

# CEMENTING A TRIUMPH IN INDUSTRY

As a leading market player, Nanjing Triumph Cement Technology Engineering Co. has pioneered the construction of cement production plants through innovative research and technical expertise. Director of Overseas department, Mr Xu Yucheng, describes to Simon Davies the remarkable development of the business.



**Nanjing Triumph** was established in December 2001 as a subsidiary of China Building Material Group. The company specialises in the construction and technological research and development of cement plants, engineering design and technical service.

"The company has carried out the construction of cement production lines, micro slag powder production lines and cement grinding stations," explains Mr Xu. "In addition, we have expanded our business to the related areas of cement plant construction, energy conservation and environmental protection projects. Nanjing Triumph has established a strong presence in the market and has become an efficient team in the building material, engineering and con-

struction industry. We enjoy very high levels of prestige in the cement industry all over the world.

"We have carried out more than 30 projects of pure waste heat generation from cement production lines, more than 10 steel structure design and construction projects and more than 80 cement plant construction projects. In recent years, we have been awarded a National Excellent Engineering Design Prize and 24 provincial prizes, of which nine were first prizes."

#### **A complete service**

Nanjing Triumph is able to offer a vast range of services to its clients and, with a National Grade A Engineering Design Certificate and Overseas Project

Contracting and Operating Certification, the company can guarantee its competence in each area.

"We are able to undertake market research, to bring in foreign capital and expertise, to help with the choice of locations for mines, plants and feasibility studies," details Mr Xu. "We can also do the design of cement plants and quarries, including special construction design for the prevention and cure of environmental pollution.

"We can get involved in equipment purchasing, building scrutiny, pre-production debugging and plant supervision. We can also train workers in the operation of the plant once it is finished. Other services we provide include research into and exploita-

tion of new technology, new processes and new materials, the design of special equipment for cement and the exportation of cement technology and equipment."

An innovative approach to energy efficiency offered by the company is the construction of waste heat recovery power plants. These facilities use the waste heat generated on the cement production lines to boil water, which is then used to generate electricity.

With lots of domestic projects undertaken, Mr Xu outlines the company's activities in markets outside China: "Nanjing Triumph has worked hard to gain a foothold in Vietnam, Turkey, Saudi Arabia and Iran. We enjoy a very good reputation in the cement industry all over the world.

"Since we entered the cement industry, our company has undertaken about 10 EP or EPC projects in the overseas market, with a capacity of more than 5000 t/d. For example, Akcansa project in Turkey one of Heidelberg Group German – we constructed a CNK-Line 2, with a capacity of 6000 t/d. "In Saudi Arabia, we were involved in an EPC project in Al-Jouf, with a capacity of 5000 t/d, financed by Saudi

Arabia Royal. We also account for a large share of the market in Vietnam, with a 6000 t/d project in Nghi Son, financed by the Japan Pacific Ocean Cement Company and a 2500 t/d project in Yen Binh."

#### **Technical superiority**

One of the main emphases of the company is technical research and development. "Innovation is the eternal theme of our company," explains Mr Xu. "We have devoted ourselves to research cement production process techniques and process control systems, new cement technologies and automatic control software. To some extent, we are a leader in technology innovation in the cement industry.

"Our technology centre focuses on the development, research and design of new technology, new processes, process control systems and software for the cement industry. The centre houses more than 30 technicians and nine senior engineers, two of whom are professor senior engineers, and it is equipped with internationally and domestically advanced research and test facilities," he continues.

"We have experts in cement, machinery, electrical automation, computers and other professions working for us, qualified with doctorates, master's degrees and double bachelor degrees. All of our mainstays come from the National Cement Design and Research Institute and have over 20 years' experience in cement project design and technical development. They have won state-level and province-level scientific and technological progress awards many times."

This high quality team of experts has made many important advances in cement production technology, as Mr Xu outlines: "Brilliant achievements have been gained in the research of the burning system of large-scale cement production. Advances in almost all stages of the cement production have been successfully applied to the 1300-6000 t/d equipment and the company has begun to develop the burning process and equipment for a 12,000 t/d cement production line, which will be the largest in the world."

Some examples of technology developed by the Nanjing Triumph team include the precalciner system, DCS configuration and applied software, a high efficiency



reciprocating grate cooler and a burning cement clinker which takes anthracite and petcoke as fuel. The team has also developed a multichannel burner system, a vertical mill system, steel pipe concrete, and pre-stressed concrete.

New patent-technologies that have emerged from the Nanjing Triumph technology centre include key equipment in the



burner system, a two-swirl multi-channel burner, an anti-accumulation device for the cooler fixed bed and a combined de-duster.

**The importance of teamwork and quality**

While the technological advances have been a foundation of the company's growth, Mr Xu points to the quality of staff as another key to the success of the company. "Nanjing Triumph has more than 400 design, technology, research and development, and management staff, working in a modern office building of approximately 20,000 square metres. There are more than 50 engineers holding the registered qualification certification, more than 10 professor senior engineers and more than 40 with a Master's degree."

With a concern for the welfare and development of the workforce across the company, Mr Xu explains the clear strategy in employee care: "The company follows the management strategy: 'Putting People First and Teamwork' to continuously strengthen the harmony within the enterprise," he explains. "Our aim is to build a strong, battle-effective team characterised by mutual respect, responsibility, ideals and

passion. The company has gathered several dozen talented people with abundant design experience in the large-scale new-type dry method cement plant, to form an efficient team in the Chinese cement engineering and construction industry."

Another important strength in the company is a commitment to quality, as Mr Xu explains: "Quality is the life of our enterprise. Nanjing Triumph works to the tenet of 'customer value-oriented service' at all times and offers meticulous service in order to maintain high levels of customer satisfaction. We follow the ISO 9001 international quality system and have strict controls on the quality of design and service to ensure all our completed products are of perfect quality and to maintain 100 percent customer satisfaction."

**Superior technology to ride out the storm**

Mr Xu acknowledges that, although the cement industry in China is still maintaining a good level of growth, the global economic crisis has definitely affected business in the wider global markets. "In the overseas markets, many new cement lines originally due to be put into construction have now been

disrupted due to shortage of funding," he admits. "This has affected us a lot, so we have come up with a series of measures to cope during this hard time.

"Firstly, we will put more emphasis on risk analysis of potential projects in order to maintain a stable development. During the financial crisis, there are many uncertainty factors in the overseas markets, so we must keep a clear mind in making an overall survey of any future projects.

"Then, we will make good use of our technological superiority and talent advantage," he continues. "This will enhance our development of technology used for the cement plant design and construction and enable us to stay ahead of the competition. Through technology innovation, we can expand our business to related areas of cement plant production and energy conservation and environmental protection projects."

The company is also implementing other initiatives in the eternal quest to remain competitive and improve the business. "We have recently invested in our staff management systems," reports Mr Xu, "as well as safety training courses and other activities to encourage our staff's spirit and enthu-

siasm. We are also attempting to cooperate with our competitors, in order to optimize the market resources and develop a win-win strategy."

In an attempt to improve the quality of future projects, the company has also begun a programme of visits to cement plants which were designed by the company. This gives the engineers a chance to see the plants in operation, to provide technological assistance and to identify areas which require further attention in the future.

**Preparing for the future**

Nanjing Triumph is a dynamic company with a positive outlook to the future. Mr Xu enthusiastically describes the attitude to possible expansion into new markets: "We are always ready to enter new markets. Based on our rich experience in cement plant construction – both at home and abroad – we are dramatically raising our profile in the international markets.

"Then, before we enter a new market," he continues, "we will make a thorough investigation and make an accurate evaluation of the potential risks and future prospects. The

most critical thing is that we put quality first. We will also seek to work together with a local company which is familiar with the local situation. One of our strategies is to cooperate with an international engineering company to achieve more of a share of the global markets."

Mr Xu sees a bright future for the company, as it confronts the future with innovative technology and solid experience: "Though the global financial crisis has caused problems to the worldwide cement industry, we are still very positive that we face a bright future. Based on our rich experiences, combined with our new technology, we will continue to provide a good service to our customers. We will make innovations in all aspects of our company, to keep up with the international trends and will continue to build more and more modern cement plants in the future."

With such a strong foundation in research and development combined with high levels of expertise in the construction of ground-breaking cement production facilities, Nanjing Triumph can expect to remain on the leading edge of the cement technology industry for years to come. □