

## **CHINESE MACHINE TOOL MARKET - WEEKLY BULLETIN**

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## Made in China 2025 will boost manufacturing



With the fourth industrial revolution prompting adjustments and changes in the global manufacturing industry, some developed economies, including the United States, Germany, the United Kingdom, France and Japan, have already worked out strategies to boost their manufacturing sectors.

China has the world's largest manufacturing sector, both in scale and output, but the sector still lags behind those of industrialized countries in terms of profit margin, efficiency, quality, industrial structure, sustainable development and resource consumption. To develop an advanced manufacturing therefore, China needs to shift its focus from scale and speed to quality and efficiency.

In fact, the Chinese government has devised the Made in China 2025 plan exactly to achieve that goal. Based on hundreds of Chinese experts' in-depth studies of global manufacturing development trend, industrialized economies' strategies, China's manufacturing problems and advanced technology's influence, the plan is aimed at facilitating the transformation and upgrading of China's manufacturing sector. Which will not only boost the sector's competitiveness but also develop China into a modern manufacturing powerhouse, by reducing resource consumption, improving labor productivity, enhancing innovation capability, expediting "informationalization", minimizing environmental impact and optimizing the industrial structure.

China has decided to launch a series of major projects before 2025 to facilitate the establishment of innovation centers, consolidate the industrial foundation, support

high-end equipment innovation, and promote intelligent and eco-friendly manufacturing. It has also formulated programs to promote talents, and improve its information, new material, and pharmaceutical industries.

However, the realization of the goals outlined in Made in China 2025 depends on further reform and opening-up, which will boost innovation and inject fresh vigor into domestic enterprises so they can improve their productivity. Therefore, the market has to play a decisive role in resource distribution to create a good business and innovation environment. China also needs to conduct fair and win-win cooperation with other countries to sharpen the global competitiveness of its manufacturing sector.

Since it was announced three years ago, the Made in China 2025 plan has strengthened the consensus among various parties on the importance of manufacturing to the national economy, promoting intelligent and green development, and expeditiously building a powerful innovation system. A series of indexes measuring the manufacturing sector's capabilities, such as research and development input per unit of output, the ratio of researchers to the total workforce, and the sector's productivity, already show a fair level of improvement.

In their efforts to promote intelligent manufacturing, some demonstration enterprises also have, to some extent, raised production efficiency, lowered operation costs, shortened the product development cycle, and reduced energy consumption.

Still, the transformation of China's manufacturing sector from quantity expansion to quality improvement is not that smooth. Compared with such manufacturing powers as the US, Germany and Japan, China's manufacturing still has a large room for improvement in terms of quality, optimization of structure and sustainable development.

And due to a lack of comprehensive knowledge about Made in China 2015, some foreign organizations have jumped to the wrong conclusion about China's initiative. For instance, the US investigation report under Section 301 of the Trade Act of 1974 mentions Made in China 2025 several times, most of which are based on deductions that run contrary to facts. Disregarding World Trade Organization rules, the report has recommended additional 25 percent tariffs on 1,300 Chinese imports, including information and communications, and mechanical products — and the Trump administration has proposed extra tariffs on Chinese imports of \$100 billion.

Still, Made in China 2025 will continue to play a vital role in boosting the competitiveness of China's manufacturing enterprises and, along with the manufacturing sector's capability to capitalize on the opportunities and meet the challenges of the fourth industrial revolution, it will help China to become a modern manufacturing powerhouse.

## China's strong and solid economic performance in Q1

The Chinese economy has started the first quarter of 2018 on a strong note with better than expected data, indicating steady and sustainable economic growth.

The following are a group of facts and figures released by the National Bureau of Statistics on China's solid economic performance in the first quarter.

- The manufacturing purchasing managers' index (PMI) came in at 51.5 in March, the strongest level this year.
- Small enterprises witnessed a particularly strong increase in manufacturing activities, as the PMI for small manufacturers jumped to 50.1 in March from 44.8 in February.
- The non-manufacturing sector accelerated the pace of growth in March with its PMI standing at 54.6, up from 54.4 in February.
- Loan demand for the real economy picked up in the first quarter with the index for loan demand rising 5.2 percentage points from last quarter to 70.9 percent.
- Entrepreneurs are becoming more optimistic about economic conditions in Q1 with the entrepreneur confidence index coming at 74.3 percent, the highest level since Q3 2011.
- Electricity consumption, a key barometer of economic activity, rose 9.8 percent in Q1, up 2.9 percentage points year-on-year.
- The national freight volume, an indicator of economic activity, maintained steady growth in Q1 as the freight volume was up 6.3 percent year-on-year to 10.2 billion tonnes.
- Consumers showed stronger willingness to spend in February with the Consumer Confidence Index reaching 124 points, the highest level since October 1993.
- The World Bank on April 12 revised up China's growth prospect from 6.4 percent in last October to 6.5 percent.
- The Asian Development Bank said in a report on April 11 that China's economic growth is expected to reach 6.6 percent this year, citing strong demand from home and abroad.

## China's power use rises 9.8% in Q1



China's electricity consumption, a key barometer of economic activity, rose 9.8 percent to 1.6 trillion kilowatt hours in Q1.

In March alone, power use stood at 532 billion kilowatt hours, up 3.6 percent year on year, according to data released by the National Energy Administration(NEA).

Electricity used by the service sector rose 16.7 percent in January-March, followed by a 10.3 percent increase for the agricultural sector and 6.7 percent for the industrial sector. Residential power use was up 17.2 percent, the NEA said.

Earlier data from the National Development and Reform Commission (NDRC) showed electricity from clean energy sources expanded at a rapid pace.

In the January-March period, power production rose 10 percent year on year to 1.6 trillion kilowatt hours, with solar and wind energy increasing by 58.7 percent and 37.9 percent, respectively.

The growth comes as the economy began 2018 on a strong note with better than expected data.

Industrial output expanded at 7.2 percent year on year in the first two months, while the fixed asset investment rose 7.9 percent, according to the NDRC.

## Massive new container vessel delivered in Dalian



Ultra large container vessel COSCO Shipping Gemini, with a capacity of 20,119 20-foot equivalent units, was delivered to its owner on April 10th in Dalian, Northeast China's Liaoning Province.

"It is the first domestic container vessel that breaks the technical monopoly of Japanese and Korean shipyards on crack arrest steel," said Zhu Ping, project manager of 20,000 TEU (20-foot equivalent unit) container vessels for Dalian Shipbuilding Industry Co.

The vessel's hatch coamings and main deck used 1,911 tons of 85 millimeter-thick crack arrest steel plates produced by Anshan-based Ansteel Group, Zhu said.

COSCO Shipping Gemini is 399.8 meters long, 58.6 meters wide and 30.5 meters deep. With a deck area equivalent to the size of four standard football fields, it can transport more than 20,000 seven-seat SUVs at a time.

DSIC and Beijing-based COSCO Shipping Lines group signed a contract for the manufacture of two 20,000 TEU container vessels in 2015 and became one of China's first manufacturers of 20,000 TEU container vessels.

Based in Dalian, DSIC built the country's first domestically developed aircraft carrier. It is a subsidiary of State-owned shipbuilding giant China Shipbuilding Industry Corp.

Considering the possibility that the ship might use cleaner fuel such as liquefied natural gas, a device system for that type of fuel is reserved on board. It can meet the needs of retrofitting and upgrading of liquefied natural gas fuel tanks for specific routes and adapt to more severe emission requirements in the future.

## Award for Bystronic Tianjin



Bystronic has been certified as a “China National High-Tech Enterprise” for its Chinese development and production location in Tianjin. With this award, China acknowledges the high quality standards in the fields of research and production at Bystronic.

Sheet metal processing technologies are developing rapidly. Current trends such as integrated automation and digital networking are resulting in new manufacturing solutions and services that allow users to sustainably optimize their production processes. The impulses from Industry 4.0 are enabling sheet metal processing companies to create intelligent and flexible manufacturing environments that allow products to be manufactured faster and more efficiently than ever before.

As a leading supplier of solutions for sheet metal processing, Bystronic actively drives forward the development of these trends and technologies. To achieve this, Bystronic is investing globally in its development and manufacturing locations in Switzerland, Germany, and China. Because this is where the decisive starting points for innovations and high-quality process solutions lie, which provide customers with the competitive edge in the challenging day-to-day business environment.

For its Chinese business location in Tianjin, Bystronic has now been certified as a “China National High-Tech Enterprise”. With this award, China acknowledges the high quality standards in the fields of development and manufacturing at Bystronic. At its current business location in Tianjin, Bystronic develops and produces state-of-the-art laser cutting and bending systems that are used successfully by customers in Asia and around the globe. The products currently manufactured in Tianjin are: the BySmart Fiber, the BySprint Fiber, and the Xact Smart.

## Chinese Academy of Engineering experts visit TOMAN investigation and research

In April 10th, a member of the national manufacturing power construction strategic advisory committee, Professor Qu Xian Ming, director of the manufacturing research room of the China Academy of engineering, the deputy director of the National Standardization Committee of the intelligent manufacturing state, Professor Dong Jingchen of the manufacturing research room of the Chinese Academy of engineering, as well as the expert of the strategic consulting center of the China Academy of engineering and the Chinese Academy of engineering. Dr. Qiu Wuhong, the deputy magistrate of Xinchang County, Qiu Wuhong, the Zhejiang provincial intelligence manufacturing expert committee, the director of the Xinchang Guidance Group Hu Xudong, the director of the County Commission Chen Zhujin, the president of the company, Yu Zhaojie and other leaders, accompanied the investigation and research.

In the investigation and research, the Chinese Academy of engineering experts saw the demonstration of the TOMAN bearing industry cloud platform and heard the introduction of related applications. After that, the deputy magistrate of Jo Wu Hong made a brief introduction to the basic development of Xinchang and the practice of bearing as a traditional industry in Xinchang. Then, by introducing the plight of the promotion of Intelligent Manufacturing in small and medium-sized enterprises, Yu Zhaojie explains how Xinchang can solve the problems of the intelligent manufacturing and popularizing of small and medium enterprises through the cooperation of government and enterprise in the intelligent manufacturing of Xinchang bearing industry to solve the problem of the application of Intelligent Manufacturing in small and medium-sized enterprises. The value is constantly improving, and the industrial benefits brought by "100 enterprises upgrading" and the exploration of cloud platform for bearing industry are introduced in detail.

After listening to the introduction, the experts of the Chinese Academy of engineering have affirmed the practice of popularizing intelligent manufacturing in Xinchang through the co - operation of government and enterprise cooperation, as well as the practice of improving the value of the small and medium enterprises through intelligent transformation, and discussed the communication between the development and perfection of the function of the TOMAN intelligent manufacturing system. Finally, the director of Qu Xian Ming said that through the support of the government and the specialized information engineering service company, the "Xinchang practice" of upgrading the traditional industry should be popularized.



## Siemens enables digitalization of machine tool industry with “Digital Twin”



At the Tenth China CNC Machine Tool Fair (CCMT 2018) opened on April 9th, Siemens exhibits how to leverage “Digital Twin” across the entire value chain from designing, engineering, production to service, to improve productivity, availability and process reliability, and optimize machining precision, engineering, process, even maintenance and service. Inheriting its concept at EMO Hanover 2017, Siemens demonstrates the applications of “Digital Twin” among machine tool manufacturers and users as well as its benefits with real-world cases.

“Integration from product R&D to production is key to migration to ‘Industry 4.0’.” said Frank Golueke, Vice President of Digital Factory Division and General Manager of Motion Control, Siemens Ltd., China, “Siemens has always been committed to simulation, as well as integration between virtual machines and CNC systems with IT systems.”

Leverage “Digital Twin” to enable digitalization of machine tool processing and manufacturing

Siemens control systems for virtual machine tools use the same language code with Siemens Sinumerik system. “Digital Twin”, or exact virtual image, of simulation and trial run may be generated with the virtual NC kernel, to enable virtual test of the program and complex movement sequence beforehand, thus increasing precision and reliability of subsequent processing steps, and minimizing adjustment time. More obvious benefits can be found in manufacturing of customized products in smaller batch sizes.

Siemens also exhibits multiple connection and mounting options of its cloud-based powerful open IoT operating system MindSphere in machine tool applications. At Siemens booth, “Manage MyMachines” on MindSphere is used to connect two machine tools at its CNC Technology Application Center in Beijing, to demonstrate to visitors how to apply the relevant machine tool data acquired and analyzed by the application. “Manage MyMachines” can easily and rapidly connects CNC systems like Sinumerik 840D sl to MindSphere, to provide users with information from connected machine tools, so that they can trace their current and historical operation, thus shortening their downtime, optimizing services and repair processes and improving productivity.

## CCMT2018 Opened in Shanghai on April 9th



On April 9, 2018, China CNC Machine Tool Fair 2018(CCMT2018), organized by CMTBA and co-organized by Shanghai International Exhibition Co., Ltd, opened in Shanghai New International Expo Center. Mr. Shen Liechu, Vice Minister of the former Ministry of Industry of China and Mr. Xu Xingchu, Academician of the Chinese Academy of Sciences participate in today's opening ceremony. Mr. Xue Yiping, vice president of China Machinery Industry Federation, leaders and representatives of government authorities and domestic organizations, leaders of machine tool associations worldwide, leaders of dozens of well-known domestic and international enterprises(list attached), leaders and representatives of key user industries such as automotive, shipping, aviation and aerospace, national defense and so forth

participated in today's opening ceremony. Leaders of the organizer and co-organizer also attend the event.

Mr. Mao Yufeng, President of CMTBA pointed out in his message that in 2017, China's machine tool & tool consumer market showed an obvious restorative growth. Meanwhile, structural adjustment and differentiation of the market became increasingly apparent and evident. The total consumption of metalworking machine tools is 29 billion 970 million US dollars, up by 7.5% compared with the same period last year, and the total consumption of measuring tools is 4 billion 820 million yuan, up 20.2% over the same period. In January and February 2018, import and export data showed that two digit growth in the machine tool market, of which metal working machine tool imports increased by 57.84% over the same period. Through the analysis on the statistical data and product mix, it is concluded that the consumer market of machine tools in China presents a new feature of "total consumption stabilizes and structure upgrades", and mild growth will show itself in the future. This feature and trend will be reflected in CCMT2018.

The honored guests for ribbon cutting at the opening ceremony of CCMT2018 are Mr. Long Xingyuan, On-duty Rotating Chairman of CMTBA, President of Qinchuan Machine Tool & Tool Group, Mr. Woods, President of AMT, Mr. Blaettler, Secretary General of SWISSMEM, Mr. Zhang Zhigang, Rotating Chairman of CMTBA, President of JIER-Machine Tool Group, Mr. He Minjia, Rotating Chairman of CMTBA, President of GSK CNC Equipment, Mr. HEIN, Director of Economic Dept & Industry Marketing Services of VDW, Mr. Inaba, President of FANUC, Mr. Wang Xu, Rotating Chairman of CMTBA, President of Beiyi Machine Tool, Mr. Chen Xiangrong, Vice President of Fair Friend Group, Mr. Dong Qingfu, President of YAMAZAKI MAZARK China., Mr. Wang Huanwei, Rotating Chairman of CMTBA, general manager of Ningbo Haitian Precision Machinery, Mr. Zhang Wenqiao, General manager of Wuhan Heavy Duty Machine Tool Group.

Over 1230 machine tool & tool exhibitors from 23 countries and regions such as China, Germany, the United States, Japan, Italy, Swiss, the United Kingdom, South Korea and China Taiwan joined the fair. There are 500 overseas exhibitors accounting for 40% of the area. More international exhibitors joined CCMT than before. 10 countries and regions including Germany, the United States, Swiss, Italy, Korea, Spain, Japan, Czech, France and Taiwan organized national pavilions. France national pavilion joins CCMT for the first time. Machine tool associations from 12 countries and regions set up information desks in CCMT2018 for convenient information exchange and communication.

CCMT2018 uses 10 indoor halls from N1-N5 and W1-W5. The total exhibition area reaches 120,000 square meters. W1, W2, W4, W5 and N2 are domestic exhibition halls, while N1, N4 and W3 are international halls. N3 and N5 are shared halls.

## Year-round platforms to support CIIE event



SHANGHAI said on April 11th that it will launch the first batch of 30 year-round exhibition and transaction platforms to support the China International Import Expo to be held in the city in November.

These platforms will provide multi-mode and multi-channel services for overseas companies entering the Chinese market, the municipal government said.

The Shanghai Commission of Commerce took into account that the six-day exhibition to be held in November is too short for exhibitors and buyers from all over the world to learn and take advantage of business opportunities in China and also to be conversant with the approaches and channels for entering the Chinese market.

The commission decided to set up the year-round exhibition and transaction platforms to provide a channel for foreign products, services and technology to enter the Chinese market as well as promote the sustainable development of the CIIE and magnify the spill-over effects of the expo.

The 30 year-round exhibition and transaction platforms are grouped into integrated service platforms, cross-border e-commerce platforms, professional trading platforms and country commodity centers.

These four platforms aim to offer exhibitors more exhibition and trading services for comprehensive products and technology, provide more overseas products for consumers through online channels, bring professional supporting services for specific products, and offer participants convenient and efficient services.

## **2018 Xiamen Industry Expo highlights intelligent manufacturing**

The 2018 Xiamen Industry Expo (XMIE) was inaugurated at the Xiamen International Convention and Exhibition Center on April 12, marking the beginning of the 22nd Cross-Straits Machinery and Electronics Exhibition, according to Xiamen Daily.

The expo is focused on intelligent manufacturing and showcases the progress of industrial cooperation between cross-Straits enterprises and the latest development trends of cross-Straits intelligent manufacturing industries.

Covering an area of 85,000 square meters, this year's XMIE attracted more than 800 enterprises from the Chinese mainland and Taiwan.

Six specialized exhibition areas at the expo were set up for over 3,500 booths for various products and services, including machine tools, intelligent manufacturing, those of the rubber industry, printing equipment, heavy-duty machinery and modular products.

The expo also established an exhibition area for transportation and logistics equipment for the first time to show intelligent transportation systems, smart parking systems, new energy vehicles, and traffic engineering materials.

A series of forums are expected to be organized during the four-day event to discuss cross-Straits economic cooperation in trade and industries. Renowned scholars and entrepreneurs from both the Chinese mainland and Taiwan will offer their ideas about cross-Straits cooperation and development.