

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

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## **Innovation and brands key to Changchun's revitalization**

Changchun, the capital of Jilin Province, has been focusing on intelligent manufacturing and new brands development since it was selected as one of the pilot cities of the Made in China 2025 initiative in November 2016.

The innovative products and brands are key to the revitalization of the old industrial base and are new forces for the region's transformation and upgrading.

The government of Changchun is now accelerating the integration of industrialization and informationization to highlight the advantages of the area.

According to the Jilin government, the total industry output of the city in 2017 exceeded one trillion yuan (\$157.20 billion), with a year on year growth of 10.7 percent, and the industrial added value reached 265.5 billion yuan, increased by 9 percent over that of 2016.

Advanced and environmental-friendly plants like the Audi Q factory have been completed in the city, which are solid foundations for the development of Changchun's intelligent manufacturing.

In addition, high-speed trains and Jilin-1 satellites also mark the city's intelligent manufacturing development.

In the last three years the government of Changchun has invested 300 million yuan in 290 technological transformation programs to promote industrial chains development.

To date, there are a total of 555 programs on intelligent manufacturing, innovative products, industrial park constructions, industry-university-research cooperative projects and green manufacturing in place.

Another 10 intelligent factories, 20 digital workshops and 50 automatic production lines are to be put into operation, which will help improve the city's industrial output and reduce the cost.

Meanwhile, eight innovation centers and 10 industry-university-research collaborative innovation platforms have been constructed and 30 science and technological achievements including carbon fiber for aviation use and green filling robots have been transformed to mass production.

## **China's manufacturing maintains rapid expansion in April**

China's manufacturing sector expanded at a slightly slower pace in April from the previous month, but still maintained "momentum of steady growth," new data showed on April 30.

The purchasing managers' index (PMI) for the sector came in at 51.4 this month, down from 51.5 in March, the National Bureau of Statistics (NBS) said in a statement on its website. A reading above 50 indicates expansion, while a reading below reflects contraction.

Despite the slight decline, the April figure was still higher than an average of 51 in the first three months of this year and 51.2 for April 2017.

Chen Zhongtao, analyst with the China Logistics Information Center, held a similar view about the sector's performance, saying the new figures reflected stability in domestic demand, production and employment.

Meanwhile, the decline in headline PMI was mainly dragged by large companies, while the reading for small and medium-sized enterprises has increased for two months in a row, showing the effects of the country's supporting policies, including cuts in taxes and fees, according to Chen.

The PMI reading for high-tech manufacturing stood at 53.8 percent in April, higher than the previous month and the headline manufacturing PMI.

In the first quarter, China's economy expanded 6.8 percent year on year, unchanged from the previous quarter and staying within the 6.7-6.9 percent range for an 11th straight quarter.

The strong start will "lay a solid foundation" for steady economic growth and high-quality development in the latter part of this year, Chen said.

At present, companies are upbeat about future business prospects, with the business outlook index staying above 58 percent for a third month in April.

The NBS data also showed that the non-manufacturing PMI rose from 54.6 in March to 54.8 in April, and the composite PMI output index, which covers both manufacturing and non-manufacturing sectors, rose from 54 in March to 54.1 this month.

## China's foreign trade up 8.9% in first four months



China's goods trade rose 8.9 percent year-on-year to 9.11 trillion yuan (about \$1.43 trillion) in the first four months of this year, customs data showed on May 8.

China's goods exports rose 6.4 percent year-on-year to 4.81 trillion yuan in the January-April period, while imports grew 11.7 percent to 4.3 trillion yuan, resulting in a trade surplus of 506.24 billion yuan, which narrowed by 24.1 percent, according to the General Administration of Customs (GAC).

In April, goods trade surplus shrank by 27 percent to 182.8 billion yuan, as exports rose 3.7 percent year-on-year to 1.27 trillion yuan, while imports grew 11.6 percent to 1.09 trillion yuan, according to the GAC.

In the first four months, exports and imports of products under the general trade category surged 12.8 percent year-on-year to 5.34 trillion yuan, accounting for 58.6 percent of the total foreign trade volume, 2 percentage points higher than the same period last year.

Chinese private enterprises played a bigger role in trade by contributing 38.6 percent to total trade, up 1.2 percentage points compared with the same period last year.

Exports and imports made by foreign-funded companies totaled 3.91 trillion yuan, up 4.6 percent, contributing 42.9 percent of the total foreign trade volume during the January-April period.

## Shifting gears



China's announcement that it will scrap foreign ownership caps on local auto companies by 2022 and remove restrictions on new-energy vehicle ventures this year is expected to be a game changer for the industry.

Under existing rules, foreign automakers can only operate in China in a 50:50 joint venture with a local partner. This forces car-makers to not only share profits in what is now the world's largest car market, but, in some cases, share expertise as well.

One company that stands to gain from the expected changes is Tesla. The Silicon Valley-based electric vehicle maker has been trying to establish a wholly owned plant in Shanghai for nearly four years.

Analysts say going solo could help Tesla maximize profits in China's booming EV market, which is set to grow as the country phases out internal combustion engines.

"China's full opening of the manufacturing industry is a clear indication of our opposition to trade and investment protectionism, and shows our clear support to widening and deepening the development of economic globalization," the National Development and Reform Commission said in the announcement on April 17.

"Through the full liberalization of the manufacturing industry, we will support Chinese and foreign companies in achieving common development on a level playing field," it added.

The NDRC said it hoped the liberalizations would encourage greater exchanges of capital, technology, management and personnel between Chinese and foreign firms.

In his keynote address on April 10 to the Boao Forum for Asia Annual Conference, in South China's Hainan Province, the President Xi Jinping announced plans for the auto industry, including cuts to import tariffs on foreign cars.

Xi described the moves as part of a "new phase of opening up" the Chinese economy.

The NDRC announcement said restrictions on foreign ownership in the shipbuilding industry would also be scrapped this year along with curbs on foreign ownership of aircraft-manufacturing firms, including those that make wide-body commercial airliners, regional jets, helicopters, drones and blimps.

Cutting China's current 25 percent import tariff on cars will mean that overseas automakers, especially luxury brands, can compete in the Chinese mainland market with lower price tags.

But with the relaxation of JV restrictions, these companies could set up production in China on their own.

China's EV market is burgeoning as the country works to tackle its pollution problems. This has led to the Beijing government offering incentives to encourage investment in and development of zero-emission EVs.

"China's door of opening-up will not be closed and will only open wider," Xi told the recent Boao Forum for Asia.

Xi promised Beijing will "significantly lower" tariffs on auto imports this year and will relax foreign ownership limits on JVs with local car companies. Both pledges were initially made in November.

The president's remarks soothed escalating fears of a trade war, three weeks after China threatened to double import tariffs on automobiles in response to US President Donald Trump's proposal to impose duties on a range of products from China and other countries.

Most of the cars sold in China by Volkswagen and General Motors are locally produced. GM and its local JVs sold more than 4 million cars in China last year.

Analysts say China is critical to global automakers.

Chinese sales of US-made vehicles totaled 266,657 in 2017, according to research firm LMC Automotive, representing less than 1 percent of the world's largest automotive market.

Jeff Schuster, an analyst at LMC Automotive, said China's moves could "facilitate an environment of investment and maximize efficiency" for US auto plants.

The biggest winners could be German automakers — such as BMW, and Mercedes-Benz maker Daimler — that build vehicles in the US for export to China, analysts said.

BMW shipped 106,971 vehicles from the US to China in 2017, while Mercedes sent 71,198, according to LMC.

Ford Motor was the third largest US-to-China exporter with a total of 45,145 vehicles in 2017, according to LMC. Fiat Chrysler came fourth at 16,545 and Tesla fifth at 14,779. Tesla makes all of its vehicles at its plant in California.

The business case for a vehicle export strategy would get a boost from the shift in the Chinese tariff policy, although it would still be more cost effective to build vehicles in China to avoid overseas shipping costs.

Most vehicles sold in China are built in the country. GM, Ford and other automakers have JVs established with Chinese automakers.

GM, the leading foreign manufacturer in China by sales, said in a statement on April 17 that it sees no change in its plans and is not eager to buy out its partner — the State-owned Shanghai Automotive Industry Corporation.

"GM's growth in China is a result of working with our trusted joint venture partners," the statement said. "We will continue to work with our partners to provide high-quality products and services to consumers."

Ford echoed similar sentiments saying it was encouraged by the announcement from the NDRC, "which is a clear demonstration of the Chinese government's commitment to further open the automotive industry".

"We will continue to monitor developments and look forward to learning more."

Volkswagen also said in a statement it was committed to continuing its JVs, but that it would explore whether new opportunities were possible. The German company has been making ambitious plans to build EVs in China, and only has a loose and temporary JV with Anhui Jianghuai Automobile Group to do so.

## **Automakers see perks with joint ventures even as China opens market**

China's landmark decision to loosen restrictions on foreign automotive investment may do little to change the joint venture landscape, international executives said last week at the auto show here.

Foreign manufacturers have invested billions in domestic partnerships and can't easily pull up roots, they say. They must also weigh thorny supply chain and government relations issues.

Local partners also pony up half the massive investment costs, they note. And they help international brands navigate China's bureaucracy and ever-evolving consumer market.

"Whether we go ahead on our own or with new partners really requires in-depth study," Kazuhiro Kobayashi, Toyota's CEO for China, said at the show. "The matter is not that simple. The question is how to best enhance the competitiveness of our vehicles."

Chinese President Xi Jinping promised this month to open investment in the country's auto industry by letting foreign manufacturers own assembly plants outright — rather than pairing in 50-50 joint ventures with a Chinese partner as currently required.

The measures would kick in this year for enterprises making new-energy vehicles, such as full electrics and plug-in hybrids. They would take effect for commercial vehicles in 2020 and open to passenger vehicles in 2022, said Peter Fleet, president of Ford Asia Pacific.

"We welcome the fact that there is some clarity now," Fleet said at the Beijing show.

But despite Beijing's change of stance, Fleet said Ford has no plans to adjust stakes in its two local partnerships, Changan Ford Automobile Co. and Jiangling Motors Corp.

Fleet added that the move is positive because it signals a maturing of the business climate and because it may help streamline government approval of a third venture Ford is pursuing.

In November, Ford and Zotye Auto said they would create a 50-50 partnership, Zotye Ford Automobile Co., to make and sell electric vehicles in China under a new indigenous brand.

That venture is awaiting a government sign-off.



"A partner still brings visceral understanding of the marketplace, which I would find hard to match," Fleet added. "There may be some different investments that some people make. But I'd be surprised if there is any violent reaction one way or the other."

Audi and Nissan executives were among those saying the status quo still works.

"We'll maintain the joint venture structure as it is today," Audi CEO Rupert Stadler said of the partnership Volkswagen and Audi have with China FAW Group Corp. "For us, it is very clear. We believe strongly that a good performing joint venture is healthy for qualitative growth."

Nissan likewise has no plans to change its tie-up with Dongfeng Motor Corp. But Jose Munoz, Nissan's chief performance officer and China chairman, said not every automaker may be as satisfied.

"This new regulation is going to show clearly who is happy with their partner and who is not, and offers new opportunities," he said. "For the time being, we, obviously, are very happy."

## **Aisin to form automatic transmission joint ventures with GAC, Geely**

Aisin Seiki is establishing joint ventures with GAC Motor Co. and Geely Automobile Holdings to build six-speed automatic transmissions for the two major Chinese car-makers, the Japanese supplier said last week.

Aisin Seiki will take a 60 percent stake in each of the joint ventures while GAC and Geely will hold the remaining 40 percent interest.

The partnership with GAC will be incorporated in the south China city of Guangzhou where GAC is headquartered, while the joint venture with Geely will be in the east China province of Zhejiang where Geely is based, according to Aisin Seiki.

The two partnerships will be established this year, each with registered capital of \$117 million (737 million yuan). Production at each joint venture is to begin in 2020.

Each partnership will have capacity to produce up to 400,000 six-speed automatic transmissions a year.

The joint ventures are part of Aisin Seiki's efforts to ramp up automatic transmission output in China to meet demand from Toyota Motor Corp. and domestic Chinese car-makers.

The Japanese supplier currently builds automatic transmission at a joint venture formed in 2004 with China FAW Group Co. in the north China port city of Tianjin. It is expanding the partnership's capacity to 800,000 automatic transmissions from 600,000 now.

Aisin Seiki is also retooling the production lines at its wholly-owned manual transmission subsidiary Tangshan Aisin Gear Co. to enable the unit to make six-speed automatic transmissions.

Tangshan Aisin Gear, in the north China city of Tangshan, will start producing automatic transmissions in August 2019. It is expected to build 400,000 six-speed automatic transmissions for automakers operating in China.

## **Harman expands Suzhou auto electronics plant**

Harman International, a subsidiary of Samsung Electronics Co., has completed expansion of its automotive electronics factory in the east China city of Suzhou.

The expansion, which cost \$6.8 million (43.2 million yuan), will enable the plant to double production capacity for automotive audio, connected car and related products, Harman said.

The Suzhou plant, established in 2006, was Harman's first production site in China.

The plant develops and produces digital sound reproduction equipment, including digital signal amplifiers and speakers, audio and visual control center systems, Bluetooth, navigation and multimedia systems.

It serves more than 20 global and Chinese car-makers, including Audi, BMW Group, Daimler, Toyota Motor Corp., Hyundai Motor Co., Fiat Chrysler Automobiles, Great Wall Motor Co., GAC Motor Co. and Geely Automobile Holdings.

In addition to Suzhou, Harman has a plant in the northeast China city of Dandong. It also runs r&d centers in Shanghai, Shenzhen, Chengdu and Suzhou.

The U.S. supplier has more than 3,700 employees in China.

## **Nidec to start Chinese production to ride electric car boom**

Nidec will spend 30 billion yen (\$274 million) to build a factory in China that will produce motors for electrified vehicles, hoping to gain a foothold in the world's largest green car market.

The plant will produce traction motors for electric, plug-in hybrid and fuel cell vehicles, with mass production starting in May next year. When fully operational, it will make enough motors to supply about 700,000 electrified vehicles.

Nidec will employ the technology that goes into its computer motors to develop the vehicle motors. Compared to competitors' motors, Nidec's products will take up half the cubic volume, resulting in less load on the autos. In addition, the company will step up local procurement of components.

The factory will be located in Pinghu, a city near Shanghai and plants of General Motors, Volkswagen and other global players. China will allow foreign capital to fully own mainland auto ventures by 2022, and the one-party state is encouraging Tesla and other electric vehicle manufacturers to build factories within its borders. Incentives are also being rolled out for parts suppliers.

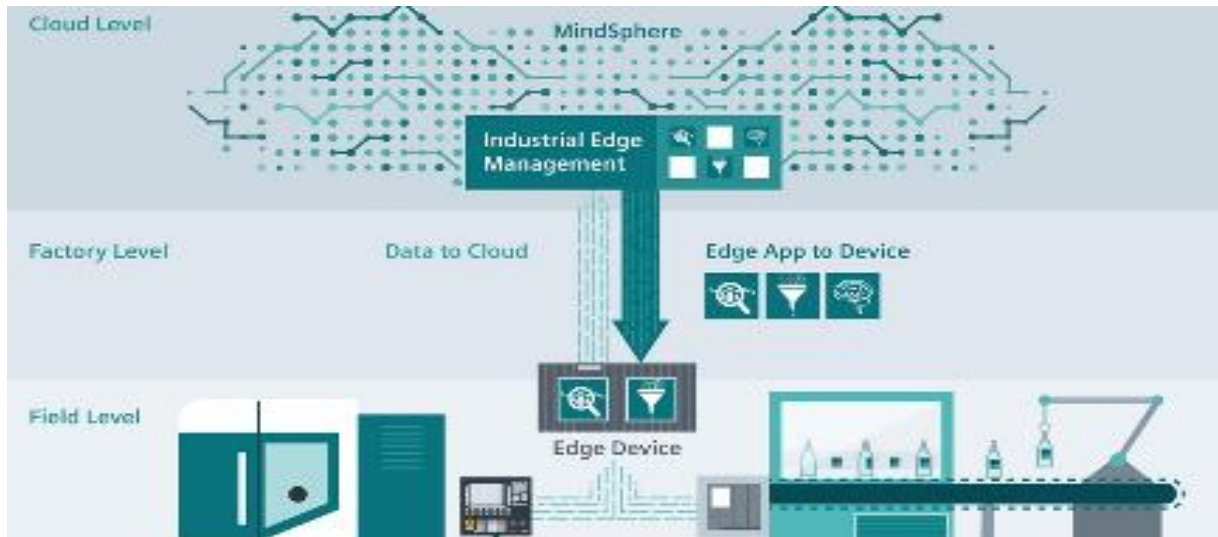
At the same time, China is aggressively promoting electric vehicles to combat carbon emissions. Automakers will be hit with sales and production quotas of new-energy vehicles starting next year.

About 1.42 million electric and plug-in hybrid vehicles were sold last year worldwide, according to Chinese government statistics, and China accounted for more than half of them. British market intelligence firm IHS Markit estimates that global electric vehicle demand will rise to 8.43 million units in 2030, or 11 times last year's sales.

Chinese automaker BAIC Group aims to sell 1.5 million new-energy vehicles annually by 2025. Japan's Toyota Motor will begin selling electric vehicles on the mainland in 2020. Setting up shop in the same market, Nidec hopes to capture the growing demand for motors.

Nidec expects to control a 70% global share in sales of electrified vehicle motor systems by 2025, which it forecasts will generate 100 billion yen in revenue that year. To that end, the Japanese multinational is forming a joint venture in Europe with French auto group PSA.

## Industrial Edge from Siemens adds benefits from the cloud at the field level



Siemens is introducing a digitalization platform to the market in the form of Siemens Industrial Edge: This extends automation devices by providing data processing at machine level and by bringing highly developed analysis technology and the intelligence of Edge Computing to the manufacturing area in a secure way. Siemens Industrial Edge offers users the possibility of executing a range of descriptive, diagnostic, predictive and prescriptive analytical applications. This allows cloud connectivity (data to cloud) to be used in combination with Edge Apps from Siemens, third party providers or end users themselves in an integrated hardware and software ecosystem (Edge App to Device) for automation components.

With Siemens Industrial Edge, Siemens is offering users the chance to close the gap between classic, local data processing and cloud-based data processing to suit individual requirements. Edge Computing allows large volumes of data to be processed locally. To this end, Siemens is releasing a broad spectrum of applications to users, including data processing, data visualization via web servers, data transfer to the cloud or IT infrastructures, and quick innovation cycles in the development of apps. There is also an additional reduction in memory and transfer costs as large volumes of data are preprocessed and only the relevant data is finally transferred to a cloud or IT infrastructure. Siemens Industrial Edge supports cloud transfer protocols for MindSphere, Siemens' own open, cloud-based operating system. In the future, it will also support Message Queuing Telemetry Transport (MQTT), making data transfer safe, secure and effective.

Stable processes and increased productivity for machine tools

Industrial Edge with Sinumerik provides a machine-level platform for software applications which captures, preprocesses and analyzes high-frequency data. In addition to this, calculations can be carried out for complex machine tools and auxiliary process times or workplace monitoring can also be optimized. Both operating system and application in Industrial Edge for Sinumerik are installed and continuously kept up to date via backend services on MindSphere, the open, cloudbased IoT operating system from Siemens. Industrial Edge for Sinumerik thus provides users with continuously stable process and condition monitoring as well as significantly higher productivity.

Siemens is offering users a platform for implementing today's demands and those of the future in the form of Industrial Edge with Simatic. Automation components such as Simatic controller are provided with supplementary support through Edge Devices in order to process greater volumes of plant data profitably and to gain information for a continuous increase in productivity. At the same time, new applications such as condition monitoring or predictive maintenance are being introduced into classic automation technology. In addition to this, Edge Computing also provides access to previously unknown degrees of flexibility, allowing plants to be kept right up to date via functional, feedback-free updates - and all within standard plant life cycles for automation. Siemens apps development supports users with frameworks and access to integrated connectivity to the world of automation.

## **TOMAN held Q1 business summary of 2018**

In April 29th, TOMAN group successfully held the first quarter operation summary of the first quarter of 2018 and the "virtual equity" incentive commendation conference in the first quarter of 2018. The meeting summarizes and analyzes the implementation of the first quarter operation plan and the implementation of major projects, the deployment and implementation of the two quarter operating objectives and focus of work, and the 2017 employees "virtual equity" incentive to commend and the 2018 "virtual equity" incentive object release and other important agenda.

At the conference, the head of the group's Finance Department reported the financial budget report in the first quarter of 2018, and the departments, subsidiaries and two centers reported on the main business objectives, major projects, the completion of the key work in the first quarter of 2018, and the key work plan and deployment of the two quarter.

After hearing the report, Yu Zhaojie, the president of the group, pointed out that the overall development trend of the group was developing towards a healthy direction, insisting on the adjustment of the industrial strategy. In the next stage of development, we should develop from subdivision to subdivision and general industry, from providing local solutions to the system solution, and strive to complete the manufacturing of equipment. Business to equipment manufacturer + service provider transformation and upgrading.

## **Fanuc foresees big earnings drop in China trade war**

Japan's Fanuc, one of the world's premier industrial robot makers, has surprised investors by forecasting a 24% drop in earnings for the year as it braces for the effects of the U.S.-China trade war and the already slowing smartphone industry.

Fanuc forecast a net profit of 137.7 billion yen (\$1.26 billion) for the year that began April 1, which would represent a decline of 24% on the year. That falls far short of the consensus view of a roughly 10% increase to around 200 billion yen.

The maker of bright yellow robotic arms sees sales sliding 13% to 634.2 billion yen, while analysts had anticipated growth of around 6%.

Fanuc, which controls most of the global market for factory automation, has been the market darling of the Tokyo Stock Exchange among foreign investors. When it held an event a week ago to showcase its products at its headquarters in the foothills of Mount Fuji, 9,000 representatives from customers gathered.

Yet Fanuc has reasons to be cautious. One factor is slowing growth in sales of smartphones. Capital spending by Chinese smartphone manufacturers has fueled Fanuc's robust earnings. Its Robodrill machines are widely used in the industry, but now manufacturers are cutting back on investments.

That much was known. Where Fanuc chose to err on the side of caution was on the potential for an escalation of the trade clash between the U.S. and China and the risk of a stronger yen.

Reduced exports to the U.S. could discourage Chinese manufacturers from making the kind of labor-saving, quality-boosting factory investments that Fanuc has profited from in recent years.

As for the Japanese currency, Fanuc based its fiscal 2018 guidance on an assumed exchange rate of 100 yen to the dollar, giving itself a wide margin of safety from the current level of around 109 yen.

For the year that ended March 31, Fanuc's net profit jumped 42% to 181.9 billion yen on a 35% rise in sales to 726.5 billion yen. Demand for industrial robots grew in the U.S., Europe and China, while numerical control devices -- which serve as the brain for machine tools -- also sold well.

## United Grinding to Focus on Intelligent Production

CCMT 2018 was held from April 9 to April 13 in Shanghai. United Grinding Group showed 7 sets of precision grinding machine / measuring machine from 8 brands (STUDER, SCHAUDT, MIKROSA, WALTER, EWAG, MÄGERLE, BLOHM, JUNG) belonged to it, which had gain a lot of attentions on the show.

As a global group, UNITED GRINDING group had produced and delivered more than 145,000 sets of machine all over the world, which takes 27% of the global grinding machine market share. And UNITED GRINDING Group is one of the ten biggest machine producer in Europe. Now the turnover of China market takes around 25% of its global amount. China had become the third important strategy market around the world, just after Europe and North America.

Facing the coming of digital manufacturing times, the global machine tool industry had launched series of new technologies and new products to follow the trends of industrial development. China had raised the strategy planning of “made in China 2025” in 2015, which focused on the promotion of digital manufacturing and intelligent manufacturing. It is an inexorable trend of transforming from digital manufacturing to intelligent manufacturing in the development of Manufacture Development. UNITED GRINDING also hope to grow with China market during this “Made in China 2025” trends and make its effort. On the media meeting and CONNECT Customer event during CCMT, GM of United Grinding (Shanghai) Ltd. Mr. Jo Santens had expressed his confidence of development of China market in the future. UNITED GRINDING China had gained gratifying achievements in 2017. WALTER 5-axes CNC tool grinding machine HELITRONIC ESSENTIAL AUTOMATION, which was launched at the beginning of 2016 to the China market, got much more orders than expected. The order number also showed the prospective and correctness of UNITED GRINDING Group putting China market as the third global market.

By 2018, UNITED GRINDING China had launched two kinds of local assembling machine in China. They are STUDER KC 33 and WALTER HELITRONIC ESSENTIAL AUTOMATION. In the coming future, there would be more machine adding into local assembling list. Let us expect the more precise future made by UNITED GRINDING.