Glass, 2008-2012
- Assets, Liabilities, Revenue and Net Income of Sinoma Jinjing Fiberglass, 2009-2012
- Subsidiaries of Jiangxi Dahua Fiberglass Group Co., Ltd
- Types and Capacity of Glass Fiber Products of Jiangxi Dahua Fiberglass Group Co., Ltd
- Glass Fiber and Related Products of Jiangxi Dahua Fiberglass Group Co., Ltd
- Revenue and Gross Margin of Changhai Composite Materials, 2008-2012
- Revenue and Gross Margin of Main Products of Changhai Composite Materials, 2011-2012
- Proportion of Overseas Revenue of Changhai Composite Materials, 2008-2012
- Capacity and Production Lines of Changhai Composite Materials
- Revenue and Gross Margin of Jiuding New Material, 2007-2012
- Revenue and Gross Margin of Main Products of Jiuding New Material, 2010-2012
- Proportion of Export Revenue in Total Revenue of Jiuding New Material, 2007-2012
- Glass Fiber Capacity of Jiuding New Material, 2010-2014
- Total Assets, Revenue and Net Income of Zhuhai Fuhua Composite Materials Co., Ltd., 2008-2012
- Revenue and Total Profit of Qinhuangdao Fangyuan Glass Co., Ltd., 2007-2009
- Revenue and Total Profit of Shanghai Grace Fabric Co., Ltd., 2005-2008
- Revenue and Total Profit of Kingboard Fiber Glass Co., Ltd (Lianzhou), 2005-2009
You can place your order in the following alternative ways:

1. Order online at www.researchinchina.com
2. Fax order sheet to us at fax number: +86 10 82601570
3. Email your order to: report@researchinchina.com
4. Phone us at +86 10 82600828 / 82601561

<table>
<thead>
<tr>
<th>Party A:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
</tr>
<tr>
<td>Address:</td>
</tr>
<tr>
<td>Contact Person:</td>
</tr>
<tr>
<td>E-mail:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Party B:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name: Beijing Waterwood Technologies Co., Ltd (ResearchInChina)</td>
</tr>
<tr>
<td>Address: Room 502, Block 3, Tower C, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080</td>
</tr>
<tr>
<td>Contact Person: Liao Yan</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:report@researchinchina.com">report@researchinchina.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bank details:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beneficial Name: Beijing Waterwood Technologies Co., Ltd</td>
</tr>
<tr>
<td>Bank Name: Bank of Communications, Beijing Branch</td>
</tr>
<tr>
<td>Bank Address: NO.1 jinxiyuan shijicheng, Landianchang, Haidian District, Beijing</td>
</tr>
<tr>
<td>Bank Account No #: 110060668012015061217</td>
</tr>
<tr>
<td>Routing No #: 332906</td>
</tr>
<tr>
<td>Bank SWIFT Code: COMMCHNA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Choose type of format</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDF (Single user license) ...............2,300 USD</td>
</tr>
<tr>
<td>Hard copy .........................2,400 USD</td>
</tr>
<tr>
<td>PDF (Enterprisewide license) ...........3,500 USD</td>
</tr>
</tbody>
</table>

※ Reports will be dispatched immediately once full payment has been received.
Payment may be made by wire transfer or credit card via PayPal.