



A technician assembles hydraulic equipment at Linde Hydraulics China's factory in the Weifang Hi-Tech Industrial Development Zone. PHOTOS PROVIDED TO CHINA DAILY

# Weichai, Shengrui blaze trail for industry

The two leaders' superior products are setting standards around the world and bringing the manufacturing process and profits home, **Tang Zhihao** reports.

Leading companies in the Weifang Hi-Tech Industrial Development Zone are pushing up technology and product renewal in support of the local manufacturing industry's upgrade and transformation.

Weichai Group, one of the leading diesel engine developers in China, reported 50 billion yuan (\$7.3 billion) in sales in the first quarter of 2017, up 86.4 percent year-on-year. Its net profit increased 126.6 percent compared to the same period last year.

The demand for Weichai's products is so high that clients have to wait for days to get the final products.

"The country's economic situation is steadying and improving, while rules curbing overload trucks get stricter, both helping the market to get warmer," said Zhang Quan, CEO of Weichai Power, a subsidiary of Weichai Group.

The company said product innovation is a key element of its growth.

Zhang said the country's policy change has helped to increase the demand for engines with 500 horsepower in the heavy truck industry. Weichai foresaw the upcoming business opportunities, and developed and reserved such products two years ago.

Li Shaohua, vice-president of Weichai Power, said that the company experienced a drop in sales in 2014 and 2015 due to the economic slowdown, which put pressure on the company to



**Manufacturing enterprises can have a future only if they improve innovation capacity and product quality."**

Li Shaohua, vice-president of Weichai Power

adjust its development and structure.

The company introduced one of the first 13-liter-class engines in China in 2015 and successfully led the Chinese heavy truck industry's increase in power.

At the end of 2016, the company developed engines and components for large mining trucks with China Shenhua Group, a leading State-owned energy company, to expand its product portfolio.

"Manufacturing enterprises can have a future only if they improve innovation capacity and product quality," said Li. "If you don't have the core technologies, then the big part of the profits will be taken away by others."

Weichai is not the only business in the high-tech zone paying attention to product innovation.

Shengrui Transmission Corp, developer of the world's first-ever front-engine, front-drive 8-gear auto transmission (8AT), launched a two-month production upgrade project on April 15. The company will be able to increase annual

production capacity from 150,000 8ATs to 250,000 beginning in June.

Shengrui revealed that a new production line will start construction at the end of this year, effectively expanding the company's annual production capacity to 550,000 units annually.

Shengrui's rapid growth was strongly supported by its innovation capability.

The privately-owned company, transformed from a State-owned diesel engine parts supplier in 2003, started to research and develop the world's first front-engine, front-drive 8AT in 2006.

Li Weiqiang, deputy general manager of Shengrui, recalled that the 4AT was the mainstream product in the domestic market in 2007, when the company started to make samples of the 8AT.

"Very few domestic companies could even produce the 6AT. The market for 8AT was dominated by Japanese and German companies," said Li.

He said many core technologies in the vehicle manufacturing industry, such as electronics, engines, transmissions and integrated con-

trol systems, were controlled by foreign developers.

Shengrui introduced the first 8AT prototype in 2010. It has been able to produce the prototype locally since 2012.

The company has established partnerships with many automotive developers to increase awareness of its 8AT. For instance, the 8AT has been equipped on Landwind-branded vehicles in China.

Shengrui's 8AT won the National Science and Technology Progress Award in January. The award is one of China's top prizes devised by the State Council in recognition of scientific contributions made by both groups and individuals. The company has become the first auto parts supplier to obtain such an award in China since 1949, when the People's Republic of China was established.

Shengrui's automotive transmission industrial park, which started construction in May last year, will soon be completed.

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## High-tech zone sees significant growth in first quarter of 2017

Various economic indices in the zone report growth in the first quarter



The GDP of the zone reached 8.64 billion yuan (\$1.25 billion) by the end of March, an increase of 11.8 percent year-on-year, topping all districts in Weifang. Primary industries, secondary industries and tertiary industries contributed 0.02 percent, 49.40 percent and 40.58 percent to overall GDP, respectively, compared to 0.06 percent, 56.77 percent and 43.17 percent in the first quarter of last year.

Growth in the industrial sector and the equipment manufacturing industry



The industrial output value of large-scale industrial businesses reached 21.17 billion yuan in Q1, an increase of 21.5 percent year-on-year. High-tech industrial output value was 15.21 billion yuan, up 33.2 percent year-on-year. The equipment manufacturing industry's output value increased 48.3 percent year-on-year to 11.51 billion yuan.

Fast growth in the service industry and in market sales



Large-scale service businesses in the zone reported 1 billion yuan in income in Q1, an increase of 18.6 percent from the same period of 2016. The growth rate is 14.3 percentage points higher than it was in Q1 of 2016. Total retail sales of consumer goods in the region reached 9.67 billion yuan, a year-on-year increase of 9.4 percent.

Increase in fixed assets investment and sales of commercial buildings



Fixed assets investment totaled 4.35 billion yuan in Q1, an increase of 11.5 percent year-on-year. Investment in infrastructure reached 247 million yuan, a rise of 46.2 percent. Real estate investment increased by 224.2 percent year-on-year to 912 million yuan. A total of 109,200 square meters of commercial property was sold in Q1, up 81.9 percent.

Steady growth in fiscal budget and rapid increase in tax income



The zone realized public budget income of 1.08 billion yuan, for growth of 5.3 percent year-on-year. The tax income of the zone increased 21.2 percent year-on-year to 1 billion yuan. Public budget expenses rose 18.7 percent to 442 million yuan, 8.9 percentage points higher than the city's average.

Fast growth in export and import, rise in materialized foreign investment



The zone realized a total import and export volume of 6.26 billion yuan, a year-on-year increase of 23 percent. That ranks No 2 in the city. The import volume in Q1 was 4.94 billion yuan, up 29.5 percent year-on-year. Export volume totaled 1.32 billion yuan, an increase of 3.5 percent year-on-year.



Staff members of Shengrui Transmission Corp work to upgrade the company's production capacity for its 8-gear auto transmission.

## Biotech company's R&D vital to expansion

By TANG ZHIHAO

Shandong Bestcare Biotechnology, a company specializing in immune protein in the Weifang Hi-Tech Industrial Development Zone, meets new market trends head-on thanks to its research and innovation capabilities.

The company, established in 2010, focuses on developing immune protein for animals such as sea cucumbers, foxes and fish.

Liu Jinlong, general manager of Bestcare, said that research and development costs will equate to 10 percent of the company's net profit annually in the next few years. The ratio stood at 30 percent during the company's initial stages.

Liu, born in 1962, entered the biotechnology industry in 2008 and launched Bestcare in 2010.

The company has been engaged in immune protein development since its establishment. It was one of the few companies engaged in immune protein development in China at that time, according to Liu.

He said it was very difficult to promote this technology in 2010. However, the positive outcomes resulting from his innovative products supported the company's growth.

"Many aquaculture businesses refused to use my products even though I agreed to supply them immune protein for free," Liu said.

He planned to partner with a listed company to test his products in the initial stages. However, the partnership did not go as smoothly as he expected.

"The company's technology consultants and experts gave a warranty to my products, but the general manager refused to test the new products in their aquaculture farms," Liu said. "You can see how difficult the processes were."

The company's management finally agreed to test Liu's products on a very small number of sea cucumbers in its aquaculture farm. Liu agreed to provide the products for free.

The results surprised the company's decision-makers. The output of sea cucumbers fed with the immune protein was 30 percent higher than the ordinary sea cucumbers.

The company has now become one of Bestcare's key partners, Liu said.

So far, the company has three world-class scientists and 84 doctorate students to support its R&D work. Liu said Bestcare has been able to register national-level patents in China every year.

The company will be building a new R&D facility at its production base soon. "I have to invest continuously in innovation to maintain a leading role in the market," Liu said.

He plans to add more production lines and expand production capacity in order to lower the company's manufacturing costs in the upcoming years.

Liu Yinghong contributed to this story.



Liu Jinlong, general manager of Bestcare, conducts an experiment on immune protein at the company's laboratory.

# Foton smart systems improve production efficiency

By TANG ZHIHAO

Foton Shandong Multi-function Plant in the Weifang Hi-Tech Industrial Development Zone is promoting smart technologies in production processes and is strengthening its quality management approach in order to support its long-term growth.

Smart technologies have been used in processes such as painting, welding and gluing at Foton Motor's Weifang plant over the past two years, according to the company.

These smart technologies have helped Foton to reduce production costs by 41.83 million yuan (\$6.14 million) in 2015 and 2016. The number

of employees on Foton's production lines dropped from 2,433 in 2015 to 2,281 in 2016.

The employees who left their positions were retrained and acquired new skills to support the company's growth in other job positions, according to the company.

Li Yongjun, an employee who once worked in Foton's assembly workshop, said that smart technologies can accurately sort and assemble vehicle parts and effectively reduce the risk of human error.

"We can make production plans more efficient and allocate manpower more accurately with smart systems," said Qu Junqi, a department manager of Foton's Weifang

plant. "The overall interruption time has been reduced by 80 percent."

Xie Xianjun, a division head in the painting department, said that the smart systems help Foton to improve production efficiency and reduce overtime work.

Foton produces more than 200 vehicles per day. In previous years, Xie and his team had to work overtime everyday to complete daily tasks.

Foton installed painting robots in 2015. The robots have not only helped to significantly reduce the rate of occupational hazards, but also helped the company to increase average net profits per capita by 10 percent.

"We can finish our work on

time with the new technologies," said Xie.

### Focus On Quality

Foton has trained a skillful quality inspection team to maintain its quality standards.

Guan Zhiyong, who is in charge of six quality control teams at Foton's Weifang plant, has made a name for himself thanks to his outstanding quality inspection skills.

He can accurately judge whether a newly assembled vehicle has quality problems within five minutes despite a very noisy working environment.

Foton's efforts in quality management have paid off. All its products work well

**41.83m yuan**

Foton has saved in production costs in 2015 and 2016 thanks to smart technologies

under extreme natural conditions, such as extremely high temperatures and elevations. Vehicles' corrosion-resistant coatings can effectively stand sea transportation.

Foton's Weifang plant was selected as one of the official vehicle suppliers for the parade marking the 70th anniversary of the end of World War II and the War of Resistance Against

Japanese Aggression (1937-45) on Sept 3, 2015.

Qu and another 18 technical experts from the plant were asked to go to Beijing to examine and enhance the performance of 18 Torano-branded vans in August 2015. The vehicles were used to serve international leaders.

Looking ahead, Foton will continue to promote quality enhancement and smart production. It will also seek business opportunities online. The company has developed a Shandong internet automotive development base to support its internet-based vehicle development.

Liu Jing contributed to this story.

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