CHINESE MACHINE TOOL MARKET - WEEKLY BULLETIN

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Desk ICE-UCIMU in CHINA

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Yantai holds 3D printing conference

The First International 3D Printing Industry Conference was held in Yantai on Dec 25.

About 200 industrial insiders gathered in Yantai to discuss the changes brought about by 3D printing in the manufacturing sector. Some of the attendees also showcased their 3D-printed products such as sports shoes and toys.

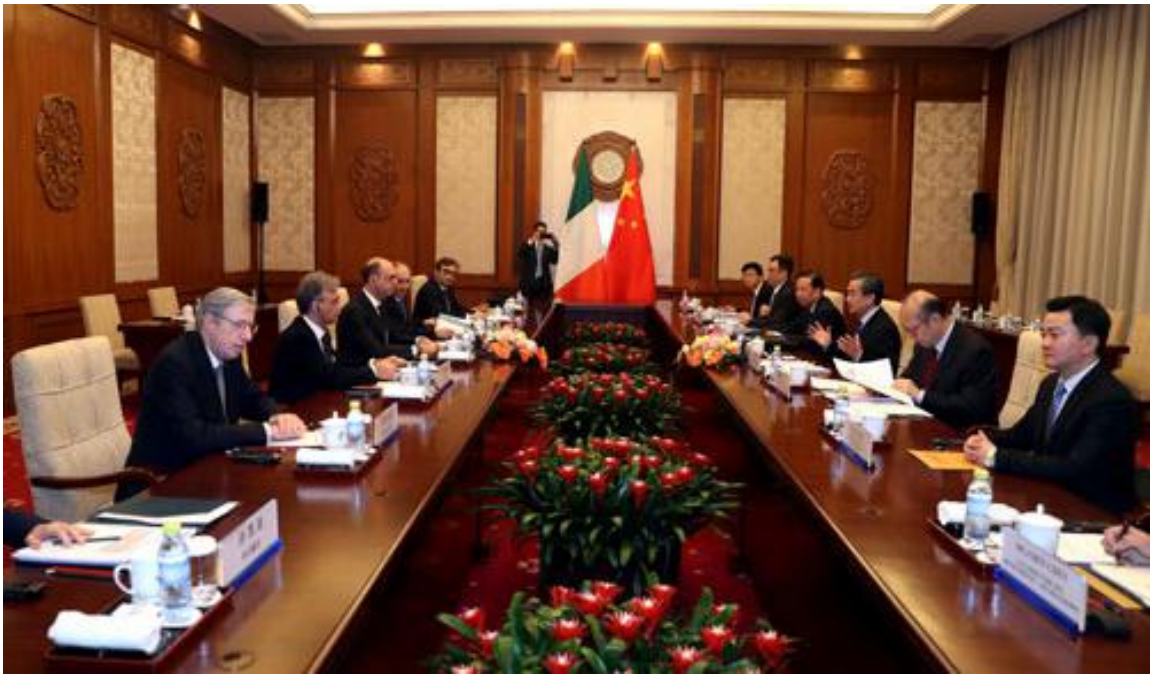
Several industrial experts delivered keynote speeches during the conference, which looked back at the current development of the 3D printing sector and set out the direction of future development.

Xu Jing, an expert from the Intelligent Manufacturing Institute under the Ministry of Industry and Information Technology (MIIT), stresses that talents hold the key to the development of intelligent manufacturing. It's important to conduct cooperation between schools and enterprises to cultivate trained personnel to fuel the development of 3D printing, Xu said.

At the conference, Shandong Sandi Shikong 3D Technology, a local based company specializing in 3D printing, was recognized as the Additional Material Manufacturing Talent Training Demonstration Base by the talent exchange center of the MIIT.

Yantai has set the goal of building itself into a competitive manufacturing city, which provides favorable environment for the development of 3D printing sector. The founding of the demonstration base can help provide more brains in the sector.

China, Italy to cooperate more on Belt and Road



China and Italy agreed to boost cooperation within the framework of the Belt and Road Initiative on December 17th, 2017.

The consensus was reached during talks between Chinese State Councilor Yang Jiechi and Italian Foreign Minister Angelino Alfano who is on an official visit to China.

Briefing Alfano on the 19th National Congress of the Communist Party of China (CPC), Yang hailed the traditional friendship between the two countries and good development momentum of bilateral ties.

Yang called on the two sides to maintain high level exchanges and contact between various departments, deepen pragmatic cooperation on the Belt and Road Initiative, and push forward people-to-people exchanges for higher level China-Italy and China-Europe comprehensive strategic partnerships.

Expressing his congratulations on the success of the 19th National Congress of the CPC, Alfano said his country places great importance on developing ties with China.

Italy will play an active role in the construction of the Belt and Road to intensify bilateral ties, the Italian foreign minister stressed.

Industrial growth fastest since 2010

China's industrial output is expected to rise by around 6.5 percent in the year of 2017, marking the best performance since 2010, as the Made in China 2025 strategy helps to boost productivity and revenue growth.

The increase is 0.5 percentage points higher than the targeted growth, partly driven by strong efforts to boost the use of new technology at traditional enterprises, Miao Wei, minister of industry and information technology (MIIT), said on December 25th.

"The country's industrial economy has maintained steady and sound growth thanks to the implementation of the Made in China 2025 strategy. It effectively promoted the integration of manufacturing and new technologies such as the internet, big data and cloud computing," Miao added.

The ministry also predicted that the country's industrial output is likely to grow by around 6 percent next year, with revenue from the telecommunications, internet, and software and information technology service sectors increasing by 50 percent, 30 percent and 13 percent, respectively.

In 2017, China has met the goal of reducing steel capacity by more than 50 million metric tons, and cutting overproduction in other industries such as cement, as the country deepens industrial restructuring.

According to Miao, the country will also publish guidelines on promoting the development of digital economy. Official data show that the country's digital economy amounted to 22.58 trillion yuan ($3.43 trillion) last year, ranking second globally and accounting for around 30 percent of national GDP.

Big industrial firms see strong profit growth

China's major industrial firms saw strong profit growth and a decreasing debt ratio in 2017, amid an improving economy, deepening reform, and the government's ongoing deleveraging efforts.

During the first 10 months of the year, total profits of industrial enterprises with annual revenue of more than 20 million yuan ($3 million) amounted to 6.25 trillion yuan, a 23.3 percent increase year-on-year, according to the National Bureau of Statistics.

In October alone, profits of major industrial firms rose 25.1 percent year-on-year, slowing from 27.7 percent in September, which was the strongest growth since 2011.

By the end of October, their debt-to-asset ratio dropped to 55.7 percent, 0.5 percentage point lower than a year ago.

Among the 41 industries surveyed, 38 posted year-on-year profit growth during the first 10 months, with industries such as coal, steel, chemicals and petroleum recording strong performance.

The profit growth was due to ongoing supply-side structural reform, which is focused on increasing high-tech production while reducing low-end capacity, said Li Jin, chief researcher at the China Enterprise Research Institute.

Li Yining, a leading economist at Peking University, said that the reform needed to be implemented to avoid path dependence, which had occurred in many developing countries and kept them stuck in poverty.

In 2016, China cut coal capacity by more than 290 million metric tons. This year's target was 150 million tons, which was accomplished in October, according to the NBS.

In the first three quarters of 2017, 90 major coal enterprises, which account for around 70 percent of the country's total coal output, recorded total prof-it of 104.1 billion yuan, with the top 10 coal enterprises' profit amounting to 83.3 billion yuan, according to the China National Coal Association.

Major steel companies' profit margins stood at 4.41 percent during the first 10 months this year, according to the China Iron and Steel Industry Association. China Baowu Steel Group, the nation's largest steelmaker, reported a 66.6 percent increase in net profit to 14.56 billion yuan in the first 10 months of 2017 on high steel prices. Its revenue was up by 55.4 percent year-on-year to 388.8 billion yuan during the same period, showing the benefits of integration and the deepening of State-owned-enterprise reform.

China's manufacturing activity expands slower in December

China's manufacturing sector expanded at a slower pace in December, official data showed on December 31 2017.

The country's manufacturing purchasing managers' index (PMI) came in at 51.6 in December, decelerating from 51.8 in November, according to the National Bureau of Statistics (NBS).

A reading above 50 indicates expansion, while a reading below reflects contraction.

The index in December is on par with the annual average, still pointing to a strong resilience in China's growth, according to NBS senior statistician Zhao Qinghe.

Sub-indices for production and new orders came in at 54 and 53.4, respectively, down from 54.3 and 53.6 last month, but well above the boom-bust line of 50.

However, the sub-index of raw material inventory stood at 48 in December, down 0.4 percentage points from last month, indicating continuously decreasing raw material inventory in the manufacturing sector.

The sector employed less people as the sub-index of employment dropped 0.3 percentage points month on month to 48.5 in December.

Meanwhile, the sub-index of supplier deliveries declined 0.2 percentage points month on month to 49.3, showing a slower delivery by raw material suppliers.

Despite an overall slower expansion, the country's manufacturing PMI has been in positive territory for 17 months in a row.

More supply-side reform on agenda

China will take more concrete steps to further its supply-side structural reform and push for high-quality development in 2018, focusing on cutting overcapacity and fostering new growth drivers in the real economy, said officials and analysts.

"The country will establish development funds to further the Made in China 2025 strategy and direct more private capital into the real economy, in order to better finance important manufacturing projects," said Miao Wei, minister of industry and information technology, at the ministry's annual conference, without elaborating on the size of the funds.

According to Miao, China will establish three new national innovation centers in 2018, and aims to tackle 50 bottlenecks that impede industrial development such as high-performance batteries for electric vehicles.

China established three centers in 2017 to promote R&D of optoelectronic information technology, printed flexible display screen and robotics, said Qu Xianming, an expert with the National Manufacturing Strategy Advisory Committee.

Supply-side structural reform will continue to be the main theme of China's economic work in this year, said Yang Weimin, deputy head of the Office of the Central Leading Group on Financial and Economic Affairs during the annual conference of the China Center for International Economic Exchanges.

"The country will focus on shutting down debt-ridden, loss-making zombie enterprises and reducing overcapacity through market-based and legal methods this year," Yang said.

Great headway has been made in cutting overcapacity, reducing the number of unsold homes, curbing debt levels, lowering business costs and dealing with weak links in 2017, said Ning Jizhe, head of the National Bureau of Statistics at the CCIIE's annual conference.

Annual targets of cutting steel capacity by 50 million metric tons and coal capacity by 150 million tons were accomplished in August and October last year respectively, according to the bureau.

More than 1 trillion yuan ($154 billion) were saved for Chinese businesses last year, on top of the 1 trillion yuan cost reduction achieved in 2016, Ning said.

By the end of November, the debt-to-asset ratio of major industrial firms dropped to 55.8 percent, 0.5 percentage point lower than in 2016.

More industrial overcapacity to be cut for high-quality economy in 2018

More industrial overcapacity will be cut to deepen supply-side reform for high-quality economic develop in 2018, People's Daily reports.

China is expected to fulfill the goal proposed in 2016 to shut down 500 million tons of coal capacity and consolidate another 500 million tons into the hands of fewer but more efficient mine operators within three to five years in 2018.

National Energy Administration proposed the country will cancel and delay about 150 million kilowatts of coal-fired power construction projects and cut 20 million kilowatts of outdated coal power generation capacity by 2020.

Ministry of Industry and Information Technology also stated that strict inspections will be carried out in key provinces and a long-term mechanism to crack down on the production and sale of substandard steel products will be undertaken to complete the annual task of overcapacity cut in steel industry.

China will use market-oriented legal measures to strengthen policy control and guide companies to cut overcapacity and outdated capacity to establish a long-term market clearing mechanism in order to improve the quality and structure of its industrial capacity in 2018, said He Lifeng, minister of the National Development and Reform Commission.

Most "zombie" companies are of a certain scale, have a lot of employees and some even have a lot of debt burden, so more specific measures are needed to solve the problems brought by these companies and upgrade industrial structure, said Liu Jiejiao, researcher of Chinese Academy of Social Sciences' Institute of Industrial Economics.

Meanwhile, we should turn to optimizing industrial capacity from merely cutting overall capacity and improve the capacity of advanced capacity with cutting-edge technology which is in accordance with the transformation and upgrading direction and green development concept, Liu added.

The annual Central Economic Work Conference in December pledged that China will press ahead with supply-side structural reform in 2018 with more efforts to improve economic quality.

In 2017, China has met the goal of reducing steel capacity by more than 50 million metric tons and cutting overproduction in other industries such as cement, as the country deepens industrial restructuring.

Official data also show that the country's digital economy amounted to 22.58 trillion yuan ($3.43 trillion) in 2016, ranking second globally and accounting for around 30 percent of national GDP.

Cutting industrial overcapacity was included as one of the top five tasks for reform of China's economic structure as early as 2015 at the Central Economic Work Conference.

Besides cutting off outdated industrial capacity, the top authorities have also supported new industries, such as the mobile internet, cultural creative industry, the internet of things and high-end manufacturing for high-quality economic development.

China budgets $2b for major research programs in 2018

China has budgeted more than 13 billion yuan ($2 billion for major research and development programs this year, the Ministry of Science and Technology (MOST) has revealed.

The programs consist of 40 special projects and more than 600 minor projects, covering four major fields including social development, high-tech research, agricultural science and technology, and fundamental research.

According to a guideline on budgets soon to be released by MOST, social development will receive the most funds, with 41.7 percent of the total projects and 34.8 percent of the budget.

Medical research is also set to get a big chunk of the budget, with five special projects receiving 1.2 billion yuan in total. From 2016 to 2018, medical research received 30 percent of the budget for social development.

Another 25.2 percent of the overall projects are in high-tech, a much lower percentage than for social development projects, yet they will receive 4.4 billion yuan - close to the amount for social development.

New energy automobiles and additive and laser manufacturing are the top two high-tech subjects in terms of budget.

Li Hongjun, researcher at the China Agricultural University, said the budget allocation for research programs reflects the country's emphasis on certain industries.

For instance, from 2016 to 2018, the budgets for research on air pollution control and causes, as well as for deep-sea technology and equipment, reached 2.2 billion yuan, showing that the country has paid more attention to people's health and becoming a strong sea power, Li said.

China's electricity use growth continues to slow

China's electricity consumption growth continued to slow in November, official data showed December 18th, 2017.

Power use rose 4.6 percent year on year, compared with 5 percent in October and 6.9 percent in November last year, according to the National Development and Reform Commission (NDRC).

For the January-November period, electricity use increased 6.5 percent year on year, a rise of 1.5 percentage points from the same period of last year.

In the first 11 months, electricity use in the service sector maintained double-digit growth, up 10.5 percent year on year, but the increase was 1.1 percentage points slower than a year earlier.

Power use in the agricultural and industrial sectors rose 7.1 percent and 5.5 percent, respectively.

The industrial sector contributed nearly 60 percent of the total electricity consumption growth.

The power use data came after a slew of other monthly indicators were released last week.

Both fixed-asset investment and industrial output softened in November from October, while retail sales growth picked up due to the Singles' Day (Nov.11) online shopping promotion, according to the National Bureau of Statistics.

China's GDP expanded 6.8 percent year on year in the third quarter, compared with 6.9 percent in the second quarter.

Bombardier to shape Wuhu monorail plan

CRRC Puzhen Bombardier Transportation Systems Ltd, a joint venture between Canada's Bombardier Transportation and China Railway Rolling Stock Corp, announced on December 18th 2017 that it will supply monorail platforms and 240 cars to Wuhu in East China's Anhui province.

The total contract is valued at 1.79 billion yuan ($270 million). The company will provide the Bombardier Innovia Monorail 300 platform, along with the 240 trains to its client in Wuhu.

Bombardier owns a 50 percent stake in this joint venture, which is consolidated by Bombardier Transportation's partner CRRC Nanjing Puzhen Ltd.

The trains will be used in Wuhu's Line 1 and phase one of Line 2 in 2020. They will be the city's first two monorail lines, which will form the rail transportation backbone of the city. PBTS' scope under this contract will comprise the design, supply, Line 1 installation with 28 six-car trains and Line 2's phase one installation with 18 four-car trains.

"The sealing of the deal shows that Chinese market has become more open to foreign businesses and is gaining the latest technology to support its own public service ability, as well as industrial upgrading," said Li Guanghui, vice-president of the Chinese Academy of International Trade and Economic Cooperation in Beijing.

Since the Montreal-based manufacturer first entered China's rail transportation market, it has delivered more than 30,000 rail vehicles, locomotives and propulsion systems in China. These include more than 3,500 high-speed rail cars and intercity passenger-train cars, 580 electric locomotives and over 2,000 metro cars.

Bombardier supplies automated people mover systems to four major Chinese cities including Beijing, Shanghai and Guangzhou. It has delivered tram cars to Nanjing and Suzhou in Jiangsu province.

It is the only foreign company in China that has joint ventures to produce whole rail vehicles, including high-speed passenger trains, metro cars, monorail trains, and automated people movers.

Eager to enhance the country's profile as a top FDI destination, the central government called in July to ease the entry restrictions and share ratio limitations on foreign investment in areas such as transportation, architecture, accounting, commerce and logistics, e-commerce and the traditional manufacturing and service sectors.

Innovation enhances China's manufacturing competitiveness

China's innovation in core technologies has helped manufacturing enterprises become more competitive.

Guan Xiyou, chairman of Shenyang Machine Tool (Group), has played a role in such innovation, with the company developing the "i5OS" intelligent control system.

"Core technologies cannot be bought," Guan said.

Debuting in November at the 19th China International Industry Fair in Shanghai, the "i5OS" is a smart operating system for industry.

"The i5 is actually five 'i,' standing for five English words, industry, information, Internet, intelligent and integrate." Guan said. "We spent 10 years and 1.5 billion yuan ($23 million) to develop the i5 system. We have complete intellectual property rights."

Thanks to the core technology with multiple patents, i5 smart machine tools have received over 20,000 orders. Over 50 agreements have been signed to build smart factories nationwide. The company plans to establish more than 30 intelligent manufacturing valleys with local governments within the next three years.

China is speeding up the integration of information technology with the manufacturing sector and the development of the "industrial Internet."

The Made in China 2025 strategy and the Internet Plus Initiative are both vital for economic restructuring and the digital economy, according to a decision made by a State Council executive meeting in October.

The industrial Internet usually refers to the convergence of the industrial system with Internet-based technology, such as cloud computing and advanced analytics.

China Aerospace Science & Industry Corporation reported on the development of its aerospace cloud network, saying that more than one million companies have registered on the network as of Oct 20, including over 6,600 foreign companies.

More than 97 billion yuan worth of deals have been sealed on the cloud network where business opportunities and production material can be shared.

"Industrial companies should build cloud platforms that enable greater interconnectivity both within firms and among the entire industrial chain," according to the State Council meeting. "A favorable environment for the industrial Internet will be created, with streamlined administration and fiscal support. Specifically, market access for products and services in the field will be widened, while companies are encouraged to raise funds through social capital and innovative financial services."

"China's economy has been transitioning from a phase of rapid growth to a stage of high-quality development," according to the report of the 19th National Congress of the Communist Party of China in October.

"This is a pivotal stage for transforming our growth model, improving our economic structure, and fostering new drivers of growth ... We need to...accelerate the building of an industrial system that promotes coordinated development of the real economy with technological innovation, modern finance, and human resources," according to the report.

During an inspection tour in Xuzhou, Jiangsu province, President Xi Jinping said China should ramp up investment and channel more energy into research and development to spur the development of the equipment manufacturing sector, noting that "many core technologies cannot be bought."

"Innovation is the source of business core competitiveness," Xi said at Xuzhou Construction Machinery Group (XCMG), a leading domestic manufacturer. Thanks to self-developed heavy-duty machines, XCMG is swiftly increasing its share in the global market.

Xi urged a shift from "Made in China" to "Created in China," stressing more emphasis on quality rather than speed.

More foreign investors look at the country's industrial upgrading as an opportunity and have increased their investment. In the first 11 months, 60.15 billion yuan of foreign direct investment flowed into the high-tech manufacturing sector, an increase of 9.9 percent year-on-year, according to the Ministry of Commerce.

Korean supplier Hanon to build third compressor plant in Dalian

Korean supplier Hanon Systems says it plans to build a third plant in the northeast China city of Dalian to produce compressors.

Hanon opened its first factory in Dalian in 2004. Today, the company's operations produce 2.7 million compressors annually. Hanon also is the largest Korean company in terms of sales in the Dalian area in China.

"We are pleased to receive this formal approval to invest and expand our Dalian operations, which is critical to support our business growth with local China automakers and global vehicle manufacturers operating in China," said company CEO In-Young Lee.

Renault to build commercial trucks with Brilliance China

Renault SA and Brilliance China Automotive Holdings are creating a joint venture to build light commercial trucks in China.

The partnership will be formed in July, according to Brilliance China. Under the agreement, Renault will acquire a 49 percent stake in Brilliance China's van subsidiary.

That subsidiary, Shenyang Brilliance Jinbei Automobile Co., assembles multipurpose vehicles and vans. The joint venture, dubbed Renault-Brilliance Jinbei, will be based in the northeast China city of Shenyang.

Brilliance China and Renault will jointly invest 6 billion yuan ($930 million) in the joint venture named Renault-Brilliance Jinbei. Brilliance China is providing 3.1 billion yuan and Renault will invest 2.9 billion yuan.

Initially the partnership will produce vehicles for the Jinbei brand, then start making Renault-badged vehicles in 2020. Its products will be sold through Jinbei's dealership network.

Annual sales are expected to total 150,000 vehicles by 2022, according to Brilliance China.

Renault-Brilliance Jinbei will be Renault's second Chinese joint venture. The French automaker also operates a partnership with state-owned Dongfeng Motor Corp. to produce passenger vehicles.

Polluters-pay reform to be expanded

CHINA will expand a pilot reform nationwide starting from the year of 2018, obliging polluters to repair the environment or pay compensation.

The decision was contained in a document issued December 17th, 2017 by the general offices of the Communist Party of China Central Committee and the State Council.

By 2020, China aims to establish an efficient comprehensive damage compensation system to protect and improve the country's ecosystem.

Under the system, individuals or companies that cause environmental damage shall have to help restore the environment. If the damages are beyond restoration, they must pay for losses, a process that will be managed by local governments as nontax revenue.

The penalties are aimed at tightening oversight of land, water and air pollution, and holding companies accountable for the cleanup costs and restoring the ecological balance after major accidents, according to the document.

The reform has already been piloted in Jilin, Jiangsu, Shandong, Hunan, Chongqing, Guizhou and Yunnan, with notable progress made, according to the document.

Commenting on the decision, an official of the Ministry of Environmental Protection told Xinhua that conditions for legislation on ecological damage compensation were not ripe, but expanding the pilot scheme nationwide would help accumulate experiences for the legislative work.

The ministry will also work to develop an environmental damage assessment system and regulate the assessment procedures.

Robot-maker Kuka seeks growth in new spheres—and in China

German industrial giant Kuka is the world's largest producer of robots used to make automobiles, with its signature orange crane like bots a fixture in automated car factories across the globe.

Growth in robots for all industries other than automotive is up more than 10 percent; that compares to just 3 percent to 5 percent for the car industry, Kuka's auto business has fallen from 80 percent of robot revenues, when he took over the company in 2009, to around 50 percent today, Reuter notes.

Now, this 120-year-old company, which in January became just under 95 percent owned by China's Midea, the world's largest appliance maker, is aiming to pull off a big transformation that, if successful, will take it into faster-growing robot markets.

That means smaller-sized and nimble robots for electronics manufacturing and logistics warehouses. Also on the drawing board are machines that could handle plugging in electric vehicles for owners, or even allow the elderly to live independently at home later in life, Reuter said in an interview in the southern Chinese city of Guangzhou, Guangdong province, earlier this month.

"We want to keep number one in automotive (but) we see that the higher growth is coming out of other industries and other sectors." For example, one large market that will become "even bigger in the future will be the production of mobile phones, handhelds, and iPads," he says. Reuter is referring to robots that have a payload—the maximum weight they can pick up and manipulate—of six kilograms or less, and are capable of carrying out much more delicate assembly tasks.

China will be key to realizing Kuka's diversification strategy, which is being led by Reuter, who makes monthly visits to Midea's Foshan headquarters and stays in close contact with its chairman and CEO Paul Fang. It's the world's largest and fastest-growing automation market. Sales of robots in China, which amount to about one-third of the global demand, grew by 27 percent last year, compared to just 12 percent in Europe and 8 percent in the Americas, according to the International Federation of Robotics.

With 68 robots per 10,000 Chinese manufacturing workers, far fewer than the 189 in the United States and 631 in South Korea, there's room for growth and rising factory wages are powering more automation.

"We want to become number one in China," says the Kuka executive, noting that their market share for robots last year was around 14 percent (that puts it among the top three suppliers).

Revenue in the country, now at 500 million euros ($588 million), will be "way above" one billion Euros by 2020, he predicts.

"If you want to be a global player, you need to compete there," says Justin Rose, a partner at BCG in Chicago. "China will become even more important."

Kuka however, is hardly alone in vying for the $11 billion China market. ABB and Fanuc are two of its largest competitors globally in industrial robots. Meanwhile, local rivals including E-Deodar Robot Equipment Co, Anhui Efort Intelligent Equipment Co and Siasun Robot & Automation Co sell their robots for about one-third the cost of foreign brands. A cost-cutting war and shakeout is possible, as China's hundreds of new local robot makers start to vie for market share.

Wang Tianmiao, president of the Smart Manufacturing Research Institute at Beihang University, said rapid technological progress puts a group of Chinese robotic players in a better position to challenge their foreign counterparts.

"Chinese companies move fast to apply artificial intelligence technology to make robots smarter, and can deliver them to the market at affordable costs," Wang said. "Foreign players need to work hard to maintain their edge."

"Made in China 2025", the government's plan to modernize and automate manufacturing, has set specific targets to increase the proportion of Chinese-made robots.

"Kuka is now part of the Midea family, which is great," says the bespectacled Reuter, who has worked as an investment banker for Morgan Stanley, Deutsche Bank and Lehman Brothers. "Midea is helping us in China get more weight on the ground."

Along with its push into non-auto industrial robots, Kuka aims to leverage Midea's sales networks and company connections to start producing consumer-focused robots, too. The companies are jointly building a large industrial park near Guangzhou that will have R&D, technology development, a robotics training center, and critically, a production facility.

"We are increasing capacity. That is the first step," Reuter says. "For Kuka, the park will be a very, very important step towards becoming number one."

As to what specific kinds of robots will be produced in the new park or elsewhere in China, Kuka's chairman is keeping mum for now.

"We have some projects on the consumer side (but) lots of them are still confidential. If I let them out of the box, people will probably jump on," Reuter says.

Estun Automation Overseas Partner Conference of 2017 was held

On December 8th, Estun Automation held its Overseas Partner Conference of 2017 in Nanjing, which gathered dozens of outstanding partners from different countries and regions including Italy, South Korea, Spain, the Netherlands, Vietnam, Poland, Mexico and India.

In the conference, Estun demonstrated its outstanding performance for overseas market development in the year of 2017.On the other hand, the meeting gave all the overseas partners the latest information and interpretation of the development plan for the international strategy of Estun automation. All the partners would realize Estun's firm determination in sharing, innovation and win-win cooperation, and witness Estun's globalization development and the process of industrialization.

At the conference, Estun issued two company awards to the international agents with top performance, Estun Outstanding Applications Awards of 2017 and Estun Outstanding Sales Awards of 2017. The winning representatives were glad to make a speech on the stage, and shared their success stories, experiences and opinions on overseas market development.

In the course of case sharing, some overseas partners demonstrated the application details of Estun's overall solution in many highly difficult fields such as manipulator, printing machine and glasses cutting machine, through texts, graphs and videos. Estun's EtherCAT solution and one servo drive with multiple servo motors were well used in the application cases. The demonstration fully showed the unique advantages

of Estun automation in the field of buses field and multi-axis servo applications. All the representatives expressed that Estun Automation's technical support and quick response had been the key points to help the partners achieve the success of the projects. They would continue to deepen the cooperation with Estun and make concerted efforts to jointly explore the international market.

Estun has comprehensively promoted the construction of sales network both at home and abroad. Currently, it has 6 overseas subsidiaries in the United Kingdom, the United States, Italy, Turkey, India and Eastern Europe, and more than 50 agents in Europe, Asia, the America and Oceania. Estun automation is exporting products to more than 60 countries and regions and is providing global users with cost-effective products and fast and effective service support.

In the future, Estun will actively face the new challenges, seize the new opportunities, take the innovation and development as its driving force, condense the global wisdom and exert its influence on the global market. Estun shall also make more efforts to accumulate the localization operation capability and become an integrated brand of R&D, production and sales. Estun shall be capable to provide global customers with more efficient, high-quality, agile services, and to create continuous value for each customer.

DHHI successfully manufactured the casting for the first 1,000MW hydropower unit in the world

A few days ago, the crown and band with a gross weight exceeding 185t manufactured by DHHI for hydropower unit were officially present to the public, and this is the first set of products for 1,000MW hydropower unit for Baihetan Hydropower Station with the largest unit capacity currently in the world. Over a week of strict inspection, this casting passed the acceptance check and reached the criteria for superior-quality product. This symbolizes that DHHI has fully solved the difficulties for development and manufacture of key steel casting for 1,000MW hydropower unit.

Baihetan Hydropower Station is developed by China Three Gorges Corporation and is presently the largest hydropower station under construction in the world. After completion of this project, Baihetan Hydropower Station will become the second largest hydropower station for installed capacity in the world after the Three Gorges Hydropower Station. This station will be equipped with sixteen 1,000MW water turbine generator sets with the largest unit capacity in the world, in which, the task for development and manufacture of crowns and bands for 5 units will be undertaken by DHHI.

The largest and heaviest integral slewing bearing in China is completed in LYC

On October 29th， 2017, the heaviest, biggest and highest precision split slewing bearing (diameter 12.37 meters & weight 90 tons) was successfully completed at LYC and passed the Classification Society Certification. This bearing broke its 4-year-old record and strengthened LYC's leader position in domestic market.

The product is equipped with the offshore installation platform of a key project in China. Due to the large size and over weight of the product, in the manufacture process, LYC made full use of the experience of bearing processing and manufacturing for many years, adopted a variety of industry leading processing technology and technology, overcame the problems in heat treatment, tooth processing, etc, guaranteed that the diameter was nearly ten meters, the accuracy error is not more than two hair and other technical requirements eventually, assembled successfully and passed China Classification Society CCS certification and acceptance at a time.

The completion of this product fills the blank of the largest and heaviest integral slewing bearing in China, consolidates LYC'S lead position in the development and manufacture of such bearing, and shows the LYC's technology and research and development strength of "China first class, international leading".