

# Baosteel prioritizes environment in designs

Complex plans include both world and country firsts

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Baosteel Group, the largest steel-maker in China, plans to make breakthroughs in energy saving and environmental protection at its new complex in Zhanjiang, Guangdong province, which is scheduled to go into operation in September.

One system will remove both sulfur dioxide and nitrogen oxides from coke oven gas to meet the national emissions standards issued last year, said Gao Yuan, director of the energy and environmental protection department of Baosteel Zhanjiang Steel.

A world first, the system was developed by a domestic institute and had its pilot testing in November.

In addition, in the sintering process, facilities using activated carbon, the first of their kind in China, remove heavy metals, dioxin, sulfur dioxide and nitrogen oxides in the gas, Gao said.

The coke oven and sintering process consume up to 60 percent of the energy used at the complex, which is located on Donghai Island in Zhanjiang and designed to produce 8.75 million metric tons of steel annually.

Energy equivalent to 609 kilograms of coal is needed at the site to produce each ton of steel, more than 95 percent of which is supplied by coal.

“We are employing all the energy-saving technologies available to reach an internationally outstanding level. The key lies in energy management to make full use of the facilities and strengthen the energy-saving awareness of all our employees,” Gao said.

Other energy-saving efforts include solar power for residential areas of the complex, thermal power at a stadium and the recycling of gas from blast furnaces, coke ovens and converters.

The investment for energy-saving and environmental protection facilities at the mill in Zhanjiang totals 6.22 billion yuan (\$1 billion) and accounts for more than 12 percent of the total investment for the complex, with 116 items of related technologies employed.

An extra 300 million yuan has been earmarked to comply with the air pollution control action plan of Guangdong for the period between 2014 and 2017, which was issued last year and requires the complex to meet the strictest standards in the country.

The operating costs for environmental purposes are estimated to be 100 yuan per ton of steel produced.

“Production capacity does not make the future of China’s iron and steel industry, but product categories and structure, and environmental friendliness,” said Zhou Shichun, deputy general manager of Baosteel Zhanjiang.

“Companies capable of growing together with nature and the ecological system make the future. Baosteel Zhanjiang is such a company and we are confident of building it into the best in this industry.”



Baosteel Group, the largest steelmaker in China, vows to make breakthroughs in energy saving and environmental protection at its new complex in Zhanjiang, Guangdong province.



The local government encourages residents to use bicycles to protect the environment. PHOTOS PROVIDED TO CHINA DAILY

## Facts and figures for Baosteel Zhanjiang

- The project plans to phase out obsolete capacity in Guangdong province.
- The company produces mainly middle to high-end products used to manufacture automobiles, home appliances and machinery.
- Baosteel Zhanjiang targets South China and Southeast Asian markets. The demand for steel in the Pearl River Delta area of Guangdong is expected to expand and a steel mill is needed to meet the demand in South China.
- Transport costs take up an increasing share of total costs amid intensifying competition in the steel industry. The iron ore used by Baosteel Zhanjiang comes from Australia and Brazil. The deep-water port in Zhanjiang helps cut the logistics distance by 1,000 km for both raw materials and finished products.
- For every 1 yuan invested by Baosteel Zhanjiang in the city, at least 15 yuan is expected to go to related sectors including equipment maintenance, material supplies and port-related services. The accommodation, catering and tourism sectors are also expected to benefit.
- The complex is designed to lead China’s steel industry in minimizing pollutant discharge per ton of steel produced, and maximizing environmental investment per ton of steel, recycling efficiency, real-time environmental monitoring facilities and clean production standards.

Rainwater collected at the mill, water from Jianjiang River and desalinated sea water make up roughly equal shares of the water used in production, with nearly 98 percent of the water recycled after use.

Wastewater from the coking process will be treated at an artificial wetland and reused, in a process that is also the first of its kind in the

country, and some treated water will be discharged deep at sea, Gao said.

The sludge from water treatment can be used for making bricks or in the sintering process, with any iron it contains also recycled.

The slag from production, after the iron is recovered, can be used to produce cement and other building materials.

All solid waste will be primarily processed or made into products before being shipped elsewhere for further processing.

Containers of powdered materials and coal and the conveyor used for transporting materials are enclosed and storage places are equipped with screens to control dust.

A national environmental moni-

## Massive project provides many jobs

Wu Dadeng has been closely following the building of the first blast furnace at Baosteel’s complex on Donghai Island.

The villager from Houhu on the island plans to be fully prepared for the scheduled operation of the facility in September, when he will be monitoring the operation of the blast furnace on a computer screen.

Having majored in iron and steel metallurgy at the Jiangxi University of Science and Technology, Wu spent almost one year training at Baosteel’s headquarters in Shanghai before transferring to his hometown.

“I’m happy that I can work at Baosteel, which is one of the world’s top 500 companies and a leading iron and steel company, and at the same time care for my parents,” Wu said.

“The income here is competitive in Zhanjiang,” he said, adding he was preparing to buy an apartment in buildings Baosteel is developing in Haidong New District, close to the newly built Olympic Center.

Wu’s parents, who still live in the village, relied on fishing for the family’s livelihood and hoped their four children could secure better jobs, Wu said.

Wu’s older sister ended her education after junior high school because of financial difficulties but her three siblings all attended university.

“Many of my primary



Wu Dadeng

school, middle school and university classmates have asked me whether there are job opportunities for them at Baosteel in Zhanjiang. More than a dozen of them have joined the project. Some have returned from their jobs in the Pearl River Delta to work and be close to their hometown,” he said.

Two of Wu’s cousins also work at the complex.

Baosteel’s Zhanjiang project has a projected workforce of more than 4,000 people with 1,100 from the city. Related subsidiaries and supporting companies employ another 4,000, the majority of whom are locals, said Xia Zhengda, director of the corporate culture department.

“We are devoted to the integration of the modern industrial civilization and local culture,” Xia said.

LI WENFANG

toring station has been installed at the complex, as well as three stations set up by the Zhanjiang city government and three others provided by Baosteel, with real-time data from the monitors transmitted to environmental watchdogs.

Baosteel also plans to share energy resources and materials with the gigantic Sino-Kuwaiti petrochemical project planned only 500 meters away on the island, and jointly use transport channels to maximize environmental efficiency.

# Economic and trade office promotes merits of Zhanjiang in Germany

By EMMA GONZALEZ  
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Zhanjiang, a city in the southwest of Guangdong province, is an example of China’s coastal cities that are becoming increasingly more important in the general economic development of the country.

Helped by the growing emphasis on international trade at such ports, Zhanjiang has been experiencing rapid economic growth thanks to the expansion of its industrial deep-water port.

As part of its plans to strengthen overseas investment and promote commercial opportunities with foreign countries, Zhanjiang opened an economic and trade office in Germany in June 2014.

The office, which was established during the visit of Mayor Wang Zhongbing to Germany in June 2014, only started formal operations in April of this year.

Located in the city of Karlsruhe, in southwest Germany, the office is close to the federal states of Bavaria, Hessen and North Rhine Westphalia, where most German heavy

industry is located.

Tobias Urban is the main representative of the office and also acts as the chief representative for Zhanjiang in Europe.

Urban’s previous experience working for the German Chamber of Industry and Commerce in Vietnam and at the economic development agency of the German city of Solingen has helped him develop a crucial understanding of trade relations between Asia and Europe.

The office only recently started operations, so has mainly focused thus far on analyzing market opportunities available between the two countries, creating a strategy for investment promotion and preparing marketing materials.

“Currently, the main task of the office is location marketing and investment and trade promotion for Zhanjiang in Germany,” Urban said. “In addition, we are building up a network of business associations.”

Looking ahead, the trade representative said, efforts would be concentrated on making Zhanjiang a priority destination for investment



**Zhanjiang offers German companies a prosperity market with high growth — above the average of China. Companies from Germany are able to benefit from those ‘catch-up effects.’**

**Tobias Urban**, the main representative of the Zhanjiang economic and trade office in Germany

from German companies as well as helping companies from Zhanjiang gain market access to Germany.

The main problem Zhanjiang fac-

es is that the city is still unknown to most companies in Germany, Urban said. Therefore, a crucial task for the office is to promote the city and new opportunities by supporting business delegations from and to Zhanjiang.

Urban said the decision to set up an office in Germany was determined by the fact the European country is a market leader in circular economy, energy efficiency and renewable resources, with many companies that are strong in those fields. It is also likely the type of collaboration between Zhanjiang and Germany will depend on the demands from projects in these fields.

“Zhanjiang offers German companies a prosperity market with high growth — above the average of China. Companies from Germany are able to benefit from those ‘catch-up effects,’” Urban said.

He said Zhanjiang’s sound infrastructure, lower costs than tier-one cities and a forward-thinking government that takes both economic development and ecological environmental protection into account

are crucial aspects to make it an ideal place for investments.

The city has also been benefiting from a change in the business preferences of European companies, Urban said. While in the past most foreign enterprises focused their investment in large cities such as Beijing and Shanghai and in the Pearl River Delta, smaller cities are now attracting greater interest thanks to lower costs and greater benefits.

“Foreign companies are more and more interested in second- and third-tier cities and the competition among cities in China regarding foreign direct investment is very intense. Our work is to find companies who fit perfectly in the economic framework of Zhanjiang,” Urban said.

Zhanjiang can also serve as a hub for foreign companies not only for the Chinese market but also for the developing markets in Southeast Asia, he said.

The Road and Belt Initiative promoted by the Chinese government that envisions vast international economic cooperation in trade and

transportation is expected to translate into significant improvements in the infrastructure of Zhanjiang and to further connect the city to the outside world.

“The Maritime Silk Road is a golden opportunity for the city to show its potential,” Urban said. “Companies located in Zhanjiang will get access to markets to Southeast Asia, Africa and Europe much more easily, enhancing business opportunities and ultimately strengthening Zhanjiang’s position as a key investment location.”

Personally, Urban said, he is deeply impressed by the city’s rapid economic development. For him, Zhanjiang has a special character that is a combination of the modern and traditional worlds.

The city is undergoing a rapid transformation from being an agriculture-based city to an important industrial hub in southern China. Despite the radical economic transition, Zhanjiang is determined to maintain sustainable development that will allow the city to maintain its blue skies and clean water, he said.