



Global and China Wind Turbine Blade Industry Report, 2015-2017

Oct. 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

China's wind power industry gradually came out of the 2011&2012 slowdowns from 2013 on, and witnessed rapid growth in 2014 with full-year erected wind power equipment capacity of 23,196MW, up 44.2% from a year ago, reaching a new record.

As the wind power industry heats up rapidly, wind turbine blade is much sought after in the market. In 2014, China needed about 13,000 sets of wind turbine blade, while it was capable of manufacturing only 11,000 sets.

During the 13th Five-Year Plan period (2016-2020), China will add more than 100 million kW of wind power capacity, creating an estimated annual average demand of over 14,000 sets of wind turbine blade.

Wind turbine blade, one of key parts of wind turbine, accounts for about 22% of total costs. Blade materials make up more than 90% of manufacturing costs of blade. Wind turbine blade materials now include mainly glass fiber reinforced polyester resin, glass fiber reinforced epoxy resin, and carbon fiber reinforced epoxy resin, with the middle one finding the widest applications. As blade materials become ultra-large and lightweight, carbon fiber reinforced epoxy resin will be vigorously developed and used in the future.

At present, most of major large wind turbine manufacturers in the world produce blades by themselves, like Siemens, Vestas, and Gamesa. The world's largest independent wind turbine blade manufacturer is LM Wind Power, whose blades are installed in 1/3 of global wind turbines.

By the end of 2014, LM Wind Power had set up 13 wind turbine blade production bases around the globe, of which 3 factories were located in China, separately in Tianjin, Qinhuangdao, and Jiangyin.

After years of intense competition among Chinese wind turbine blade companies, capacity tends to converge. Over 30 manufacturers now can supply goods in batches, and several firms including Sinoma Science & Technology, AVIC Huiteng Windpower Equipment, and Lianyungang Zhongfu Lianzhong Composites Group take the lion's share.

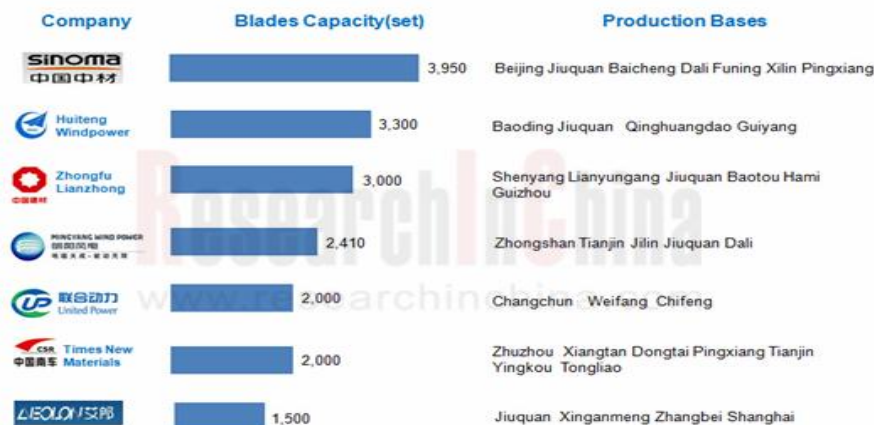
Sinoma Science & Technology: The company specializes in composite wind turbine blade, high-pressure composite cylinder, and membrane materials. Wind turbine blade business is operated by Sinomatech Wind Power Blade, which now has eight production bases (Kangzhuang and Badaling in Beijing, Jiuquan, Baicheng, Dali, Funing, Xilin, and Pingxiang). Pingxiang base produced its first set of blade in January 2015, and will be capable of manufacturing 400 sets of 2.0MW-3.0MW low-wind-speed large wind turbine blades annually after reaching designed capacity.

AVIC Huiteng Windpower Equipment: The company, one of the largest wind turbine blade suppliers in China, provides 14 series and more than 50 models of products with single blade covering 65kW to 5.0MW and blade length ranging from 8m to 63.5m. It has powerful R&D strength and three R&D centers respectively in Baoding, Beijing and the Netherlands. Blades produced by the company primarily adopt the independently developed vacuum suction & injection forming process.

Copyright 2012ResearchInChina

Lianyungang Zhongfu Lianzhong Composites Group: The company, a leading MW wind turbine blade manufacturer in China, is capable of producing 10,000 pieces of wind turbine blades annually, with power ranging from 1.25MW to 6MW and length from 31m to 75m. It has set up companies in Thuringia (Germany), and Liaoning, Inner Mongolia, Gansu, Xinjiang, and Guizhou in China, and R&D center in Europe. In August 2015, Lianyungang factory obtained the certificate issued by DNV?GL, becoming China's first blade manufacturer to secure the certificate.

Capacity and Production Bases of Major Chinese Wind Turbine Blade Companies, 2015



Source: Global and China Wind Turbine Blade Industry Report, 2015-2017 by ResearchInChina

Global and China Wind Turbine Blade Industry Report, 2015-2017 by ResearchInChina highlights the followings:

- Global installed wind capacity, distribution, wind turbine blade supply & demand, major companies, etc.;
- Wind turbine blade supply & demand, competition, and technical status in China;
- Status quo of the Chinese wind turbine blade materials (EP, UPR, GF, and CF) market and applications in blade;
- Wind turbine market capacity & distribution, and major wind turbine manufacturers in China;
- Operation, wind turbine blade business, and R&D of 8 global and 15 Chinese wind turbine blade manufacturers.

1. Introduction to Wind Turbine Blade

- 1.1 Basic Concept
- 1.2 Forming Process
- 1.3 Industry Chain

2. Development of Global Wind Turbine Blade Industry

- 2.1 Status Quo of Wind Power Industry
 - 2.1.1 Installed Capacity and Distribution
 - 2.1.2 Wind Turbine Manufacturers
- 2.2 Status Quo of Wind Turbine Blade Industry
 - 2.2.1 Market Supply
 - 2.2.2 Market Demand

3. Development of Wind Turbine Blade Industry in China

- 3.1 Market Supply & Demand
 - 3.1.1 Supply
 - 3.1.2 Demand
- 3.2 Competition
- 3.3 Technical Status

4. Chinese Wind Turbine Blade Materials Market

- 4.1 Overview
- 4.2 Epoxy Resin (EP)
 - 4.2.1 Status Quo of Market
 - 4.2.2 Major Companies
 - 4.2.3 EP for Wind Turbine Blade
- 4.3 Unsaturated Polyester Resin (UPR)
 - 4.3.1 Status Quo of Market
 - 4.3.2 Major Companies
 - 4.3.3 UPR for Wind Turbine Blade
- 4.4 Glass Fiber (GF)
 - 4.4.1 Status Quo of Market

- 4.4.2 Major Companies
- 4.4.3 GF for Wind Turbine Blade
- 4.5 Carbon Fiber (CF)
 - 4.5.1 Status Quo of Market
 - 4.5.2 Major Companies
 - 4.5.3 CF for Wind Turbine Blade
- 4.6 Others
 - 4.6.1 Core Materials
 - 4.6.2 Wind Turbine Blade Coatings
 - 4.6.3 Wind Turbine Blade Adhesives

5. Status Quo of China's Wind Power Industry

- 5.1 Overview
- 5.2 Installed Windpower Capacity and Distribution
 - 5.2.1 Installed Capacity
 - 5.2.2 By Region
 - 5.2.3 By Power
- 5.3 Major Wind Turbine Manufacturers

6. Key Wind Turbine Blade Manufacturers Worldwide

- 6.1 LM Wind Power
 - 6.1.1 Profile
 - 6.1.2 Operation
 - 6.1.3 Wind Turbine Blade Business
- 6.2 Vestas
 - 6.2.1 Profile
 - 6.2.2 Operation
 - 6.2.3 Wind Turbine Blade Business
- 6.3 Enercon
 - 6.3.1 Profile
 - 6.3.2 Operation
- 6.4 TPI Composites
 - 6.4.1 Profile
 - 6.4.2 Wind Turbine Blade Business

- 6.5 Suzlon
 - 6.5.1 Profile
 - 6.5.2 Operation
 - 6.5.3 Wind Turbine Blade Business
- 6.6 Tecsis
 - 6.6.1 Profile
 - 6.6.2 Wind Turbine Blade Business
- 6.7 EUROS
 - 6.7.1 Profile
 - 6.7.2 Wind Turbine Blade Business
- 6.8 Inox Wind

7. Major Chinese Wind Turbine Blade Manufacturers

- 7.1 AVIC Huiteng Windpower Equipment
- 7.2 Lianyungang Zhongfu Lianzhong Composites Group
- 7.3 Sinoma Science & Technology
- 7.4 Zhuzhou Times New Material Technology
- 7.5 Shanghai FRP Research Institute
- 7.6 Dongfang Electric (Tianjin) Wind Blade Engineering
- 7.7 Guodian United Power Technology
- 7.8 Ming Yang Wind Power
 - 7.8.1 Profile
- 7.9 Sino-wind Energy
- 7.10 Shanghai Aeolon Wind Energy Technology Development
- 7.11 Jilin Chongtong Chengfei New Material
- 7.12 Energin Wind Power Equipment
- 7.13 Dawntine
- 7.14 Sany Electric
- 7.15 Miracle Automation Engineering

8. Summary and Forecast

- 8.1 Summary
 - 8.1.1 Market
 - 8.1.2 Enterprise
- 8.2 Trend Forecast

- Composition of Wind Turbine Generator System
- Wind Turbine Blade Industry Chain in China
- Global Newly Installed Windpower Capacity, 2007-2017E
- Global Cumulative Installed Windpower Capacity, 2007-2017E
- Global Installed Windpower Capacity Breakdown by Region, 2014
- Global Installed Offshore Windpower Capacity, 2011-2014
- Market Share of Global Wind Turbine Manufacturers, 2014
- Distribution of Major Wind Turbine Blade Manufacturers and Production Bases Worldwide, 2015
- Global Demand for Wind Turbine Blade, 2009-2017E
- Companies that Have Retreated from Wind Turbine Blade Industry in Recent Years
- China's Wind Turbine Blade Capacity and Utilization Rate, 2010-2015
- China's Demand for Wind Turbine Blade, 2009-2015
- China's Wind Turbine Blade Sales Volume, 2013-2015
- Distribution of Major Wind Turbine Blade Manufacturers and Production Bases in China, 2015
- Technological Paths of Major Wind Turbine Blade Manufacturers in China
- Materials Used by and Process Characteristics of Major Blade Manufacturers in China
- Product Series of Major Wind Turbine Blade Manufacturers in China, 2015
- Application of Three Composites in 34m Wind Turbine Blade
- Performance Comparison of Traditional Blade Materials
- Epoxy Resin (EP) Capacity in the World's Major Countries/Regions, 2013
- China's EP Output, 2009-2017E
- China's Apparent Consumption of EP, 2009-2017E
- China's EP Imports and Exports, 2009-2015
- China's Import Volume and Value of EP by Country/Region, 2015H1
- Major EP Companies and Capacity in China, 2015H1

- China's Demand for EP Structural Adhesive for Wind Turbine Blade, 2009-2017
- China's UPR Output and YoY Growth, 2007-2015
- China's UPR Consumption Structure, 2013-2015
- Major UPR Manufacturers and Capacity in China, 2015H1
- China's GF Output and YoY Growth in China, 2010-2017E
- Operating Revenue and Total Profit of GF Industry in China, 2010-2015
- China's GF Imports and Exports, 2010-2015
- Major GF Companies and Capacity in China, 2015H1
- China's CF Output, 2010-2017E
- China's CF Demand and YoY Growth, 2009-2017E
- China's CF Imports and Exports, 2010-2015
- Major CF Companies and Capacity in China, 2014
- Application of CF in Wind Turbine Blade
- Foreign and Domestic Wind Turbine Blade Manufacturers Adopting CF
- Major Manufacturers of Wind Power Equipment Coatings
- Development History of Wind Turbine in China, 1980-2015
- China's Newly Installed and Cumulative Windpower Capacity, 2004-2015
- China's Installed Offshore Windpower Capacity, 2009-2015
- China's Newly Installed Wind Capacity Breakdown by Region, 2014
- China's Cumulative Wind Capacity Breakdown by Region, 2014
- China's Newly Installed Wind Capacity Breakdown by Power, 2014
- China's Cumulative Wind Capacity Breakdown by Power, 2014
- Newly Installed Windpower Capacity and Market Share of Wind Turbine Manufacturers in China, 2014
- Cumulative Windpower Capacity and Market Share of Wind Turbine Manufacturers in China, 2014
- Revenue and Profit of LM Wind Power, 2011-2015

- Wind Turbine Blade Products of LM Wind Power, 2015
- Production Bases of LM Wind Power, 2014
- Wind Turbine Blade Output of LM Wind Power, 2010-2015
- Wind Turbine Blade Factories of LM Wind Power in China, 2015
- Main Economic Indicators of Vestas, 2012-2015
- Revenue Breakdown of Vestas by Business, 2012-2014
- Production Bases of Vestas, 2014
- Subsidiaries of Vestas in China, 2015
- Global Market Share of Enercon, 2014
- Wind Turbine Blade Production Bases of Enercon, 2014
- Wind Turbine Blade Production Bases of Suzlon, 2015
- Wind Turbine Blades of EUROS, 2015
- Wind Turbine Blade Production Bases and Capacity of EUROS, 2015
- Production Bases and Capacity of IWL, 2015
- Main Economic Indicators of IWL, FY2015
- Wind Turbine Blade Production Bases of AVIC Huiteng Windpower Equipment, 2015
- Revenue and Net Income of AVIC Huiteng Windpower Equipment, 2011-2015
- Wind Turbine Blade Production Bases of Lianyungang Zhongfu Lianzhong Composites Group, 2015
- Revenue and Net Income of Sinoma Science & Technology, 2011-2015
- Wind Turbine Blade Output and Sales Volume of Sinoma Science & Technology, 2012-2014
- Wind Turbine Blade Production Bases and Capacity of Sinoma Science & Technology, 2015H1
- Wind Turbine Blades of Sinoma Science & Technology, 2015
- Revenue and Net Income of Sinomatech Wind Power Blade, 2012-2015
- Revenue and Net Income of Zhuzhou Times New Material Technology, 2011-2015
- Operating Revenue and Gross Margin of Zhuzhou Times New Material Technology by Business, 2013-2015

- Wind Turbine Blade Bases of Zhuzhou Times New Material Technology, 2015H1
- Main Economic Indicators of Shanghai FRP Research Institute, 2012-2015
- Revenue and Net Income of Dongfang Electric (Tianjin) Wind Blade Engineering, 2013-2015
- Main Production Bases and Businesses of Guodian United Power Technology, 2015H1
- Main Production Bases and Capacity of Ming Yang Wind Power at the end of 2014
- Revenue and Profit of Ming Yang Wind Power, 2011-2015
- Wind Turbine Blade Production Bases of Sino-wind Energy, 2015H1
- Main Wind Turbine Blade Production Bases and Capacity of Aeolon, 2015H1
- Products of Jilin Chongtong Chengfei New Material, 2015
- Production Bases of Jilin Chongtong Chengfei New Material, 2015H1
- Operating Revenue Breakdown of Miracle Automation Engineering by Business, 2013-2015
- Wind Turbine Blade Companies and Business Indicators of Miracle Automation Engineering, 2014
- China's Wind Turbine Blade Capacity and Demand, 2010-2020E
- Market Share of Major Wind Turbine Blade Companies in China by Sales Volume, 2014

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

Party A:			
Name:			
Address:			
Contact Person:		Tel	
E-mail:		Fax	

Party B:			
Name:	Beijing Waterwood Technologies Co., Ltd (ResearchInChina)		
Address:	Room 502, Block 3, Tower C, Changyuan Tiandi Building, No. 18, Suzhou Street, Haidian District, Beijing, China 100080		
Contact Person:	Liao Yan	Phone:	86-10-82600828
E-mail:	report@researchinchina.com	Fax:	86-10-82601570
Bank details:	Beneficial Name: Beijing Waterwood Technologies Co., Ltd Bank Name: Bank of Communications, Beijing Branch Bank Address: NO.1 jinxiyuan shijicheng, Landianchang, Haidian District, Beijing Bank Account No #: 110060668012015061217 Routing No #: 332906 Bank SWIFT Code: COMMCNSHBJG		

Title	Format	Cost
<i>Total</i>		

Choose type of format

- PDF (Single user license)2,000 USD
- Hard copy 2,150 USD
- PDF (Enterprisewide license)..... 3,100 USD

※ Reports will be dispatched immediately once full payment has been received.

Payment may be made by wire transfer or credit card via PayPal.

About ResearchInChina

ResearchInChina (www.researchinchina.com) is a leading independent provider of China business intelligence. Our research is designed to meet the diverse planning and information needs of businesses, institutions, and professional investors worldwide. Our services are used in a variety of ways, including strategic planning, product and sales forecasting, risk and sensitivity management, and as investment research.

Our Major Activities

- *Multi-users market reports*
- *Database-RICDB*
- *Custom Research*
- *Company Search*

RICDB (<http://www.researchinchina.com/data/database.html>), is a visible financial data base presented by map and graph covering global and China macroeconomic data, industry data, and company data. It has included nearly 500,000 indices (based on time series), and is continuing to update and increase. The most significant feature of this base is that the vast majority of indices (about 400,000) can be displayed in map.

After purchase of our report, you will be automatically granted to enjoy 2 weeks trial service of RICDB for free.

After trial, you can decide to become our formal member or not. We will try our best to meet your demand. For more information, please find at www.researchinchina.com

For any problems, please contact our service team at: