

# Taiyuan Heavy Industry innovates to win sales

Company's locomotive components now meet strictest quality standards in the world, granting it access to every market



By YUAN SHENGGAO

Shanxi's manufacturing industry is experiencing a transformation toward technological advancements, efficiency, smart and environmentally friendly operations, as well as vigorous globalization.

One enterprise representing the trend is the rail transit equipment unit of Taiyuan Heavy Industry Group, located in the city of Taiyuan.

When visiting the company's production plant, visitors will be impressed with the high efficiency of its production processes.

At the plant, the production of a forged steel locomotive wheel, which involves complicated procedures such as cutting, heating, preshaping, pressing, boring and shaping, proceeds at an astonishing speed. The finished product, which started out being cut from a huge cylinder of steel, is completed in just 53 seconds.

Zhang Lei, a technical officer at the rail transit equipment unit, said the plant, which is called No 2 plant by staff members, boasts one of the most advanced production lines in the industry globally.

"The production of train wheels looks as easy as making mooncakes, thanks to the high level of automation," Zhang said. "From cutting to packaging, the entire process has realized full automation."

"Even the loading and transport of raw materials and products are done by robots and unmanned vehicles."

As a train wheel can be produced in less than a minute, the plant can produce about 1,000 wheels a day at



A worker inspects the quality of train wheels produced by the rail transit equipment unit of Taiyuan Heavy Industry. WANG PEI / FOR CHINA DAILY

full capacity.

Zhang, who was a regular worker at No 2 plant 12 years ago, recalled that the company made less than 1,000 wheels a month at that time — a productivity that saw the company lose millions of dollars in the rail equipment sector.

"We began to import production equipment and technologies at that time," Zhang said. "And later we developed our own core technologies, steadily improving our production efficiency and product quality."

The executive said that since the company reached a globally advanced level in production and operations several years ago, it has

seen a substantial increase in orders from both home and abroad.

At present, Taiyuan Heavy Industry's rail transit unit is the only company in China capable of producing a full portfolio of train wheels and components that include wheel axles, wheel hubs and wheel sets.

According to Ren Jinfeng, a sales manager responsible for the Asian region at Taiyuan Heavy Industry, the company's train wheel products are widely used for high-speed and metro trains in China and overseas.

"The metro and high-speed train systems in many Chinese cities, including Taipei, as well as those in South Korea, Turkey and Africa, are using our wheels," Ren said.

He said he has seen the sales networks steadily expand overseas over the past few years.

"We first exported our products to neighboring South Korea and Vietnam, and then Iran, South Africa, Morocco, Egypt, Poland, Austria, New Zealand, Singapore and Malaysia, to just name a few," Ren said.

The company made one of its largest deliveries overseas at the beginning of this year.

Loaded with 50 containers of train wheel axles produced by the company, a freight train bound for Europe departed from Taiyuan on Jan 31.

This was one of its major marketing breakthroughs after it reported a rapid sales increase for 2021.

Despite the challenges of the COVID-19 pandemic, the company's 2021 business revenue and profit grew 48 percent and 89 percent respectively from 2020.

Company executives said the wheel axles sent to Europe represented their highest technological level of production.

Han Yuming, general manager at the rail transit equipment unit of Taiyuan Heavy Industry, said this batch of axles was produced using its latest patented technologies and standards the company proposed on behalf of the industry.

For its efforts in developing these technologies and industrial standards, the research and develop-

ment team for rail transit equipment was awarded the second prize for science and technology progress in Shanxi in 2021.

Han said enhanced R&D is the secret behind the company's rapid and high-quality growth in recent years.

"Our R&D team has been constantly growing, from a dozen people several years ago to more than 50 at present," Han said.

Along with the growth in personnel numbers is the growing innovation capacity of the team's members, according to Han.

"In the past, we made products according to clients' designs," the executive said. "Now we can design advanced and pacesetter products to help to increase added value for customers."

In addition to its own standards, Han said the company's products are produced according to the highest standards in the world.

For instance, the company has been granted the CL65, a globally recognized certificate for raw materials used in wheel axle production. "This allows us to export our train wheels and components to more global destinations," Han said.

A recent development is that the company passed a quality assessment by Deutsche Bahn, the national railway operator of Germany, in 2022.

"As Deutsche Bahn's standard is the strictest in the world, the qualification means we are granted a passport to enter every market globally," Han said.

The innovation system of Taiyuan Heavy Industry's rail transit equipment unit is now composed of a provincial-level technology center, two provincial-level laboratories and four joint labs.

Wu Jia contributed to this story.

## Transport network boosts global reach of province

By YUAN SHENGGAO

Recognizing its role in promoting economic development, the North China province of Shanxi has made great strides in developing its transport network over the past decades, aiming to facilitate people's travel and flow of goods.

Shanxi began to develop a modern transport network in the late Qing Dynasty (1644-1911), starting from building railways.

But it is since the founding of the People's Republic of China in 1949 that Shanxi has developed a comprehensive transport network that covers highways, railways and civil aviation.

The transport industry was given a stronger boost nearly three decades ago, when Shanxi began to build its first expressway in 1993. Today, the province has more than 5,760 kilometers of expressways. And the construction of express-

ways has not stopped here. Several projects, including lines to link cities inside the province and connecting to the rest of the country, are under construction this year and more are planned for the future.

While cities in Shanxi are well connected with highways, expressways and railways, the expansive rural regions are not left behind.

Shanxi's investment in rural roads reached its peak during the 13th Five-Year Plan (2016-20). The province had channeled more than 100 billion yuan (\$14.9 billion) into building 78,400 km of rural roads during the period. As a result, the current rural road network, with a total length of 126,000 km, has put all the villages in Shanxi on wheels.

Shanxi entered the high-speed train era more than a decade ago, when its first high-speed railway to link the Shanxi provincial capital of Taiyuan with Shijiazhuang, the



The bridge over the Yellow River between the Shanxi city of Yuncheng and Sanmenxia in Henan province is a major connectivity project. SUN RONGXIANG / FOR CHINA DAILY

provincial capital of neighboring Hebei, began operations in April 2009. Today, its high-speed railways totaled 1,150 km, connecting all nine large cities in the province.

While the high-speed lines are mainly used for passengers, the bulk of its conventional lines, with a combined length surpassing 5,000 km, are devoted to both passenger and freight transportation.

Shanxi is now also playing a leading role in China's civil aviation. It has the densest air routes of any province in China.

While the province's major cities are linked with 82 destinations in China and overseas with 278 air

routes, intercity air transportation inside Shanxi has seen rapid development over the past three years thanks to the medium and short-distance lines operated by general aviation companies. And the short-haul routes are the major reason for the province's highest air-route density.

Over the past three years, Shanxi General Aviation Group, the leading general aviation operator in Shanxi, for instance, has opened seven short-distance routes linking cities in Shanxi, and two routes to connect to cities in neighboring provinces.

Han Linfang contributed to this story.

## Tourism flourishes after reforestation campaign

By YUAN SHENGGAO

Located at the heart of the Taihang Mountains, Baquan Gorge is a popular attraction that represents the best of this largest mountain range in North China.

In the southeast of Huguang county and some 70 kilometers from the county seat, Baquan Gorge, with a total area of about 24 square kilometers, became a 5A scenic area — the highest-ranking destination rated by the national tourism authority — in 2020.

Baquan, which means eight springs, is so called because of eight springs that formed a torrential stream in the gorge.

With a length of 13 km and a width ranging from 3 to 20 meters, the narrow valley is surrounded by peaks rising up to 1,100 meters from the valley floor.

In addition to dozens of waterfalls and several karst caves, the destination's major attractions also include a reservoir, rising cliffs and dense forests.

The most impressive sight in the area is a huge vertical "cave" called Huxuedongtian — which literally means a kettle-like cave with a narrow section of sky visible. Although the site is called a cave, it is actually the narrowest part of the valley.

Li Yang, a tour guide in the scenic area, said Baquan Gorge is a destination of choice for tourists because of its four-season attractions and diversified landscapes.

"The area has its best to offer tourists across all four seasons, which includes myriad varieties of flowers by the stream in spring, lush forests in summer, colorful leaves in fall and snow-covered mountains in winter."

"As a popular Chinese saying goes, 'the benevolent favor mountains and the wise favor waters', Baquan can offer both to satisfy the diverse needs of tourists," Li said.

In Baquan Gorge, he said, tourists can have both spectacular mountains and beautiful waters to please their eyes and satisfy their aesthetic demands.

However, Baquan Gorge, as well as its vicinities, was not an appealing scenic area some 40 years ago, according to Li.

Four decades ago, Li recalled, the severely arid climate and land degradation left Baquan, as well as the rest Huguang county, barren.

"The landforms were the same as today, but there were rarely trees on mountain ridges and slopes, and the stream was dry for most of the year," Li said. "That environment was unpleasant to locals, and needless to say tourists."

However, since a mass tree planting campaign in 1978, the county of Huguang has witnessed its forest coverage grow from less than 7 percent to 52.6 percent today. And Baquan Gorge and its neighboring areas boast the densest forests in the county.

Growing vegetation coverage has also helped to prevent soil erosion and retain underground water, which leads to a steady increase in the runoff volume of streams and brooks.

"That environmental improvement campaign has eventually turned Baquan into an attractive tourist destination, offering an example of how 'green mountains and clear waters can turn into mountains of gold and silver,'" Li said.

Peng Ke'er contributed to this story.

## High-quality foodstuffs find favor in Hong Kong

By YUAN SHENGGAO

Although they are more than 2,000 kilometers away from Shanxi, many residents in Hong Kong have the feeling that they are close neighbors to the North China province.

Produce from Shanxi, commonly seen on the dinner tables of Hong Kong families, is one of the major reasons.

Nanshan Baishishi'an Agriculture and Husbandry, based in Jiaokou county in the western Shanxi city of Lyuliang, is a supplier of live pigs and pork to Hong Kong. Executives and workers at the company consider it a top priority to offer safe, high-quality products to Hong Kong residents.

The variety of the pigs that the company breeds is called Lyuliang Mountain Pig. The pigs live in an environment featuring scenic valleys covered by dense forests and lush vegetation.

Shi Guodong, general manager of Nanshan Baishishi'an, said the pigs are "organic" because they mostly live on naturally growing feed. The use of hormones, antibiotics and clenbuterol — which increase lean



One of the pig farms of Nanshan Baishishi'an is located in a valley with dense forests. GUO YANJIE / FOR CHINA DAILY

meat — is forbidden. There is also a whole-process monitoring system, ensuring the animals can be traceable from birth.

"Thanks to their quality as organic food, our pigs and pork are favored by Hong Kong consumers," Shi said.

He recalled that the company first launched its products in the Hong Kong market on Sept 21, 2019. "The

first batch of pork was sold out in a single day," Shi said.

Lyujian Agriculture Development, based in the central Shanxi city of Jiexiu, is another food supplier to Hong Kong. Its offering is organic eggs.

"We began to supply eggs to Hong Kong in 2014," said Feng Jiliang, the general manager. "Our sales volume in Hong Kong has increased sub-

stantially over the years, from less than 200 metric tons in the first year to more than 2,000 tons last year."

The executive said the product's popularity in Hong Kong is a result of the company's high standards in production and quality control.

"We have imported advanced equipment from Germany and the Netherlands for raising hens and environmental control," Feng said. "Every egg has an electronic ID, showing production information."

He said Hong Kong is the company's largest market. "We produced 4,500 tons of eggs last year and nearly half were sold to Hong Kong."

Feng noted that Lyujian is one of Shanxi's leading egg suppliers to Hong Kong. Official statistics show that Shanxi supplied 3,141 tons of eggs to Hong Kong in the first half of this year.

In addition to meat and eggs, vegetables and fruit are also Shanxi's staple supplies to Hong Kong.

Vegetables from the county of Xiaxian and apples from the city of Yuncheng have been popular in Hong Kong's market for the past few years.

Guo Yanjie contributed to this story.



Baquan Gorge in Huguang county can be traveled by boat on the reservoir's waterway. PENG KE'ER / FOR CHINA DAILY