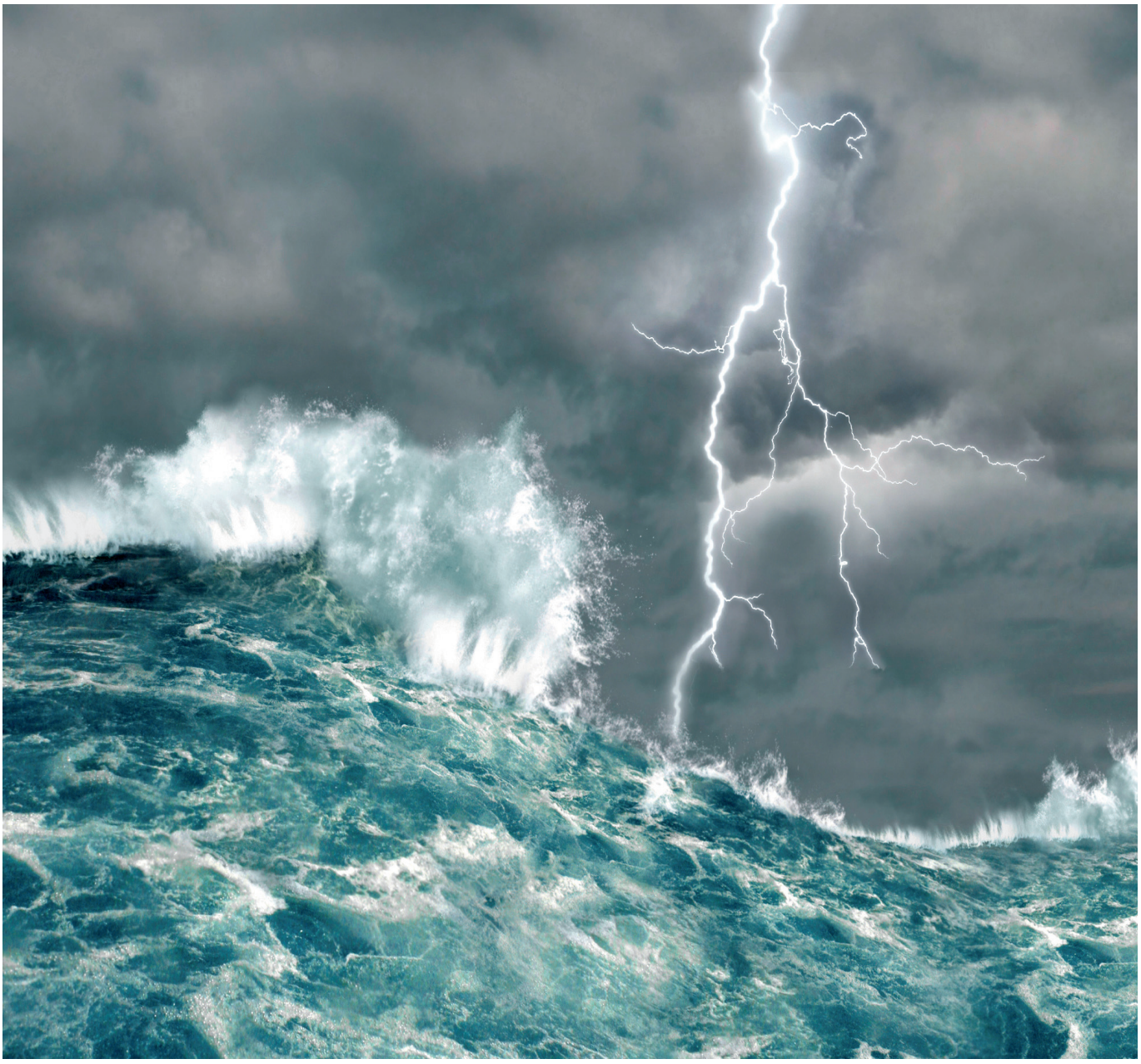
Forward Technology Co., Ltd. | 610021 Chengdu | China

Reliable under harshest climatic conditions

Chinese wind turbines with Bachmann technology



bachmann.

For three years now, Bachmann electronic has been represented with its own subsidiary in Shanghai (China) and a second office in Beijing. One of the first Chinese companies to use Bachmann technology was Forward Technology Co., Ltd. The high reliability of the M1 automation system under at times extremely harsh climatic conditions was argument enough for the high-tech company, which now integrates complete controller systems for Chinese wind power plant builders.

▲ "Together we are driving forward the development of renewable energies.« David Zhang, owner and CEO of Forward Technology

Forward Technology Co., Ltd. has its head-quarters in Chengdu, the provincial capital of Sichuan. Forward develops, produces, installs and maintains control systems and electrical installations for wind power plants, primarily for large systems with a power output of more than one megawatt. With around 150 employees, every year the company supplies the complete control cabinets for more than 1500 turbine controller systems and 500 pitch control systems - and all of these are based on the Bachmann M1 system.

Passed the acid test

"When Forward evaluated various manufacturers of automation systems in 2007, our M1 system was simply installed straight into a wind turbine in Mongolia", remembers Reiner Waffenschmidt, who is the General Manager of the Bachmann subsidiary in Shanghai. At -25°C the Dongfang Electric Corporation, one of the biggest power plant builders in China and a customer of Forward, took its wind turbine into operation and tested the controller system under the harshest possible conditions. "The reliability and availability of the M1 system convinced Forward Technology and Dongfang in equal measure", Reiner Waffenschmidt describes the start of a strategic partnership with one of the leading Chinese system integrators for wind power plant controller systems.

Far-reaching partnership

The partnership between Forward Technology and Bachmann electronic is far-reaching: together, the two companies develop basic technology and refine the aspects of efficient system integration for wind turbines. "We offer our customers complete solutions, support them with integration into their plant and thus deliver real added value", says David Zhang, owner and CEO of Forward Technology. The openness and performance of the M1 system is a key contributing factor in these efforts. "In this way we can cater for the individual needs of our customers and are able to design and build wind turbine controller systems which are tailor-made in terms of functionality and cost-effectiveness", explains David Zhang further.

▲ **Made to measure:**
Wind turbine control systems from Forward with Bachmann technology.

Safe remote access

If required, the company can also take care of the maintenance and servicing of the installed wind power systems. Consequently Michael Gao, Head Engineer at Forward, really values the comprehensive networking options offered by the M1 system: "It is very easy to set up SSL-protected connections via the Internet to the M1 controllers, which then allows us for example to query parameters which are relevant to the maintenance of the wind power plant." For this purpose Forward supplies its own, highly functional SCADA system for monitoring, controlling and data acquisition from the plants. This allows operators to evaluate the operating data of individual wind turbines or of a complete wind farm at any time.

A vital contribution

According to the mission statement of Forward Technology, the company is "driving forward the development of renewable energies, helping to provide technological advances and supplying first-class products and services". As David Zhang is happy to confirm, "the cooperation with Bachmann electronic is making a vital contribution to this". At the same time, he is also already looking to the next steps in the near future: the company is set to widen its range by adding the Bachmann safety controller system, a comprehensive condition monitoring system and - last but not least - the use of the Bachmann coldclimate modules for the most climatically challenging regions in the western and northern parts of China. ■