CYBERWORLD

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Mazak's Challenges and Innovations to Lead Global Manufacturing Towards a Brighter Future



New Year's Greeting

President Takashi Yamazaki



We would like to extend our best wishes for the New Year.

Last year, technology industries, including generative AI, led the growth of the global economy. Additionally, against the backdrop of a declining working population, capital investment aimed at process integration and labor-saving became more active, and orders in the machine tool industry remained firm. IMTS was held in the US, AMB was held in Germany, and JIMTOF was held in Japan, with many visitors visiting every day. We are once again aware of the high expectations placed on our products and technologies, and have renewed our determination to step up our efforts to meet those expectations. Looking at industrial trends, in the automotive industry, manufacturing is changing due to the advancement of electrification and innovations such as gigacasting which integrally molds large structural parts. Amid these changes, we developed and began selling the "FF-1250H" horizontal machining center last year, which is ideal for mass-producing large aluminum die-cast parts that are integrally molded. It is equipped with a tilting rotary table that can accommodate large workpieces such as automobile subframes and achieves process integration by performing multi-face machining in one chucking. In this way, we will continue to develop products that meet new processing needs resulting from changes in manufacturing processes and contribute to the advancement of manufacturing.

As part of our efforts to develop labor-saving solutions, we have added a new lineup to our easy-to-use automated cell, the "Ez LOADER" series. The "Ez LOADER 125i," which uses an industrial robot, can handle heavier workpieces and has improved operating speed, while maintaining the high operability for which the Ez LOADER series is known. We will continue to provide optimal automation solutions tailored to our customers' needs.

Mazak

As a machine tool manufacturer that supports the foundation of manufacturing, we are working to achieve both reduced power consumption and improved machining performance in order to realize a decarbonized society. Last year, we expanded the "NEO Series" with enhanced energy-saving functions and announced many new products, including the 3-turret / 2-spindle CNC turning center "HQR-200/3 NEO and HQR-250/3 NEO." We have also started selling a new product, "VCN-460 HDCC," which uses inhouse produced mineral cast material in its structure. Mineral casting has excellent properties as a material, such as high vibration damping, which contributes to shortening cycle times and improving the guality of machined surfaces. In addition, since hightemperature melting processing is not required during manufacturing, energy consumption can be significantly reduced compared to casting production, which also leads to an improvement in the working environment. We will continue to develop products that reduce the environmental impact while improving productivity.

The transfer of skills and the improvement of working environments are issues that the entire manufacturing industry faces.



At our company, we are actively working to review our manufacturing processes, which are currently performed manually by skilled workers, to reduce the number of workers required and automate the process. We intend to pursue the creation of nextgeneration manufacturing sites that make maximum use of machine and robot technology, are comfortable to work in, and enable people to create greater added value.

Amid the changing and increasingly uncertain environment surrounding the manufacturing industry, we strive to meet our customers' expectations and be a presence that supports the future of manufacturing. The entire group will continue to work together to develop and provide solutions that help resolve our customers' issues.

We look forward to your continued patronage this year and wish you all the best in your health.

Event Report 2024

Promoting information of new products and technologies around the world! Mazak's solution proposal

Under the slogan "DISCOVER MORE WITH MAZAKTM," Mazak provides solutions for recent issues in manufacturing, tailored to the region and industrial characteristics at the exhibitions held in each market.

The economic environment surrounding the manufacturing industry and issues the industry faces

The economic environment surrounding the manufacturing industry is becoming increasingly complex, with changes in industrial structure, restructuring of supply chains, rising energy costs, and responses to climate change due to inflation centered on major countries and geopolitical risks. Meanwhile, one of the major challenges facing the manufacturing industry is the chronic labor shortage caused by a decrease in the working population due to a declining birthrate and aging population. Looking at the trend in the world's working-age population ratio (Figure 1), the labor force, which plays a central and important role in economic activity, has been on the decline since around 2010. Looking at the domestic situation, in the approximately 20 years since 2002, the number of people employed in manufacturing has decreased by approximately 1.5 million people (Figure 2). To address this labor shortage, various industries are calling for innovations such as automation, utilization of digital technology and Artificial Intelligence (Al). In our industry too, turning centers and machining centers are being replaced by 5-axis and multi-tasking machines, which can integrate their processes, and the trend toward automation and labor-saving is accelerating.

(Figure 1) Changes in the global working-age population ratio

(Figure 2) Changes in the number of manufacturing workers in Japan

JIMT0F2024 Innovations in Manufacturing by MAZATROL

See, touch, experience. Innovation that seized the attention of customers

The Japan International Machine Tool Fair - JIMTOF 2024 was held at Tokyo Big Sight for six days from November 5th to 10th last year. The total number of visitors was approximately 129,000, 13% higher than the previous exhibition, and the number of visitors from overseas doubled, making the exhibition a huge success. Many customers also visited the Yamazaki Mazak booth. The theme of the exhibition was "Innovations in Manufacturing by MAZATROL." With the ever-evolving CNC system "MAZATROL", proudly in its 44th year of service since its debut in 1981, as the main content, the entire booth was dedicated to showcasing the comprehensive solutions that MAZATROL can control. This includes process integration, advanced manufacturing technologies such as gear machining, grinding, oscillation cutting, automation, digital support and energy-saving technologies.

Mazak had the largest booth of any exhibitor, displaying 19 cutting-edge machine tools, laser processing machines, and automation systems such as robots and Multi-Pallet Pool (MPP). Six new products and two advanced manufacturing technologies: grinding and profiling were introduced at the booth. Among the new products, the 5-axis machining center VARIAXIS C-700 was popular as a model that offers excellent cost performance and high productivity due to its powerful spindle and well-balanced, highly rigid structure. Customers also had the opportunity to experience the high productivity of the FT-150 NEO, a laser processing machine for pipe processing that can be easily programmed and scheduled through integration with CAD/CAM.

We also exhibited the "VCN-460 HDCC", which uses mineral casting, a highperformance composite material produced in-house. Compared to normal casting, mineral casting has benefits such as lower energy consumption in the manufacturing process, high vibration damping and thermal stability. We have also focused on Electric Vehicle (EV) applications, which are expected to grow in the future. As one of our proposals to the industry, we demonstrated multi-face machining of subframes, which are large, aluminum workpieces

Automated cell with industrial robot combined with a multi-tasking machine

INTEGREX i-450H + EZ LOADER 125 i

Ez LOADER 125i can transport workpieces weighing up to 45kg (99.21lb), and its high transport speed of 3000m/sec (9842.5 ft/sec) makes it suitable for mass production, and by changing the hand, it is possible to transport a wide variety of workpieces. It uses a dedicated software called "Ez LOADER APP", which makes it easy to introduce the robot and does not require complicated robot teaching.

integrally molded by gigacasting, using "FF-1250H", a horizontal machining center with a two-axis rotary table. We also proposed high-speed Friction Stir Welding (FSW) to improve the cooling performance of battery cases and motor cases. In terms of environmental performance, we introduced Energy Saver and Smooth Coolant System as technologies for reducing CO₂ emissions during machine tool operation, which attracted the attention of many customers. In the metal processing industry, there is a growing need for automation due to labor and skill shortages, as well as demands for cost reduction in light of rising raw material prices. However, there were many cases where companies were willing to invest but were hesitant to do so, with comments such as, "We're considering automation, but we don't know whether a gantry loader or a collaborative robot is better," and "We're hesitant to introduce automation when the future is so uncertain." Yamazaki Mazak exhibited a number of systems,

including the Ez LOADER series of easy-to-install robot systems as automation solutions to eliminate these concerns, as well as gantry loaders and pallet-changers, and introduced system solutions tailored to customer needs. In addition to the exhibited machines, we had many solution-focused corners,

Ez LOADER 125

such as interactive programming experience, digital setup, digital support, energy-saving technology, Additive Manufacturing (AM) / FSW, etc., to showcase ease of use and convenience. In particular, the digital setup for the MAZATROL DX gained positive feedback that it was more specific than other companies in terms of the data shift between the digital machine in the office PC and the machine on site.

The ultimate process-integrating machine that handles everything from gear machining to grinding INTEGREX i-350H AG GRINDING PKG

By consolidating the processes of product machining, gear machining, and grinding into one machine, the time and effort required for setup and delay time between processes can be eliminated. Dressing and unique sensing technology also enable high-quality grinding. The Smooth Coolant System ensures the thorough disposal of sludge and other cutting chips.

Taking on three industries with growth potential using 5-axis machines

The United States' largest machine tool exhibition, IMTS2024 (International Manufacturing Technology Show), was held in Chicago, Illinois, USA from September 9th to 14th last year. The number of exhibitors reached 1,737, and over the six-day event a total of 89,020 people from over 110 countries visited the venue in search of the latest manufacturing technologies, with a focus on automation.

The theme of Mazak Corporation was "Learn More, Do More and Make More," helping customers improve their machining skills and productivity. At our booth, we proposed a variety of solutions to challenges facing the manufacturing industry, such as a shortage of skilled workers and the need to improve productivity. Among them, multi-tasking machines such as the INTEGREX series and 5-axis machining centers like the VARIAXIS series were popular machine tools with the visitors. Especially, the demonstration of 5-axis multi-face machining for complex-shaped workpieces drew a noticeable amount of attention of the visitors.

As a high cost-efficiency model for customers at job shops, the

Ez series, which consists of CNC turning centers and vertical machining centers, were also popular machine tools at the booth. Digital / automation solutions gained popularity comparable to that of machine tools. The newly announced Ez LOADER, which can automate the attachment / detachment of workpieces, and the Mazak SMARTBOX[™] 2.0, which can safely connect all machines at the site into one network, received a great amount of attention among the solutions.

The U.S. economy is expected to remain stagnant through fiscal 2024, making the situation difficult for the manufacturing industry. However, IMTS shows that the need for improving productivity remains high, and the outlook for North American manufacturing is bright in the long term. Among the industry, three markets are expected to see particularly large growth in demand: medical, space development, and aviation.

Growing product groups in the medical sector include implants, instruments, and sterilization equipment for surgery. There is a high demand for multi-tasking machines for workpieces that require machining of complex shapes using new materials, and multi-axis machining centers for workpieces with simpler shapes. In the field of space development, there is a growing need for machines that can handle both turning and milling of large, complex cylindrical parts with a vast array of angled holes and other features

In the aviation industry, our machines are used to process many parts, including wheels, brakes, landing gear, and engines, but in recent years, expectations have been growing for the manufacture of large parts, just as in space development. Mazak Corporation is keeping a close eye on industries where demand is growing and we are steadily preparing to provide products and automation / DX solutions that meet our customers' needs to make an approach to these industries.

5-axis machining center with high precision and environmental performance

VARIAXIS | NEO SERIES

This 5-axis machining center boasts high environmental performance while also having a wide range of spindle variations and automation options, which are the strengths of the VARIAXIS i series. It can reduce power consumption using MAZATROL and is equipped with a Smooth Coolant System that reduces the frequency of coolant changes.

Highly cost-effective US-made 5-axis machining center

VC-Ez 20X

A 5-axis machining center with a simple structure and easy installation, designed and manufactured in Kentucky, USA. Although it is a cost-effective model, it is equipped with a thermal shield to reduce effects of thermal displacement and an MX hybrid roller guide that enables highprecision positioning, achieving highprecision machining.

Increasing demand for high-cost performance machines that meet market needs

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FABTECH is the largest trade fair for metal forming, processing, and welding in North America, held every fall. Last year, it was held in Orlando, Florida from October 15th to 17th, ahead of the presidential election. FABTECH 2024 featured more than 1,500 companies from around the world and welcomed more than 30,000 visitors over three days. In the United States, the shortage of workers is a common issue across the manufacturing industry, and many companies have proposed automation using robots.

Rising inflation in the United States has created a demand for low-cost products. To meet this market demand, Mazak Optonics Corporation exhibited the OPTIPLEX 3015 Ez, which provides excellent cost-effectiveness while maintaining the convenience of the OPTIPLEX NEO series. It offers high-guality cutting capability at an affordable price point, making it accessible to customers considering the introduction of a new laser processing machine. The live demonstration showcased at the booth attracted a lot of interest from visitors looking for a cost-effective product.

A demonstration of the loading and unloading of materials and sorting of parts using the sorting system also attracted a lot of attention. Other exhibits at the booth included a demonstration of high-speed, high-precision cutting using the OPTIPLEX 4220 NEO, an introduction of the Orange Support app - a unique support application from Mazak Optonics Corporation, videos introducing new products, and case studies of customers who have installed Mazak machines. The next FABTECH 2025 will be held in Chicago, Illinois. Mazak Optonics Corporation will continue to focus on automation systems that deliver high productivity and efficiency, as well as focusing on proposing solutions for laser cutting of pipe and structural material, such as the CNC system "SmoothTUBE" and CAD/CAM software "TUBE DX."

Partnerships with customers built through automation and process integration

The machine tool trade fair AMB2024 (International Exhibition for Metal Working) was held in Stuttgart, located in southwestern Germany, from September 10th to 14th last year. 1,244 companies from 28 countries around the world exhibited, and a total of 65,584 people visited the event during the period. This year's exhibition saw many cutting-edge proposals for automation systems that combined machine tools and robots, against the backdrop of the labor shortage issue in Europe. Under the theme of "Innovation through partnership, shaping the future together," the company promoted "Team Mazak" to express its desire to deepen relationships with customers and suppliers, and exhibited a total of seven machines, including new products and automated solutions, as well as environmental and digital solutions. The new model HQR-200/3 NEO, which was unveiled simultaneously in Europe and the US ahead of the rest of the world, drew attention

for its unique three-turret, two-spindle machine structure that reduces cycle time by 24% compared to conventional two-turret machines. Many visitors were also interested in the INTEGREX i-250H ST AG, which can perform everything from gear machining to milling and turning on a single machine, enabling significant process integration. The European-developed 5-axis machining center CV5-500 took the venue by storm with a digital twin demonstration in front of the machine. Many visitors also stopped by the MAZATROL DX area. which featured robotic automation, environmentally friendly features such as the Smooth Coolant System, and digital transformation of work processes.

During AMB2024, we held a social gathering with customers under the name of Team Mazak, and also ran a LinkedIn follow campaign using influencers, which were both well received.

Highly efficient 3-turret / 2-spindle CNC turning center

HQR-200/3 NEO

The unique 3-turret / 2-spindle machine structure not only allows for simultaneous machining of two workpieces on the left and right, but also allows for balanced cutting using the upper and lower turrets at the same time. The lower turret can approach both the first and second spindles, so for workpieces where there is a difference in the amount of machining between the first and second processes, it achieves significant productivity improvements compared to a 2-turret 2-spindle CNC turning center.

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2024

Boosting

Your

Productivity

EuroBLECH 2024 (27th International Sheet Metal Working Technology Exhibition) was held for four days from October 22nd to 25th last year at the Hannover Exhibition Center in Germany. The exhibition was held across nine exhibition halls, covering a total exhibition space of over 160,000 m² (1,722,222 sq.ft.), and attracted 1,317 exhibitors from 40 countries and 38,946 visitors from 114 countries.

Under the theme of "Boosting your productivity," the main exhibits were high-output laser processing machines and automation systems that meet the market needs for high efficiency, high precision, and high cost-effectiveness. With the global economy in a slump, many European manufacturers are still cautious about investing, but Mazak demonstrated that it is possible to improve technological capabilities even in uncertain times.

The large-scale automated system, which combined the costeffective OPTIPLEX 3015 Ez with a sorting system and eight

High-speed laser processing machine for pipes with a new CNC system

FT-150 NEO & SMOOTHTUBE

High-speed, high-precision cutting using U-axis control enables high-quality, high-productivity processing of various pipes. In addition, by installing the optional rotating tool unit, drilling and tapping processes can be consolidated into one machine. The new CNC system. SmoothTUBE, offers significantly improved operability and helps to increase productivity.

Towards a brighter future for global manufacturing

The global manufacturing industry is facing a variety of challenges, including a shrinking working population. Through exhibitions held around the world, Mazak proposed new products and technologies, such as process integration machines, advanced processing technologies, high-costeffectiveness machines, and automation systems, as solutions to challenges faced by the industry and customers. We will continue to build partnerships with each and every customer in each country, working together as a group to tackle common global issues and realize groundbreaking innovations that lead to improved productivity for our customers.

Total laser solutions that paves the way to economic recovery

shelves, was exhibited in response to the needs of those wanting to solve the current issues of labor shortages and labor-saving. They demonstrated everything from processing to sorting, and it was the highlight of the booth, catching the attention of customers. The 20kW high-output fiber laser processing machine OPTIPLEX 3015 NEO, equipped with the new GRAND CUT technology, highlighted superior cutting capabilities on thick materials using various assist gases, earning significant visitor commendation. The booth also displayed the friction stir welding machine FSW-460V, introducing that by cutting the workpiece with a laser processing machine and joining them by friction stir welding, it is possible to shorten production lead times and reduce costs. Additionally, customers involved in pipe and section steel processing showed great interest in the new CNC control, SmoothTUBE, which features a large dual monitor for significantly improved operability.

echno Labo began its operation in January 2024 Many Mazak machines operate at the main factory

Focusing on manufacturing based on the local industry

SHINZU KOGYO Co., LTD. was founded in 1959 by President Hiroshi Kimura's father and became a corporation in 1997. The business, which began with metal processing for local Hamamatsu products such as motorcycles and musical instruments, has expanded to include IT and semiconductor-related parts and medical equipment in response to changes in the market. Most of the machinery and equipment used is Mazak, with over 40 machines in operation at the main factory, including the VCN series vertical machining center. "Most visitors are amazed when they open the factory door and see the neatly arranged Mazak machines before their eves." says President Kimura. When the company was founded, they also used machine tools made by other companies. President Kimura states, "when we introduced a vertical machining center in the late 1980s, we were astonished by the ease of use of the MAZATROL. Its excellent usability and easy-to-learn system also translates into operator training, so Mazak is our go-to choice for cutting machines." The company's current sales consist of 60% transportation equipment parts, robot parts, and semiconductor-related parts, 25% optoelectronic components and medical equipment, and 15% others. Mazak machines are deeply involved in the manufacturing of all of these products.

VCN and Ez LOADER contribute to labor-saving and automation

The company's products made by Mazak machines have been highly praised for their precision and delivery time. However, one day, one of the major clients of the company came and requested manufacturing of "massproduced products with a tolerance of ±1 µm." The existing production system was not enough to meet this request. To meet this stringent precision requirement, the company decided to open Techno Labo.

The aim of opening Techno Labo is to improve the processing efficiency of high-precision optoelectronic components and establish a mass production system in response to the requests of the company's main client. The key to this is "advanced production through high-speed machining, automation, and 24-hour operation." To achieve this, Techno Labo currently has

Workpieces processed by Mazak machine Optoelectronic componen machined on a vertical

machining center

Mazak machines are orderly lined up

in a research institute-like space

President Kimura (right) and

the executive members

Customer Report SHINZU KOGYO Co., LTD.

A modern factory built around Mazak machines for advanced production

President Head office

Tovota Factory

Techno Labo

Number of employees : 42

Techno Labo, a new factory run by SHINZU KOGYO Co., LTD. (Hamamatsu City, Shizuoka Prefecture), a manufacturer of precision parts, began full-scale operation in January 2024 with the aim of massproducing optoelectronic components, and is progressing smoothly. The spacious factory, which is centered around Mazak machines, is filled with an atmosphere reminiscent of a laboratory, as its name suggests.

SHINZU KOGYO Co., LTD.

∲SHINZU

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President Kimura talks about the company's prospects President Kimura (center) and the operators

An one-stop service, including in-hous measurement, is provided

seven VCN-460s, two VARIAXIS j-500s, and the collaborative robot Ez LOADER 20. "We introduced the VCN-460 because high precision and high-speed machining are required for mass production of optoelectronic components. The Ez LOADER 20 contributes to automating workpiece loading and unloading. By automating the process, there is no need for people to be constantly there at the production line. It can operate continuously 24 hours a day, making it possible to 'stock up' production at night," President Kimura says. By combining VCN-460 with Ez LOADER 20, the processing time per optoelectronic component housing has been reduced. In addition, the amount of processed products per day increased by 1.8 times. By eliminating the operators' waiting time, Techno Labo has also been able to further reduce the number of staff required.

Mazak machines that captured the hearts of high school girls

A year has passed since Techno Labo has started its full operation, and it has been steadily achieving success in terms of production with the VCN-460 and Ez LOADER 20. It is also achieving success in the current tough hiring environment. The average age of the company's employees is 30, which is young for a Japanese company. This is because there are a number of high school graduates, including female students who do not major in engineering, join the company each year." They were in awe of the clean, air-conditioned interior, the young employees, and the way Mazak machines were used, which they saw in the factory tour. By using MAZATROL, even novice workers can enjoy machining as if it were a game. "Kimura expresses. It was said that those girls were so interested in controlling MAZATROL, that they asked the tour staff if they can try machining the materials themselves. Now, those girls work as employees at the company, operating MAZATROL and engaging in machining tasks daily at Techno Labo. The proactive introduction of equipment, systems that realize highprecision machining, and the continuous development of human resources who can use them, will be the driving force for SHINZU KOGYO Co. LTD to meet the needs of its customers.

A female employee performs machining using the CNC system MAZATROL

Reliable technical expertise from the Land of Smiles, Thailand

In the vibrant Muang Chonburi district, the capital of Chonburi Province, ACA Industrial Tools manufactures the machine parts that specializes in precision machining. They strive daily to improve quality, production processes, and services, supplying products not only domestically in Thailand but also to renowned companies worldwide, ncluding those in Japan.

INTEGREX i-450H contributes to higher productivity

TODUMAX

ACA Industrial Tools Co., Ltd. President & CEO : Arnon Prakraiwar 68 Moo1 T. Napa A. Muangchonburi Headquarters Chonburi 20000, Thailand Number of Employees : 270 ww.acaindustrial.co.th

Employees of ACA Industrial Tools Co., Ltd

President Arnon Prakraiwan

Office employees supporting the company's manufacturing

VARIAXIS i-600 for fixture machining

Mazak machine forging a brand-new path in business

ACA Industrial Tools was founded in 2002, by the current three presidents, Mr. Arnon, along with Mr. Champa and Mr. Apichai. They initially introduced used general-purpose machines and most of the orders came through their friends. In order to expand their business and meet the demands for high-precision machining required across a wide range of industries, they decided to introduce Mazak machines. As a result, it led them to achieve in machining of complex-shaped parts, as well as production of various parts in small quantities, and designing fixtures that were once said to be difficult to do in house even for major leading industrial manufacturers in Thailand. Accordingly, they have steadily improved their business performance. Today, the company primarily engages in manufacturing parts for heavy industries such as automotive and construction machinery manufacturers. They also fabricate FA devices tailored to their customers' production facilities and needs. They also undertake the production of special components, fixtures, and molds of precision machine parts including design, manufacture, and welding. With a variety of machines such as lathes, milling, grinding, electrical discharge (EDM), and wire cutters, it makes it possible to achieve to provide all manufacturing processes from design to manufacturing in "one stop."

Meeting customer demands with high precision and productivity

Since introducing the first Mazak machine in 2006, ACA Industrial Tools now has a total of 16 Mazak machines, including the multi-tasking machine INTEGREX i-450H and the 5-axis machining center VARIAXIS i-600.

In particular, VARIAXIS i-600 with fixture machining increased their productivities. Parts that were previously required machining on several 3-axis machines with special tools can be machined on a single machine, reducing tool breakage and downtime

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	Workpiece
/_	processed by
/_	Mazak machine
	Parts of die sets processed by Mazak

High-precision machining with VARIAXIS i-600

Easy programming with the MAZATROL CNC system

that had been troublesome for operators. They strictly achieve machining accuracy of dimensions, hole pitch, geometric tolerances, and the ±10µm tolerance of ultraprecision machining, as required by their customers in overseas

Moreover, the conversational programming of MAZATROL is another strength. Not only does it shorten the process until the machining starts up, but it is also user-friendly even for newly hired operators, contributing to staff training.

Mr. Attanon, the International Marketing Manager, describes the impact of Mazak machines as follows: "Mazak is well-known in our industry for its high reputation and reliability. By using Mazak machines, we can meet the precision machining requirements demanded by customers in various industries, contributing to our value-added production."

Towards further development

Achieving significant growth in just over 20 years since its establishment, ACA Industrial Tools aims for further development with two goals. One goal is to focus on precision machining parts. Though their current business mostly consists of parts for heavy industries, they plan to expand into the increasingly promising field of precision machining to broaden their business scope. Another goal is to strengthen relationships with Japanese companies. Although they have been supplying products to renowned companies worldwide, they aim to meet the high-quality requirements from Japanese companies and gain further reliability. Mr. Attanon emphasizes that introducing new machines represents a significant decision and investment. "We need to carefully consider our purpose and needs when introducing a new machine. In terms of part processing, Mazak machines makes it possible to meet the needs of various industries and sectors. As one of the users of Mazak machines, I highly recommend them." ACA Industrial Tools continues to thrive with Mazak machines

Mazak News & Topics

"Mazak Turning Center 2500R" certified as a Mechanical Engineering Heritage by JSME

Ryuichi Fujisawa of CU Business Unit was awarded the Medal with Yellow Ribbon

Mr. Ryuichi Fujisawa of the CU Business Unit (Quality Assurance Section) was awarded the Medal with Yellow Ribbon in autumn of 2024. The Medal with Yellow Ribbon is awarded to individuals who have made exemplary efforts in fields such as agriculture, commerce, and industry and who have demonstrated exemplary skills and achievements. Since joining the company in 1984, Mr. Fujisawa has been involved in the assembly of machine tools for over 30

years, during which he has established work methods that contribute to finishing high-precision spindle units and improving the productivity of spindle assembly. These achievements were highly evaluated, leading to this award. With this latest award, the total number of Yamazaki Mazak Group employees to receive the Medal with Yellow Ribbon has reached 11. We will continue to strive to develop human resources with advanced skills, and contribute to the development of manufacturing around the world by providing high-performance machine tools.

The Mazak Turning Center 2500R (MTC-2500R), an NC lathe owned by the Yamazaki Mazak Museum of Machine Tools (located in Minokamo City, Gifu Prefecture), has been selected as a Mechanical Engineering Heritage by the Japan Society of Mechanical Engineers (JSME). The MTC-2500R, manufactured in 1970, was Japan's first domestically produced NC lathe to be exported to the United States. It is a historic machine tool that made a significant contribution especially to the development of the aerospace industry. The export of this machine led to Japan-made NC equipment being highly acclaimed on the global market, and this became an opportunity for the standard of Japanese machine tool technology to be widely recognized.

In 2008, the machine was retrieved from the United States and refurbished by skilled craftsmen at Yamazaki Mazak Corporation. Currently, the MTC-2500R is on working display at the Yamazaki Mazak Museum of Machine Tools, and is highly regarded as a valuable resource for learning about the principles and structure of NC machine tools. Its historical significance has been widely recognized, and it has now been officially certified as a "Mechanical Engineering Heritage Site."

Hiroyuki Kurita of Minokamo Factory's CS Section selected as a "Contemporary Master Craftsman"

Mr. Hiroyuki Kurita from the CS Section at Minokamo Factory has been selected as the "Outstanding Skilled Worker (Contemporary Master Craftsman)" for the fiscal year 2024. The "Contemporary Master Craftsmen" award is a system in which the Minister of Health, Labor and Welfare recognizes individuals who have contributed to industrial development with their outstanding skills. Since joining the company, Mr. Kurita has

been involved in the manufacturing of

machine tools, and has been engaged in tasks such as machining, machine assembly, and maintenance management. He received this award in recognition of his efforts to utilize the advanced skills and knowledge he has cultivated over the years to automate production, review assembly processes, and train the next generation of service engineers. Mr. Kurita's efforts have made a significant contribution to improving our production efficiency and passing on skills. The Yamazaki Mazak Group now has a total of 15 employees who have been selected as "Contemporary Master Craftsmen".

Kenton County, Kentucky, USA, declares October 31 as "Mazak Corporation 50th Anniversary Celebration Day"

TDI Challenge Finals held at European Technology Center in UK

The finals of the Design and Innovation (TDI) Challenge, sponsored by Mazak, was held at our European Technology Centre (UK) in July 2024. The TDI Challenge promotes the innovation and the creativity of students learning engineering and industry-academia partnerships. Students of age 14-19 compete for the top with their inventions based on 4 indicators research, innovation, development, and solution. 1st prize for this year's challenge was granted to Indigo Wernick who invented "Product design to help people with dyspraxia" and was awarded with prize money to support future inventions, and a ticket to watch a Cup Motorsport Race Day. Mazak proudly supports such activities to nurture the future generation of manufacturing.

In Kenton County, Kentucky, USA, where Mazak Corporation (MC) is located, the Kenton County Fiscal Court has declared October 31 as the "Mazak Corporation 50th Anniversary Celebration Day" to recognize the company's half century of contributions to the manufacturing industry through the provision of machine tools, automation systems, and manufacturing support software. Since its opening, the Kentucky facility has expanded its site area by more than 20 times and currently employs over 600 people, producing more than 70 types of products. The reason why MC has grown to a level where it can support the local economy and employment is due to the words of Teruyuki Yamazaki, the former chairman who was the president at the time of MC's founding. He said, "We should place as much importance on being close to customers as we do on pursuing advanced technology." This mindset has led to the achievements MC has made up to this day.

To commemorate the establishment of this award, Kenton County Judge Kris Knochelmann presented a certificate to MC President Daniel Janka. Upon receiving the award, Daniel said, "We're honored to make our corporate home here in Kentucky and to participate in the economic vitality of the state, This proclamation reinforces our enduring commitment to the manufacturing industry and our focus on sustained growth," expressing his hopes for the company's future leap forward.

Mazak Poland takes a step forward in environmental protection with beekeeping

Under the slogan "MAZAK Go GREEN," we are implementing various environmental initiatives at our bases around the world. Among them, Mazak Poland is one step ahead in its activities. Last spring, the company recognized the important role bees play in nature and set up an apiary on its premises. Honeybees are involved in the reproduction of 70% of plants and are essential for maintaining ecosystems. This beekeeping facility also serves as a venue for Student Day, which provides an opportunity for local students to learn about manufacturing and coexistence with nature while enjoying delicious honey.

KISLING, Moïse [1891-1953], "Mimosa and Hyacinth", 1946, Oil on canvas

THE YAMAZAKI MAZAK MUSEUM OF

https://www.mazak-art.com

Mimosa and Hyacinth KISLING, Moïse

THE YAMAZAKI MAZAK MUSEUM OF ART

In the West, the mimosa symbolizes a delicate sensibility. The hyacinth recalls the famous Greek myth about a beautiful boy named Hyacinth, who died an unfortunate death. In medieval Europe, it was also thought of as a symbol of resurrection and rebirth because it is one of the first flowers to bloom in spring. In this painting, both flowers are presented together as references to spring. The yellow of the mimosas sets off the white of the hyacinths, which are bordered on one side by green leaves. The artist has painted the yellow mimosas and white hyacinths thickly, deliberately giving them the artificial unnaturalness of fake flowers rather than attempting to capture their natural appearance. The viewer of this painting can take pleasure in the Surrealistic effect that suggests something transcending nature as well as the abstract quality of the forms painted in contasting green, yellow, and white.

The Yamazaki Mazak Museum of Art was opened in April 2010 in Aoi Higashiku, the heart of Nagoya in order to contribute to the creation of a rich regional community through art appreciation and, consequently, to the beauty and culture of Japan and the world.

The museum possesses and exhibits paintings showing the course of 300 years of French art spanning from the 18th to the 20th centuries collected by museum founder and first museum director Teruyuki Yamazaki (1928 - 2011), as well as Art Nouveau glasswork, furniture, and more. We look forward to seeing you at the museum.

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