

# CYBER WORLD



## New Year's Greeting

Feature

## Opening of The Yamazaki Mazak Museum of Machine Tools

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2020  
No. 59



# 2020

NEW YEAR'S GREETING



## New Year's Greeting

Yamazaki Mazak Corporation  
President Takashi Yamazaki

I wish you a Happy New Year.

Last year, while Japan started a new era named Reiwa, Yamazaki Mazak celebrated its 100th anniversary of its start of business. In such a milestone year for the company, I took over the presidency in June from Tomohisa Yamazaki, who is now the chairman. Since manufacturers of machine tools, which are industrial goods, tend to maintain a relatively long relationship with customers, it is important to preserve the corporate culture. I will work for the development of the company while keeping a good balance between "stability," which means the maintenance of our strong corporate culture, and "fluidity," which means the flexibility to constantly adapt to environmental changes as they occur.

Then, I will take advantage of my own experience of many years in sales activities in Japan and overseas to focus on the development of products and the supply of solutions and before and after-sales service and support that are more oriented to customers than ever. I plan to visit production sites of our customers around the world and listen directly to their opinions on products and services in our machine tool, laser and solution businesses with a hope to further reinforce our relationship of trust with them.

We opened The Yamazaki Mazak Museum of Machine Tools last year as a project to commemorate our 100th anniversary. Following the desire of the late Teruyuki Yamazaki, the former chairman, to establish a museum that teaches the importance of manufacturing to future generations, the current chairman launched the project a few years ago. The museum was covered by many mass media as a museum specializing in machine tools, which is rare in the world, and has received a large number of visitors since its opening. I would be glad if we can contribute to the cultivation of the persons who will play major roles in manufacturing in the future, as well as the development of the manufacturing industry as a whole, through the museum by informing many people including children of what machine tools are, which are essential for manufacturing, and drawing their attention to manufacturing.

Mazak is currently converting our production facilities in Japan and other countries into unique smart factories which are called Mazak iSMART Factory™. As part of this initiative, we have established last year a large-scale smart factory through the digital integration of two production facilities in Minokamo Japan based on IoT technologies. We connected the production equipment and production management systems based on IoT technologies and introduced the latest machining technologies and internal logistics management systems, which enabled us to shorten in-process time for faster deliveries and improve productivity. It is also our strength that the expertise acquired by actively incorporating AI, Digital Twins and other technologies into our own factories can be applied to our products.

The manufacturing industry has faced various challenges in recent years, including the decrease in the working population, rising labor cost and shortage of skilled employees. Under these circumstances, we recognize that it is an important mission for machine tool manufacturers like ourselves to help customers improve productivity in their entire plant management. This is realized through the proposal of automation that features convenient installation and the utilization of IoT technologies such as the smart factory, as well as the increasing compatibility of our products for automation.

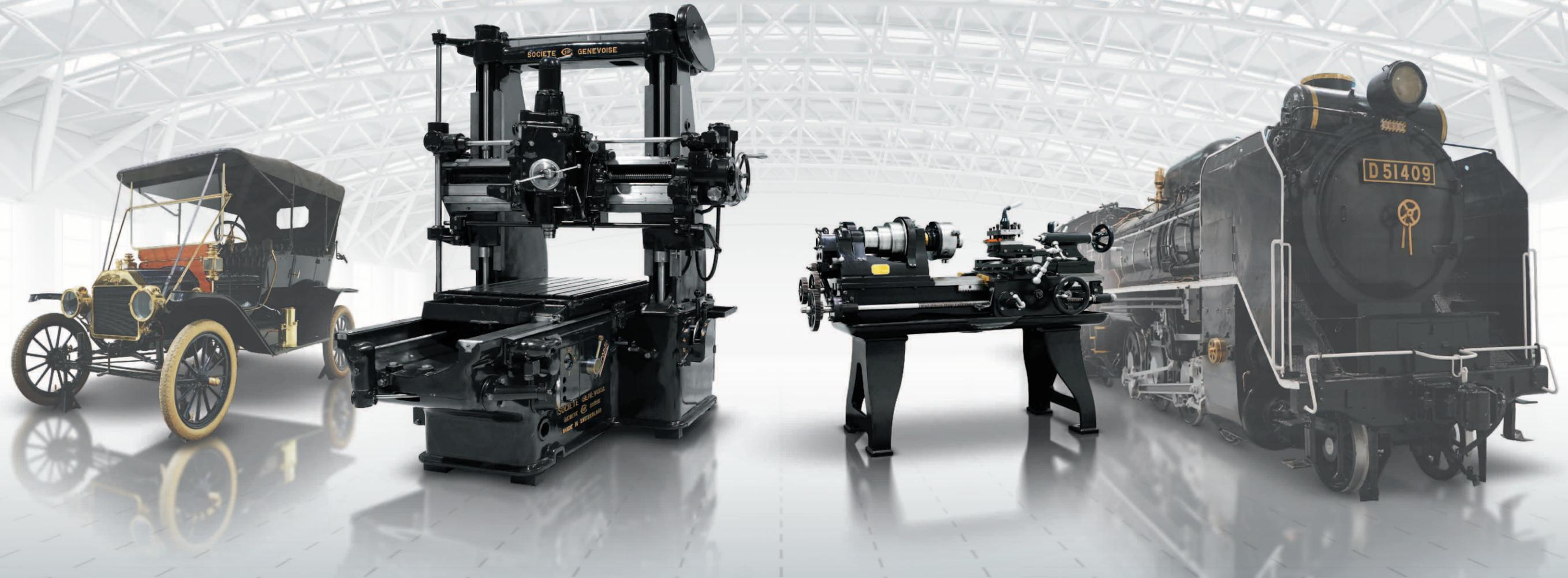
This year, we start our journey for the next 100 years. With renewed enthusiasm all employees will follow our management philosophy and action guidelines to provide products and services that can contribute to productivity improvement, which is of true value for customers. Through their concerted efforts, the whole Yamazaki Mazak Group in Japan and around the world will continue to strive to become a reliable partner for every customer.

I hope for your continued good health and success and renewed support in this New Year.



# M THE YAMAZAKI MAZAK MUSEUM OF MACHINE TOOLS

# GRAND OPENING



## Opening of The Yamazaki Mazak Museum of Machine Tools

Vehicles and aircraft, as well as familiar consumer products, cannot be manufactured without machine tools. It is regrettable that although machine tools contribute to social development through manufacturing, most people usually have few opportunities to directly see machine tools and hardly know anything about them.

Under such circumstances, with the goal to have more people learn about machine tools and become interested in manufacturing, we opened The Yamazaki Mazak Museum of Machine Tools as a project to commemorate the company's 100th anniversary on November 2, 2019.

The museum opening ceremony was held on November 1 prior to the opening and attended by guests from various fields including government and school officials. On the following day, the museum received many visitors as soon as it opened and became crowded with people including parents with children. The visitors intently viewed classic machine tools as well as much newer one, which they usually have no opportunity to see, and the products that were made with machine tools.



Scenes of the opening ceremony on November 1 and the opening day on November 2



### Floor Map

- 01** Machine Tools and Mankind
- 02** Mankind and Tools
- 03** The Industrial Revolution and Machine Tools
- 04** Four basic machining methods
- 05** Planer
- 06** Manually powered Machine Tools
- 07** Line shaft drive lathe
- 08** Line shaft drive factory
- 09** Line shaft drive milling machines / drilling machines
- 10** Motor driven Machine Tools
- 11** Machine Tools 1900-1930's
- 12** Industrial and consumer products made with Machine Tools
- 13** Japanese Machine Tools in the mid-20<sup>th</sup> century
- 14** General purpose lathes in Japan 1960's-1970's
- 15** Imported Machine Tools for producing Machine Tools in Japan
- 16** The first NC (Numerical Control) era
- 17** The second NC (Numerical Control) era
- 18** Multi-tasking Machine Tools
- 19** Mazak iSMART Factory™



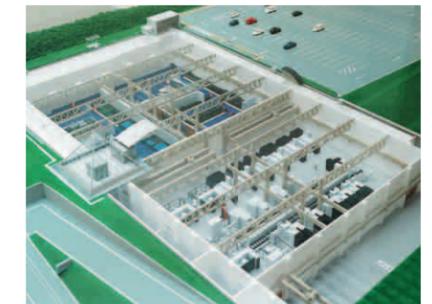
### Interactive sections for enjoyable learning

The museum has a Manufacturing experience workshop room, where people can see the technologies used for machine assembly, and Touch and Feel experience room, where visitors can feel the precision of machine tools. In addition, there is a section to introduce the principles of machining. By seeing, touching and enjoying them in this museum, children can learn about machine tools.



### Energy-efficient underground museum

The museum is underground, located approximately 11 meters (36ft.) below the surface. It has an environmentally friendly design that maintains a relatively stable temperature throughout the year by using geothermal energy. Instead of using a conventional air-conditioning/heating system, outside air is taken in and circulated in an air jacket with a total length of about 500m (about1,650ft.) in the walls of the museum. In this way, fresh air is cooled or heated by geothermal energy before being supplied to the museum.



### 03 The Industrial Revolution and Machine Tools



This steam locomotive was produced in 1940 and is on display representing the importance of the first steam engine for the beginning of the industrial revolution. In addition to the real locomotive, visitors can enjoy digital representations of the train traveling.

### 08 Line shaft drive factory



In the "Line shaft drive factory" area, which exhibits belt driven lathes, milling machines, etc., a plant of more than 100 years ago has been reproduced so that visitors can learn what manufacturing was like at that time.

### 19 Mazak iSMART Factory™



Metal parts of machine tools are produced in the automatic machining plant (Mazak iSMART Factory™). Visitors can see a modern plant using advanced technologies including IoT and automated robots.

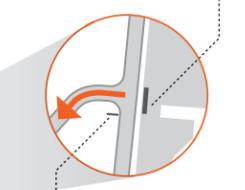
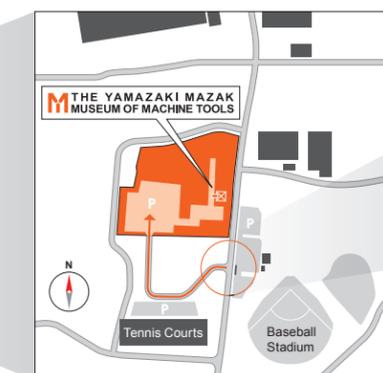
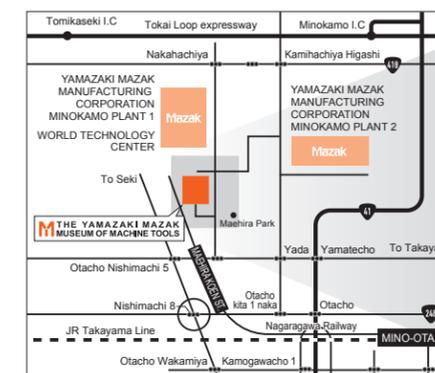
The Yamazaki Mazak Museum of Machine Tools has dynamic exhibits of historic machine tools and also displays representative industrial and consumer products including a steam locomotive, a historical automobile and aircraft. This museum also offers interactive experiences to enable visitors to see, touch and enjoy exhibits, including digital representation displays and a section where the principles of the actions of machine tools can be experienced in a comprehensible manner. An advanced machining facility (Mazak iSMART Factory™) composed of modern machine tools has also been set up in the museum to manufacture production components used in MAZAK machine tools. By being able to see the IoT-based futuristic plant, visitors can discover the innovativeness of today's machine tools.

In this way, The Yamazaki Mazak Museum of Machine Tools introduces the relationship of machine tools with people's lives, as well as the mechanism and evolution of machine tools, in an easy-to-understand manner. Through this machine tools museum, we will continue to convey the joy and importance of manufacturing to people including children and contribute to the development of human resources who will play a key role in manufacturing tomorrow.

### Information

Hours : 10:00~16:30 (Last admission is 16:00)  
 Closed : Mondays  
 (When Monday is a national holiday, the next business day),  
 Year-End and New Year Holidays  
 Admission : Adults 500yen  
 University, College and High School Students 300yen  
 Junior High School and Elementary School Students 200yen  
 Address : 3-1-2, Maehira-cho, Minokamo, Gifu-prefecture, 505-0037, Japan  
 Tel : +81-574-28-2727  
 Fax : +81-574-25-2129

**【Access】**  
 ■By train... Take the JR Takayama Line to Mino-Ota Station and transfer to the Nagaragawa Railway. Get off at Maehira-Koen Station - approximately 10-minutes by foot to museum.  
 ■By car... Approximately 10-minutes from Tokai Loop expressway Minokamo Interchange (Gifu-Prefecture).





# Customer Report 01

## Realizing single-source services for steel tube components

### Japan FUSOH STEEL TUBES Group

From material to machining, the FUSOH STEEL TUBES Group operates businesses related to steel tubes for mechanical structural use. The group companies include FUSOH STEEL TUBES in Urayasu, Chiba, which is a sales company, and FUSOH TUBE PARTS in Komatsu, Ishikawa, which is in charge of machining. With the knowledge of materials and records on machining developed since its establishment, the group is recognized as one-of-a-kind in the business sector. It delivers steel tubes not just as material but as machined parts to realize "single-source services of materials plus machining." The services are highly valued in Japan and overseas as a unique model that differentiates the group from competitors.



01. INTEGREX e-500H helps shorten setup time and in-process time  
 02. Machines and steel tube material orderly arranged in the plant  
 03. Machining of steel tubes by a multi-tasking machine for increased added value  
 04. Mr. Nobukazu Emura, CEO of FUSOH STEEL TUBES (third from right, back row), Mr. Hiroyuki Kawashima, CEO of FUSOH TUBE PARTS (second from right, back row) and employees

### COMPANY PROFILE



**FUSOH STEEL TUBES CO., LTD.**  
 CEO : Nobukazu Emura  
 Head Office : 1-9-2, Mihama, Urayasu, Chiba  
 Number of employees : 363 (group total)  
 www.fusoh-kokan.co.jp

**FUSOH TUBE PARTS CO., LTD.**  
 CEO : Hiroyuki Kawashima  
 Address : 32-2 Yatanomachinishi, Komatsu, Ishikawa  
 www.fusoh-kokan.co.jp/FTP



### Customer Report 01

Japan FUSOH STEEL TUBES Group

FUSOH STEEL TUBES was founded in 1968 by the father of Mr. Nobukazu Emura (CEO of FUSOH STEEL TUBES and Chairman of FUSOH TUBE PARTS), who paid attention to the shift of demand for materials from round bars to steel tubes amid the high-growth period of the Japanese economy. To differentiate itself from its leading competitors, the company set up an integrated system to not only procure and store materials but also perform cutting, machining and parts shipment. "The idea was revolutionary and defied conventional wisdom in the industry," according to Mr. Emura.

In 2008, FUSOH TUBE PARTS was established as a division in charge of machining. This enabled FUSOH STEEL TUBES to offer "single-source services of materials plus machining," which is now the strength of the company. The main production items include parts for machine tools, construction machinery, civil engineering, seismic isolators and vibration control devices. "Reflecting the recent trend toward automation in industry as a whole, we have also increased production for material handling equipment, robots and other areas."



Mr. Emura (left), CEO of FUSOH STEEL TUBES, and Mr. Kawashima, CEO of FUSOH TUBE PARTS, talking energetically about the strength of FUSOH STEEL TUBES

The group has established overseas production facilities in Thailand, Indonesia and China. FUSOH TUBE PARTS also provides extensive support for these sites. In addition, the group is committed to initiatives to develop human resources including the training of employees from the facilities in other countries. The lively workplaces demonstrate the corporate culture of the FUSOH STEEL TUBES Group, which has continuously taken an original path.

**MAZATROL easily understood by operators**  
 A total of 41 machines are currently operated in the plants of the FUSOH STEEL TUBES Group. They include 15 Mazak machines for key machining processes, such as the INTEGREX e-500H multi-tasking machine, the MEGA TURN 900M vertical CNC turning center and the 3D FABRI GEAR 220 laser processing machine. While FUSOH TUBE PARTS is responsible for machining in the group, Mr. Hiroyuki Kawashima, CEO of FUSOH TUBE PARTS, said "The MAZATROL CNC system is easy to understand and operate. The enhanced support system including the contents of the training school at MAZAK is also a reason why we choose Mazak machines."



MAZATROL training of operators

The multi-tasking machines and CNC turning centers are used to process machine tool parts including motor sleeves and housings, as well as construction machinery parts including hydraulic cylinders and bushings. The laser processing machines are used for producing structural members around the cabin (driver's seat) of construction machines. Mr. Takeshi Abe, Director of FUSOH TUBE PARTS, explained about the effects of introducing Mazak machines, saying, "the INTEGREX e-500H helps reduce the setup time and the in-process time because the output of three conventional machines can be completed by just one INTEGREX. The workpiece precision has also been considerably improved as the whole process is completed in a single setup."

Parts machined with high precision to be used in industrial and construction machinery



3D FABRI GEAR 220 II is used for 3D cutting of steel tubes

### The business has been expanded as a one-of-a-kind company in the field of steel tubes

"As we were a newcomer in the industry, we had to develop our business with more focus on customer demand." Mr. Emura thus revealed the reason why the group decided to offer the single-source services to optimize the whole supply chain of customers ranging from the selection and procurement of materials to machining, which is also an attraction of the group now.

"We can make proposals and incorporate creative ideas that meet customer demand because we are familiar with materials and can machine them as well. With the inventory of a wide variety of materials, we can also promptly respond to requests for trial production."

FUSOH STEEL TUBES has successfully established a unique business model that differentiates itself from competitors in the same industry based on the customer-first business policy. As a result, the company is also highly evaluated overseas and, for example, recognized as a Tier 1 company, which can directly deliver machined items to manufacturers. With the single-source services covering material procurement and machining at the core, the FUSOH STEEL TUBES Group will further expand its business as a one-of-a-kind company in the field of steel tubes for mechanical structural use.



01

## Customer Report 02

### Ensuring customer-centered approach to establish a unique position

#### Japan REGAR MARINE ENGINEERING INC.

With the slogan "Ask the sea about the sea," REGAR MARINE ENGINEERING INC. specializes in the manufacturing of boat fittings and marine sports goods. "Regar" in the company name means a sort of fitting and represents the feeling of Mr. Yoshinori Kobayashi, President, who also enjoys marine sports and fishing in his private life. His intimate knowledge of marine leisure goods allows the company to develop products that accurately meet customer demands, which is highly valued by Japanese boat manufacturers and other customers. The unique manufacturing activities are supported by the integrated production system to internally handle almost all processes from machining to welding and sewing. Mazak machines play a key role in them.



02



03



04

- 01. Joints of boat fittings machined by Mazak machines
- 02. In-house integrated production utilizing a total of three Mazak machines
- 03. Rod holder components to be mounted to boats to hold fishing rods
- 04. Mr. Yoshinori Kobayashi, President (center, middle row), Mr. Fumiaki Kobayashi, Senior Executive Director (third from right, middle row) and employees

#### COMPANY PROFILE



#### REGAR MARINE ENGINEERING INC.

President : Yoshinori Kobayashi  
 Senior Executive Director : Fumiaki Kobayashi  
 Address : 1732 Minamikanai, Daian-cho, Inabe, Mie  
 Number of employees : 20

www.regar.co.jp



REGAR MARINE ENGINEERING offers approximately 800 types of products, which are wide-ranging including standard items such as rod holders (to hold fishing rods on boats) and spunkers (a type of sail for boats), as well as customized items such as boat sunshade awnings and fuel tanks. Their design drawings are prepared by Mr. Kobayashi. The president has enjoyed marine leisure since his youth but always felt unsatisfied with the specifications and prices of related goods because most of them were imported in those days. Then, he thought of an idea that "When the items I want are not available, I just have to make them. And I will make products that can be used by Japanese customers." Mr. Kobayashi became independent and founded REGAR MARINE ENGINEERING in 1980. The design was easy for him because he was originally involved in design and development in a major electronics manufacturer and had also used marine leisure products for many years.



Mr. Yoshinori Kobayashi, President (left), and Mr. Fumiaki Kobayashi, Senior Executive Director, talking about the unique features of the company

"Some factories can produce boat rails and some companies can sew tents. But there are no other manufacturers specializing in marine leisure products." Such uniqueness attracted attention and the company gradually became well-known in the industry. Currently providing products and parts to most of the famous boat manufacturers in Japan, REGAR MARINE ENGINEERING has achieved an indispensable position as an indispensable supplier in the Japanese marine leisure industry.

#### MAZATROL CNC features ease of operation

The annual production of each product made by REGAR MARINE ENGINEERING is approximately 3,000 units at most and the lot size for most parts is between 5 to 10 parts. In other words, the type of production performed by the company is high-mix, low-volume. It is not rare to receive an order for a one-of-a-kind item with unique specifications. "Even for the top-selling boats, the annual production of boats in Japan is extremely small when compared to other countries. So, it is inevitable to produce many kinds of marine accessories in small quantities," said Mr. Fumiaki Kobayashi, Senior Executive Director. In addition to meeting the demands for high-mix, low-volume production, it is also considered important to deliver products quickly in the marine leisure industry. In response, the company has established an integrated production system composed of processing machines including machining centers and CNC turning centers, as well as industrial sewing machines and other equipment in order to be able to quickly respond to customers' requests.



Sudden program changes are easily handled with the MAZATROL

REGAR MARINE ENGINEERING installed a Mazak VERTICAL CENTER SMART 530C vertical machining center and a QUICK TURN SMART 300 CNC turning center as its main machine tools in 2015. A VTC-530/20 vertical machining center was added in 2016. "The sophisticated design and ease of operation were attractive. It is easy to make machining programs with the interactive MAZATROL CNC system, which is very suitable for our production style. The ease of operation of the MAZATROL and visibility of the screen are also excellent which prevent

▶ Joint and fitting components (left) and a rod holder



#### Customer Report 02

Japan REGAR MARINE ENGINEERING INC.

operators from becoming stressed." Mr. Fumiaki Kobayashi explained why the company introduced the Mazak machines.



Finish machining of the inside of a lost-wax casting component

#### Sales are always made when necessary products are offered

"Anyone can prepare a drawing and bend a pipe. However, not everyone can produce products based on the different tastes and demands of individual users. For example, one of our very successful products is a rod holder, which is used to mount a fishing rod to a boat. It has solved problems that used to annoy many users, such that the rod rotated in the holder naturally. In this way, we are always putting ourselves in users' shoes and try to develop products accordingly." Mr. Fumiaki Kobayashi described the strength of the company.

"We do not pursue the expansion of sales because I originally started the business to do what I like to do. I believe that good products and new jobs will be automatically generated when the skills of our employees are improved," said Mr. Yoshinori Kobayashi. This comment was followed by a strong assertion of Mr. Fumiaki Kobayashi that "Sales are always made when we offer the products needed by society." REGAR MARINE ENGINEERING is also considering entry into the motorcycle-related parts market, in which its technology for marine leisure products can be utilized, as a plan for its future business development. While Yoshinori and Fumiaki Kobayashi place importance on the development of products from the standpoint of users, this attitude will also allow the company to keep creating highly unique products in new fields in response to customers' demands.



01



**OEB S.r.l**

Chairman : Alessandro Manzini  
 Head office : via Circonvallazione, 9  
 41031 Camposanto (Mo) – Italy  
 Number of employees : 52  
 www.oeb.srl.it



# Customer Report **03**

## Actively investing in human resources and equipment for the next leap

Italy OEB S.r.l

Located in Modena, Emilia-Romagna, Italy, OEB S.r.l manufactures various racing machinery parts, as well as medical equipment, parts for packaging machines and aerospace components, and is known for delivering precisely machined products within a short period. The company is strong in machining complex-shaped parts made of hard-to-cut materials such as titanium, Inconel and stainless steel. "Our machining efficiency has been improved with Mazak's machine tools in a wide range of product categories. It has also helped us get new jobs." Mr. Alessandro Manzini, Chairman of the company, stressed that its competitiveness has been enhanced through the use of Mazak machines.



02



03



04

- 01. Mazak machines support the capability of OEB S.r.l to respond flexibly
- 02. Parts are machined in a single setup to reduce the in-process time and improve the precision
- 03. The ease of operation of the MAZATROL was the key to the introduction of Mazak machines
- 04. Employees who operate the INTEGREX multi-tasking machines

OEB was founded by the father of Mr. Manzini in Modena, a city in Northern Italy in 1972. Modena has an area called Motor Valley, where the world's leading car manufacturers are concentrated, and OEB is based in the heart of this area. While the company started its business with the machining of parts for packaging machines, it launched a business to machine racing parts in the 1990s out of a passion for motorsports, which are popular in the local area. Since then, OEB has supported the production of machines for globally well-known racing teams including prestigious Italian F1 teams for more than 20 years. An advantage of the company is its capability to respond flexibly, which has been developed through transactions in the motorsports field over many years. Taking advantage of the strength developed through promptly meeting the demand for complex and precision machining, OEB now also receives orders from the medical equipment and aerospace industries. It has established a good reputation not only in Italy but also in other countries.

production equipment and software during the last three years.

**Developing its capability to respond flexibly thanks to the INTEGREX**

OEB introduced its first Mazak machine in 1993. "In most of the NC systems available in Italy at that time, the programming method was too complicated. On the other hand, it was very easy to program Mazak's interactive NC system. This was the determining factor for us to introduce the Mazak machine as our first NC machine tool." Since then, Mazak machines have contributed to the complex and precision machining of various components, including racing parts, medical implants, parts for packaging machines and aircraft engine parts, for more than 25 years.



F1 racing car components produced by OEB S.r.l

At present, more than half of the 11 Mazak machines in total that have been introduced by OEB are multi-tasking INTEGREX machines. "Complex-shaped parts can be machined in a single setup. It is appealing that it can shorten the in-process time and improve precision at the same time." Mr. Manzini explained why the INTEGREX was selected. "The integration of processes by the INTEGREX has allowed us to considerably reduce the setup time in several hundred cases. Because the whole process can be completed without the need for transferring between machines, we have become able to deliver products on the day following the receipt of the order at the earliest and established a flexible production system." He emphasized that the capacity to respond flexibly, which is the pride of the company,

- Precision machined complex parts for the motorsports, medical equipment and aerospace industries



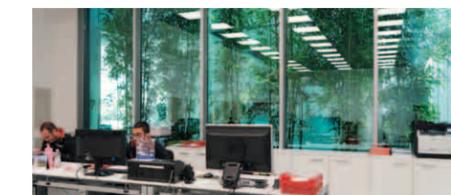
Mr. Alessandro Manzini, Chairman

Mr. Manzini mentioned that the motto of the company is to tackle jobs with enthusiasm and continuously make technological innovations. "We always keep this idea in our minds." Its aggressive stance on technological innovations led to the setup of the Additive Manufacturing Division in 2015 to start the 3D additive manufacturing of racing parts. OEB also continues to adopt advanced technologies. For example, the company invested an amount equivalent to 20% of its annual sales in

depends on the use of INTEGREX.

**Continuously investing in improved competitiveness**

Aiming for further growth, OEB places importance on the improvement of the work environment to enhance the performance of employees. Mr. Manzini believes that the establishment of a comfortable environment is the first step for human resources, who are valuable assets for the company, to demonstrate their full potential. Based on this idea, he designed the company buildings while giving first priority to the improvement of working conditions for employees. In fact, the buildings including a plant with a tidy layout and an office with a view of outdoor greenery are popular among not only employees but also interns from universities and technical schools.



View of outdoor greenery from office

In addition to these initiatives, OEB also plans to invest in IoT for further improvement of productivity. "We will enhance our abilities to analyze data through the strengthening of our production management system based on IoT. By making maximum use of production equipment, we would like to realize modern production activities." Mr. Manzini described the objective of the investment. As to the secret of the company's past performance, he stated, "We have achieved a high level of competitiveness not by coincidence but due to our passion, intelligence and continuous hard work." With a passion for manufacturing and tireless efforts for technological innovations, OEB will keep growing steadily.



# MAZAK PEOPLE

Technical Solution Team, World Technology Center, Application Department

## Ms. Sophia Kina

### Gaining a wide range of experience to work actively on a global scale in the future

Yamazaki Mazak operates many bases in Japan and other countries for various functions such as production, sales, and before and after-sales service and support. MAZAK PEOPLE introduces employees who are active at the forefront of the Group companies.

This issue features Ms. Sophia Kina, who is an application engineer at the World Technology Center. She is a promising young staff member who is gaining experience at the World Technology Center, which is visited by many customers from all over the world.

#### PROFILE >> Ms. Sophia Kina

Ms. Kina joined the company in 2016. After a six-month training period, she was assigned to the department that evaluates the performance of new models. Since her transfer to the World Technology Center in 2017, she has been involved with the setup of machines to be displayed and their promotion to customers.

#### —Why did you decide to join Mazak?

I lived abroad when I was a child, so from my school days I wanted to pursue a career in the future related to foreign countries. When I was hunting for a job, I learned about a global company named Mazak from a teacher and became interested in it. While I was studying computer languages in an information-related course, I found that what I learned could be used effectively in Mazak, a machinery manufacturer, so I decided to join the company.

#### —What jobs have you experienced?

The department to which I was assigned first was in charge of the performance evaluation of new models and I was responsible for the evaluation tests of QUICK TURN milling holders. I was involved in a series of tasks for the evaluation starting from the preparation of tools and materials necessary for the evaluation, as well as making machining programs, actual machining and the preparation of reports after machining.

In 2017, I was transferred to the Technical Solution Team of the World Technology Center. I am now assigned to set up the machines to be displayed at the World Technology Center and machine tool trade exhibitions held in various locations, as well as the promotion of our products to customers visiting the World Technology Center.



Team meeting to discuss workpieces for demonstration

#### —What have you learned from your work experience at Mazak?

I have learned the importance of writing ability to correctly convey

my ideas to others and ask them to take action whether they are people inside or outside the company.

I acutely felt this performing the evaluation of new models. To have design staff and production staff understand the results of evaluation tests and take action for improvement, it is necessary to explain the results in a way that anyone can be convinced. While I had great difficulty preparing a convincing report right after I was assigned, I improved my writing skills through the preparation of various materials.

I feel that the ability to clearly construct sentences is also used effectively in my current job to promote products to customers. While I usually explain products orally, not in writing, these days, I have become able to always arrange my comments in my head in an order which can be understood easily when communicating with customers.

#### —When do you feel rewarded?

I feel rewarded when I have completed a series of tasks to set up machines to be displayed in a short period. When a new model is displayed, the period that can be spent for the setup is usually as short as one to two months. I sometimes feel under pressure when I have to propose to my boss the way of conveying the promotion of the new model and then making machining programs and arrange necessary tools and materials without delay over a tight schedule. There are also cases where all team members have to work together until late at night to change the content of the demonstration even on the day just before we announce a new model. On the other hand, when everything has gone well, I feel so fulfilled that I forget all the difficulties. While I have been involved in the setup of 10 models or so, I like my job as an application engineer very much because I can gain such experience many times.

#### —What is your future goal?

While my main job has been the setup of machines to be displayed, I would also like to be involved in the launch of a whole exhibition booth in the future. When I saw the process of launching Mazak's

booth at the JIMTOF venue, I was impressed with the way that a beautiful booth was created from scratch. I hope to be committed to the design of a booth layout and elaborate decorations to impress customers.

In addition, I want to have more opportunities to be connected to business in other countries, which has been my dream since I was in school. My goal is to have a wide range of experience as an application engineer and become a person who perform business communications with other countries. Language skills are also important for reaching the goal. In addition to Japanese, I have mastered English, Portuguese and Spanish, I am also thinking of beginning to study Chinese or French.

The motto of Ms. Kina is "Be humble to admit what you do not know or cannot do now and use the help of others without hesitation. Always be cheerful and keep smiling." Her good nature and positive attitude seem to have made her indispensable for the Application Department. She will have a positive impact and inspire her team members in Japan and also in overseas facilities in the future.

#### How she spends her days off

I started to raise a female hamster recently. Her name is Jennifer. To relax on the weekend and when I have spare time, I take her picture with my favorite camera, which I bought with my first paycheck.



## News & Topics Introduction of new products

### New INTEGREX i-H series multi-tasking machines



#### INTEGREX i-H SERIES

The new INTEGREX i-H series multi-tasking machines have enhanced abilities to meet the demand for automation. The INTEGREX i-200H was exhibited at EMO in September as well as DISCOVER 2019, which was held in our World Technology Center in November 2019 and attracted considerable attention.

The INTEGREX i-H series has adopted a flat surface design on the front to significantly improve the accessibility and integration with peripheral equipment such as robots and material stockers to realize an automation system with a small-footprint. The machines are equipped with a tool magazine with higher expandability and are available with a lower turret and an automatic chuck jaw changing system with improved specifications when compared to previous systems. These features will reduce the machine non-cutting time for changing tools and chuck jaws for improved continuous operation performance.

The INTEGREX i-H is equipped with the new MAZATROL SmoothAi

CNC system. This latest version of the MAZATROL CNC features AI functions that make it possible to easily make machining programs extremely quickly so that machining can start in the minimum time. Additionally, robot teaching is simplified to ensure efficient operation of automation systems.



The INTEGREX i-200H was exhibited at DISCOVER 2019, which was held at the World Technology Center in Minokamo Japan

The Yamazaki Mazak Museum of Art was opened in April 2010 in Aoi Higashi-ku, 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.



Collection Showcase 1  
THE YAMAZAKI MAZAK MUSEUM OF ART

**GALLÉ, Émile**  
“Engraved and painted vase with pine design”

The motif is a pine tree with dynamically spreading branches and different-sized mushrooms growing at its base. The pine, an evergreen tree that grows vigorously on barren land with little nourishment and has a wonderful fragrance, was regarded by Gallé as a symbol of the lonely but noble condition of the artist. The precisely carved form expresses the grandeur of art and the rugged branches have the strength of a wrestler's arms.

The École de Nancy exhibition in 1903 became an important event in Gallé's career because of his early death from leukemia the following year. Much of the glassware he exhibited was of the highest quality he had ever produced. Some of the pieces had a pine motif, and a photograph of the period shows that actual pine branches were inserted in the exhibited vases. This vase is thought to have been made at about the time of the École de Nancy exhibition because of the tree motif and metallic patination, both of which Gallé often used in that period. The strong curves of the trunk and branches carved in the thick, subtly colored glass reflect Gallé's state of mind in his later years. He was throwing himself energetically into his creative work as he fought the illness.



GALLÉ, Émile [1846-1904]  
“Engraved and painted vase with pine design”  
1902-04

Collection Showcase 2  
THE YAMAZAKI MAZAK MUSEUM OF ART

**CHARDIN, Jean-Baptiste Siméon**  
“Rabbit, Game Bag, and Powder Container”



Jean-Baptiste Siméon Chardin is one of the most important still-life painters in the history of French art. His work was loved by the bourgeoisie as well as the nobility, art lovers, and art critics, and it marked a turning point in the history of still-life painting.

This painting shows a rabbit taken in the hunt, a leather shoulder bag made for game, and a metal ammunition case partially visible beneath the bag.

Chardin often painted plain, simple, everyday containers. In the context of Enlightenment ideas, this practice was connected with the practical morality and values of the bourgeoisie of Paris. However, when the word simplicity is used in discussing Chardin it must also refer to simplicity of color, form, and composition. Chardin never used the dynamic, unbalanced compositions that characterized the popular rococo style of the same period. He worked very slowly, using a limited palette of subdued colors in the careful production of simple forms, paying attention to horizontals and verticals and balancing the left and right sides of the picture. Chardin's approach to still life painting foreshadowed a new, modern form of still life.

CHARDIN, Jean-Baptiste Siméon [1699-1779]  
“Rabbit, Game Bag, and Powder Container”  
1736  
Oil on canvas