

Globe

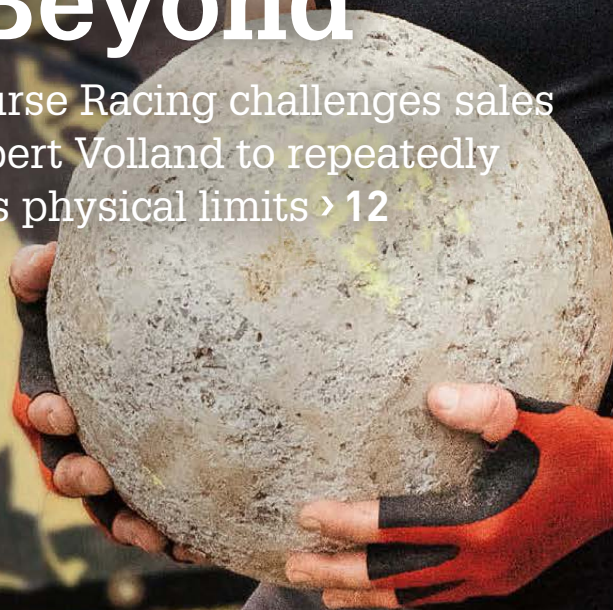
+GF+

THE GLOBAL MAGAZINE
FOR GF EMPLOYEES

ISSUE 3 · 2019

To the Limit and Beyond

Obstacle Course Racing challenges sales engineer Robert Volland to repeatedly transcend his physical limits > 12



GF Linamar expansion

A new die-casting module is expected to bring new impetus to the automotive market > 10

Ball valve 546 Pro

The leading product from GF Piping Systems regulates the flow rate in many industries > 20

Lean management

CEO Andreas Müller believes in lean processes and continuous improvement > 28

HELLO!



Shanghai

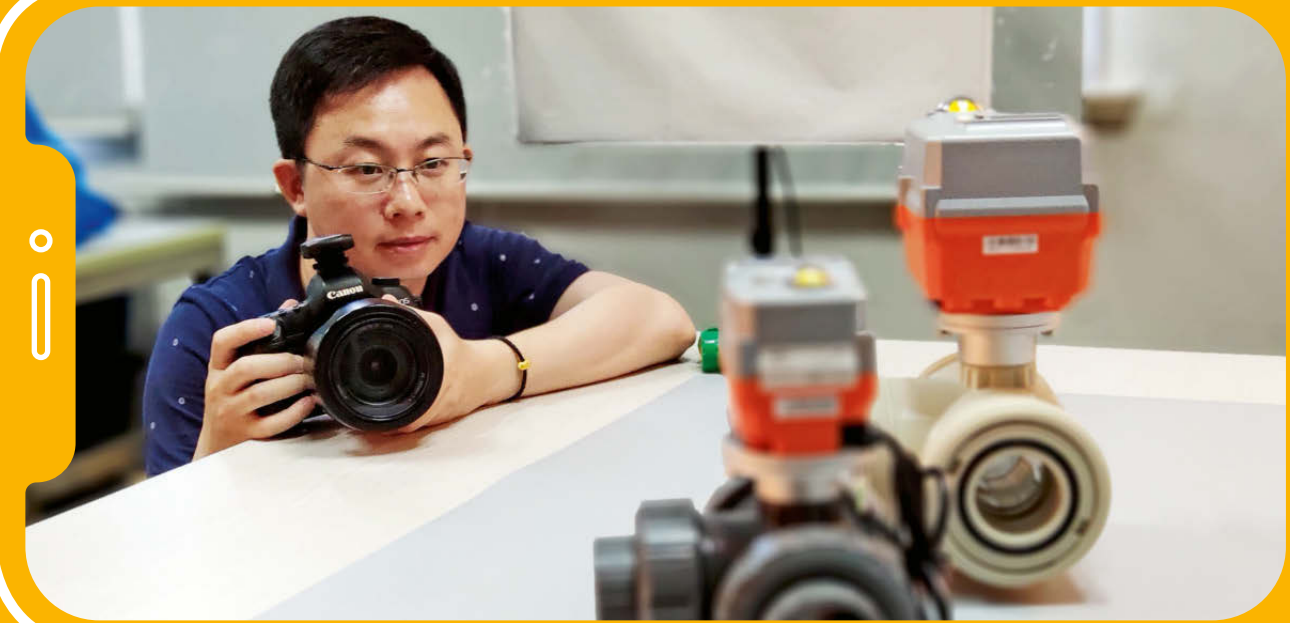


Lei Ley

Shanghai (China)
28 June 2019,
10:00 a.m.

I am taking promotional photos for a brochure of our new product: electric ball valves. Normally, I work behind the camera, but for today's 'HELLO' I switched sides for once.

Lei Ley is Marketing Specialist at GF Piping Systems in Shanghai (China).



You can find further submissions to HELLO! online at globe.georgfischer.com



Pontresina



Tamara Sommer

Pontresina (Switzerland)
28 June 2019,
10:00 a.m.

At that time, I was hiking in the Swiss mountains. Only two hours away from our GF site in Seewis, I spent a wonderful day with my husband and daughter. Here we are posing in front of the beautiful Monteratsch glacier.

Tamara Sommer is Head of Human Resources at GF Piping Systems in Seewis (Switzerland).



JOIN IN AND WIN!

What are you doing on **9 October 2019** at **4:30 p.m. local time?**

Send your snapshot with 'Hello!' in the subject line and a short description to: globe@georgfischer.com

All entries will be included in our competition on page 40.

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GF Machining Solutions develops solutions for the medical market, a segment that is set to grow. GF is coming to the fore with expertise and new strategies.

EDITORIAL

No Distance Is Too Far

Dear colleagues,

Postcard fans like myself will be familiar with the Japanese saying “No distance is too far with a friend by your side.” It’s clear why it enjoys such great popularity – it’s because we overcome challenges easier together, especially those that we would never have dared to do by ourselves. What an incredible feeling!

We at GF want to keep our pathways and processes as streamlined as possible with lean management, an approach that depends on us all. When was the last time you thought: “This could be done more efficiently”? These are exactly the type of thoughts that are central to lean management. They are the baseline for us learning and improving together as a team. You can find out about how “lean” we at GF are already today from page 28.

One example of successful teamwork comes from GF Linamar: In just a few months, our colleagues in the USA got a new module on the road (from page 10). The story of our cover hero Robert Volland is also amazing. Six years ago, he took part in his first extreme obstacle race with a friend. Today, he participates in some of the toughest races all over Europe and knows for sure that “Some obstacles can only be overcome together” (from page 12).

We also put this Globe together as a team. Thank you to all who participated or contributed to this issue. We’re always happy to receive feedback or ideas for topics by e-mail or even by postcard!

I hope you enjoy reading this issue.

Lena Koehnen
Project Manager Globe



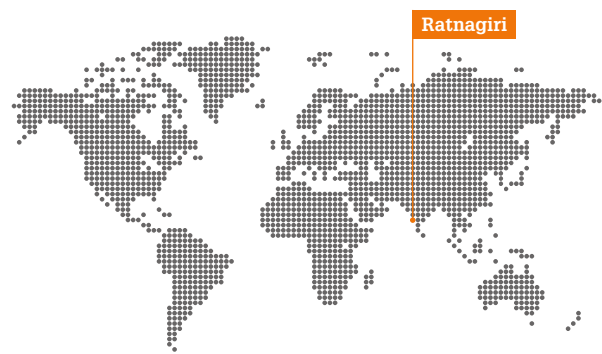
IN BRIEF



The new Bieler Werke headquarters span 17'000 square meters for production, assembly, and offices.

Divisional Headquarters Inaugurated

GF Machining Solutions opened its new headquarters on 13 September 2019. The division consolidated the Swiss Milling and Laser production in Biel (Switzerland), and with the former Nidau, Ipsach, and Luterbach sites. The new location offers space for 450 working places and houses a modern research and development center. In the so-called Demo Center, customers and visitors can experience the technologies and products of GF Machining Solutions up close.



Plant Expansion in India



In addition to the new production hall, a new access road, areas for pipe storage, and a new employee building will also be constructed.



In India, the demand for infrastructure facilities for gas and water distribution is growing strongly, so products from GF Piping Systems are highly popular. To meet rising demand, the division is expanding the Ratnagiri site to include a production hall with 1'000 square meters of floor space. The new building will accommodate additional injection molding machines. The first customer orders have already been placed. Construction is expected to be completed in the first quarter of 2020. ■

Award-winning Hycleen

The jury behind the Red Dot Design Award has recognized GF Piping Systems for its Hycleen Automation System. The division received an "Honorable Mention" for this product, which impressed the 25-member jury with its well-designed detail settings. The Hycleen Automation System is a new control system designed for controlling, monitoring, and logging drinking water installations located in sensitive environments, such as hospitals. ■



Ideas from the Technology Center

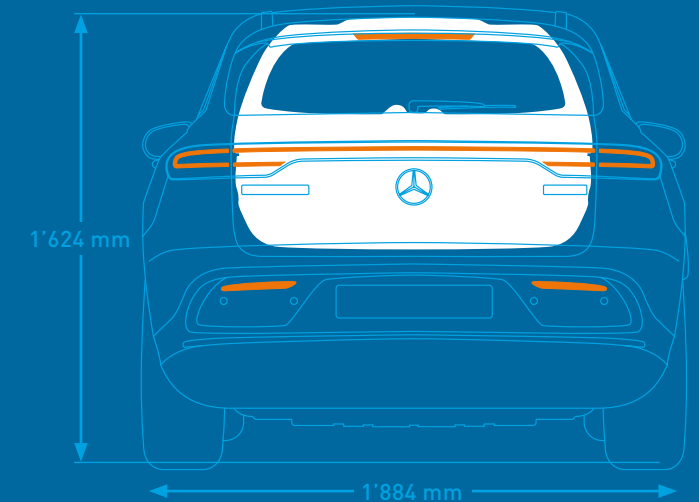


In the spring of 2019, GF Piping Systems opened a new section of its technology center at the Schaffhausen site in Switzerland. The new "Technikum" allows the division to implement ideas and innovations from the areas of material and technology development, production and development, and process technology. Focus areas are injection molding, compounding, and Industry 4.0. The results will be made available to all companies of GF Piping Systems. ■



More pictures and videos on the news in brief at globe.georgfischer.com

PRODUCT IN FIGURES



1'032

millimeters – this is how high the rear wall door of the Mercedes-Benz electric SUV EQC is. GF Casting Solutions, traditionally a first choice supplier of large and lightweight structural parts for passenger cars, started building its first SUV component at the Herzogenburg plant in Austria in April 2019. The rear door frame is the largest tailgate ever produced by GF Casting Solutions; the models for station wagons are 20 centimeters smaller on average. It also sports a very thin (3-millimeter) wall. It is the first rear door frame for an electric car – in line with GF's strategy to offer European premium manufacturers lightweight solutions for their new models with electric drives. Beyond the rear wall door's dimensions, the EQC stands out with its rear light designed as a continuous light band. This feature must be taken into account when making the mold. Plus, for the first time, a new quality control technology for production is being tested. After casting, the tailgate is scanned and optically measured. A computer compares the data with a digital geometric model to evaluate the quality. ■

- Component weight:** 7.2 kilograms
- Width:** 1'237 millimeters
- Height:** 1'032 millimeters
- Depth:** 203 millimeters
- Production time per unit:** 28.5 minutes
- Production machine:** die-casting machine with a clamping force of 4'400 tons

Planned Site Relocation

In response to changing market conditions, GF Casting Solutions is relocating around 300 jobs from Werdohl (Germany) to Romania and Austria. In line with its strategy, GF is also planning to divest the iron foundry in Herzogenburg (Austria). This finalizes the strategic withdrawal from iron casting in the automotive sector in Europe, which began in 2018. ■

Breakthrough with Spark Track

The international Swiss Prodex trade fair described a new technology from GF Machining Solutions as a “breakthrough in EDM wire cutting machining.” This proved reason enough to present Spark Track with the Prodex Award 2019. The Intelligent Spark Protection System (ISPS) reduces the risk of wire breakage and increases the productivity of wire-cutting EDM machines by up to 25%. ■

The Prodex Award was presented on 15 May 2019 in Basel (Switzerland).



Cause for celebration: With a speed of 252 km/h, the Swiss student team’s pod won the silver medal in the finals of the Hyperloop Pod Competition.

Cool Pod

In 2019, the Swissloop team of ETH Zurich took part for the third time in the Hyperloop Pod Competition initiated by Tesla and SpaceX founder Elon Musk. As the main sponsor of the Swissloop team, GF Casting Solutions developed a cast component for cooling the powertrain

of this year’s pod. On 21 July 2019, the team launched its pod along the competition test track in Los Angeles – and finished in second place. The Swissloop team also received the Innovation Award from SpaceX for its linear induction motor and inverter. ■

Lightweight Parts for Vinfast

GF Casting Solutions has received an order worth EUR 37 million from Vinfast for the development and manufacture of lightweight components. The division develops and manufactures aluminum shock towers and iron differential housings for the Vietnamese automotive manufacturer. The parts are produced in Altenmarkt (Austria) and Kunshan (China). ■



TWO POINTS OF VIEW

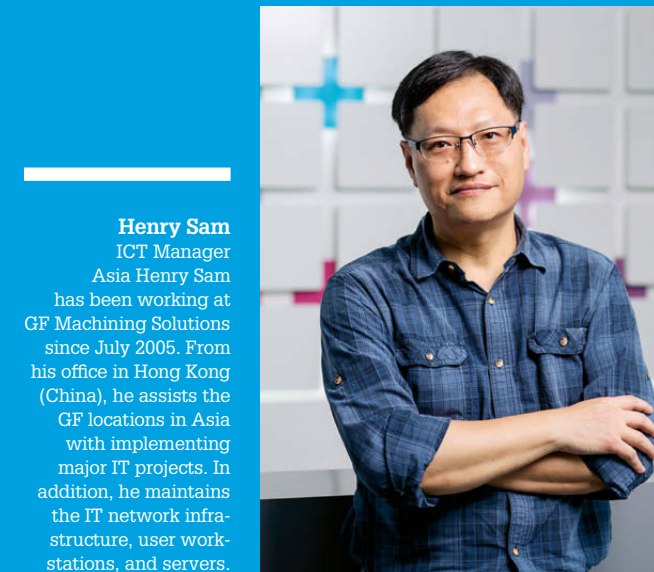
What keeps you focused on the most important aspects of your daily life?

Every day, I receive different kinds of enquiries and tasks concerning the IT environment at GF. Most of them are related to a single user, but sometimes there are problems affecting the whole office or a business application. Some of the assignments can take months to complete.

Handling all these tasks immediately is almost impossible. Therefore, prioritizing them is very important, which I do based on the following rules: First, I write everything down in a detailed to-do list. I also apply Habit 3 (first things first). That means, I evaluate my priorities and, most importantly, I accept that sometimes it is ok to say “no.”

My colleagues and I in the IT support team often need to solve problems very quickly. If possible, I finish what I can finish right away and then set up ‘deadline flags’ in my Outlook calendar for the remaining tasks.

If we cannot solve a problem on our own, we request support from our external IT partners. One of the challenges is working in a team distributed across the globe and different time zones. As our IT partner is located in Europe, sometimes we need to schedule calls in the evening or at nighttime in Asia. This can be rather challenging at times, but I derive a lot of satisfaction from reaching our goals. ■



Henry Sam
ICT Manager Asia
Henry Sam has been working at GF Machining Solutions since July 2005. From his office in Hong Kong (China), he assists the GF locations in Asia with implementing major IT projects. In addition, he maintains the IT network infrastructure, user workstations, and servers.



I work closely with the Head of Business Unit Americas and all related Business Units, SAP, sales and marketing coordination. When I work, I focus completely on my tasks. I start by putting my thoughts in order and by getting a good understanding of what I need and want to accomplish. I define my priorities and think about what result I plan to achieve for each task. A rule for myself: Take ownership and follow through, focus on one thing at a time, and make sure I finish what I have started with a great sense of urgency and flexibility.

Time is our most valuable commodity, and without organization and setting priorities, it is easily wasted. The keys to the way I work are my abilities to keep myself organized and then apply that to everything I do. Communication is also essential to obtain and deliver results. Every communication tool is important, and I firmly believe that you can’t simply exchange one for another. Also, communication is a two-way street!

When I am with my family, I focus on them, listening, doing things for and with them, connecting, and building memories. I also invest time in myself; a good balance is important for a healthy life, according to ‘sharpen the saw’ from Stephen Covey’s ‘The 7 Habits of Highly Effective People.’ ■

Beatrice Weber

has been with GF Piping Systems for almost 19 years, currently as Sales & Marketing Head of BU Americas Executive Assistant in Irvine, California (USA). She previously held the position of Export Manager for Latin America, where she managed the Latin America business from the GF office in Tustin, California (USA).



More pictures of Henry Sam and Beatrice Weber at globe.georgfischer.com



With great passion and commitment, Maintenance Manager Bill Penn, Senior Program Manager Jürgen Steinberger, and Manufacturing Engineer Mike Morgan (from left) completed the expansion of the GF Linamar plant.

MADE IT! NEW MODULE ADDED IN MILLS RIVER

Expanding the Value Chain

Joint venture **GF Linamar** is on schedule to complete an expansion to its plant in North Carolina (USA) this autumn. This will help drive further growth in the North American automotive market.

It is big, it was built fast, and it will be highly productive: Module 1B, a new extension at the die-casting plant in Mills River, North Carolina, is on track to operate at full capacity less than a year after breaking ground. The expanded facility was built after an order for 700'000 die-cast components per year from a major American automobile manufacturer came in. Its completion represents another milestone for GF Linamar on its way to becoming a dependable source for quality, ready-to-mount die-cast parts for the American automotive industry.

How it came together

GF Casting Solutions and Linamar formed the joint venture GF Linamar back in 2015. An ambitious plan was launched to combine Linamar's know-how on the North American automotive parts market with GF's die-casting expertise, together becoming a new parts supplier in the industry. The joint venture opened a production site in 2017.

The idea for an expansion of the plant was all part of the initial plan. Construction of Module 1B finally got started at the beginning of 2019. While casting is still done in the original plant, the new space adds further capacity to machine and assemble more than 700'000 parts per year – an impressive average of one new ready-to-mount part every 28 seconds. That required good planning and execution before the work began. "Our motto is that we want to be 'Best in Cast'," says Senior Program Manager Jürgen Steinberger. The plant expansion results in a more capable and agile facility, allowing GF Linamar to work closely with customers to design and produce ready-to-mount die-cast parts for the American market eco-

nomically. "Our Maintenance Manager Bill Penn and Manufacturing Engineer Mike Morgan were integral to the expansion," says Steinberger.

Close collaboration

Bringing together two companies from different continents, like GF Casting Solutions and Linamar, can entail certain challenges. "This was only possible because of the great team we have," says Steinberger. The sales department was key to making the expansion possible – the economic rationale for expanding the facility was provided by the deals they closed. The colleagues responsible for safety had to manage a lot of requirements that are specific to the US market. The people in charge of Module 1A designed Module 1B before transferring their plans to the current team. Several other departments, including Engineering and Product Design, also had a hand in the successful project. "Sometimes it was a challenge just to coordinate – we had many employees from two companies spread over several time zones." GF Linamar has seven die-casting machines in operation, three in the process of being installed, and two further cells are planned at present. The site could even see future expansions – and Jürgen Steinberger and the rest of the GF Linamar team will be prepared. ■



STRONG PARTNERSHIP

GF Linamar is a joint venture between GF Casting Solutions and Canadian manufacturing expert Linamar. The light metal plant in Mills River (USA) produces lightweight aluminum and magnesium components for the automotive industry. The addition of Module 1B as an extension to the plant is a further milestone in the partnership.

MODULE 1B IN FIGURES

7'360 tons

Amount of concrete that was used to build the new module.

3'127 m²

Area covered by the new module.

150

Number of people involved in the construction of Module 1B.



More pictures at
globe.georgfischer.com

The Only Way to go: Straight Ahead

Robert Volland has an unusual hobby:

He throws himself into deep mud pits, surmounts barriers several meters high, and runs almost to the end of the world. His energy reserves are almost inexhaustible – a skill that also gives the sales engineer a special edge when it comes to acquiring new customers.

783



Robert Volland knows cold, heat, pain, and exhaustion very well. He dares to plunge into the unknown and withstands electric shocks – all quite voluntarily, because the sales engineer at GF Machining Solutions in Schorndorf (Germany) is an extreme sports athlete. His passion is Obstacle Course Racing (OCR). This discipline is all about overcoming extreme obstacles during a race. OCR involves running, climbing, crawling, shimmying, swimming, diving, and sometimes even jumping over burning obstacles. Another name for OCR is Survival Running, and there's a reason for this: "If you torture yourself for many hours over a long distance, the pain will come at some point. When the body says, 'I can't go on, I can't take it anymore,' I say, 'Yes, I will carry on.' To pull yourself out of these mental holes and to motivate yourself over and over again – that's what OCR is all about, in addition to being in excellent physical shape, explains Robert.

Only a few years back, in 2012, things looked quite different for him: Despite his average height of 1.74 meters, he weighed almost 90 kilograms. "When I was a teenager, I did kickboxing for a few months, before >

Strength goes a long way towards braving an OCR course. When you are shimmying like here at the monkey bars, you must never touch the ground, or you will be punished with up to 30 burpees.



PERSONAL DETAILS

Name: Robert Volland
Position: Sales Engineer
Division: GF Machining Solutions
Location: Schorndorf (Germany)
Part of GF since: 2015



Robert Volland gets in shape for the challenges by training his strength and stamina. Week after week, he runs up to 35 kilometers of mountain cross with 700 meters of elevation and the same distance doing interval training in flatter terrain. In addition, he spends about 4.5 hours in building his strength.



For Robert Volland, extreme sports and sales are two sides of the same coin. In both disciplines, it's all about strategy, stamina, and the ability to adapt individually to each task or customer.

OBSTACLE COURSE RACING FACTS

OCR originally developed from military pentathlon.

The first OCR race, the Tough Guy Race, took place in the UK in 1987. The race is considered one of the toughest races, alongside Getting Tough – The Race, Iron Viking, and Ultra Viking.

Popular TV adaptation of OCR races: the parcours challenge show Ninja Warrior.



› my studies and family put an end to that. Sport was out of the picture back then," he remembers. One morning he looked down at himself and thought, "Oh my God!" His shirt was stretched to the point where a single deep breath would have sent the buttons flying. "This was my personal turning point," says Robert. At that point, he decided to take action and get active.

The starting signal

He started out by going on mountain bike tours. But at the end of 2013, Robert saw a report about the German 'Braveheart Battle' on television, an extreme cross-country race with an unusually high count of meters of elevation and tough natural obstacles. "I knew that was exactly what I wanted." A phone call with his friend Matze was all it took to jump start him into the OCR scene: "Matze had signed up for the battle before me. I had no choice but to follow his lead," says Robert. Together they started training for the race, wearing green T-shirts that showed Hulk from the Marvel comic universe. However, Robert does not have much in common with the roaring, uncontrolled mound of muscles. He is all about being straight-forward and focused – characteris-

tics that are as helpful in sales as they are on the course.

The strategy

The trained toolmaker, who also studied business economics, has been working as a field sales engineer at GF Machining Solutions in Schorndorf for four years. He sells, among other things, wire and die-sinking EDM machines, Milling machines, and Laser systems. The family man has his office in Bebra, about 150 kilometers northeast of Frankfurt am Main (Germany). What may seem like a job as a lone fighter, due to the distance to Schorndorf, in reality requires the permanent exchange of information and constant teamwork. The same holds true for OCR: "There are always obstacles that can only be overcome together. For example, there is no escape from a three meter deep mud pit alone. But what makes OCR so special is the racers' comradeship: "The runners help each other." This means literally giving others a hand, providing a foothold to overcome an obstacle, or even human pyramids.

Robert organizes customer care and acquisition in Bebra. In his home office, he draws up offers and concepts. "You have to fight for every single order and adapt indi-

vidually to each customer. Again, this is in many ways similar to OCR, where I focus fully on the track and its challenges. In both cases I have to answer similar questions: What is important to the customer? Which strategy makes sense for the next course?" If all goes according to plan, he is rewarded with closing the deal at work and with a medal in the world of sports.

Iron will

'Getting Tough – The Race' is set in the German state of Thuringia. It is Robert's favorite race and is considered the toughest obstacle course in Europe. It always takes place in December, with starting temperatures around 0 degrees Celsius. Because of the season, there are several ice-cold water obstacles. "It's extremely tough, and you might actually have a near-death experience during the race," he says with a grin. Neoprene is frowned upon, but a bathing cap is a must-have when diving. Cramps? Well, that's just part of the game. "Sometimes my cold fingers won't be able to hold the cup anymore at the refreshment station. At the finish line, I can barely get out of my clothes on my own." So why on earth does a person willingly suffer such an ordeal? "It's the ambition to cope

with extreme conditions – ever faster, tougher, and further. The feeling of happiness at the finish is indescribable," Robert reveals.

There are videos on the Internet about events such as the ones where Robert tortured his way to the finish line. The videos are reminiscent of TV documentaries on the training of military special forces. "I successfully survived the Iron Viking races in Wächtersbach (Germany) and Nijmegen (Netherlands)," Robert proudly points out. Over 42 kilometers, a maximum of seven and a half hours, and over 120 obstacles. "Participants like me, who run the long distance in this race wear special vests. They have priority at all obstacles over the short-distance runners, because if the intermediate times or the finish time are not reached, the respective long-distance runner will be disqualified."

The training

OCR brings out the perfect athlete in you, says Robert: "Strength and endurance, speed and toughness." To stay in top condition, the sales engineer therefore likes to run mountain cross, sometimes 35 kilometers and more, mostly on Sunday morning. He interrupts the running rhythm again and again, ›

FACTS ABOUT ROBERT

Robert Volland's favorite contest is **Getting Tough – The Race** in Thuringia (Germany).

His last race was the **Ultra Viking** in Warstein (Germany) in September 2019. There he had to brave a running trail of more than 60 kilometers, roughly 3'300 meters of elevation, and about 135 obstacles – in less than 10 hours.

70 km

of running per week are on Robert Volland's itinerary – particularly when preparing for a race.

Robert Volland is on the road a lot in his job. As a salesman, he travels almost 50'000 kilometers across Germany per year.



«I want to cope with extreme conditions.»

Robert Volland
Sales Engineer at
GF Machining Solutions

› doing knee bends, burpees, and sit-ups. In the gym, he builds his strength doing core units as well as with classical dumbbell and strength training. The correct balance is essential and fully depends on the upcoming event.

To date, Robert retired from a race only a single time. "I lay in the snow under the barbed wire and could move neither forwards nor backwards – the legs had simply shut down. I couldn't motivate myself anymore. So this was it, then." This defeat bothered him for a long time. So it was all the more important to get right back on his feet, analyze the event, and come back even stronger. "This is also reflected in the work we do in sales. If a customer ends up going to the competition, you have to understand why and learn from this defeat, while at the same time retaining the will to fight for the next order with the next customer. It goes on and on, and there's only one direction: straight ahead." ■



More pictures and a video of Robert Volland are available at globe.georgfischer.com

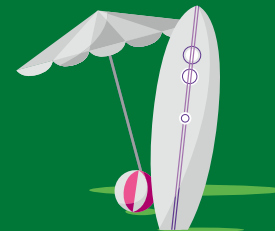
3x3

1. I would like to travel to:
2. Country living or big city flair?
3. Today on the way to work...



Christine Fink
Head of HR Germany
GF Machining Solutions
Schorndorf (Germany)

1. Hawaii.



2. As a nature lover, I prefer living in the countryside.

3. ... I observed the sunrise. A perfect start into the new day!

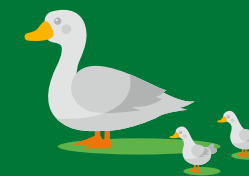


William Lewert
Shipping/Warehouse Clerk
GF Piping Systems
Easton (USA)

1. Scotland.

2. Life in the countryside!

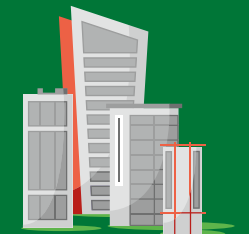
3. ... I saw a man guiding a family of ducks off the road.



Georgiana Ungureanu
Safety and Health Inspector
GF Casting Solutions
Pitești (Romania)

1. Bora Bora.

2. Big city flair.



3. ... I realized that my wedding was precisely one year away and that I would be starting a family then.



Here are the new questions:

1. A vacation full of relaxation or sight-seeing?
2. In this place my creativity truly soars:
3. My first car was a...

Take part and send your answers along with a portrait photograph and '3x3' in the subject line to: globe@georgfischer.com
All entries will be included in our competition on page 40.



You can find further submissions to 3x3 online at globe.georgfischer.com

**ONE DAY WITH
PHAM THI MINH THUAT**

Name: Pham Thi Minh Thuat
Position: Senior Sales Engineer
Division: GF Piping Systems
Location: Ho Chi Minh City (Vietnam)
Part of GF since: September 2018



Always On Site for Her Customers

For Senior Sales Engineer Thuat Pham Thi Minh, no two days are the same. But there's one constant: She is always on the road, traveling across Vietnam to meet with customers, often directly on site. Her clients hail from a wide range of industries and require individual water treatment solutions. Keeping personal contact with them is key to her sales job at GF Piping Systems.



8:10 a.m.:

Thuat's morning coffee with her sales colleagues is important for a lively start into the day. Today, as always, they exchange the latest news in a relaxed atmosphere. Thuat and her colleagues are convinced that a cheerful working atmosphere is the best incentive for good performance.



10:05 a.m.:

Thuat takes her scooter to drive to her first appointment at the Saigon river port in Ho Chi Minh City. She discusses upcoming major projects with Lam Nguyen from 'Piriou,' a company specializing in the construction of naval vessels based on European standards. GF supplies piping systems for the water treatment on board.



12:37 p.m.:

Even at lunch, Thuat maintains contact with potential customers. Today, she meets an OEM's planning team for wastewater management, a potential customer for wastewater treatment systems.



1:50 p.m.:

Back at the office, Thuat welcomes another customer: A shrimp farm operator who is active at numerous locations throughout Vietnam. Thuat presents the double containment system from GF Piping Systems, which is ideally suited for applications with particularly sensitive processes such as food production.



3:18 p.m.:

Like every day, Thuat exchanges ideas with her supervisor Vu Dinh Cuong, the Country Manager of GF Piping Systems Vietnam. Together they discuss the status of ongoing projects, and Thuat reports on today's meetings with customers.



5:12 p.m.:

At the end of each working day, Thuat is already preparing for the next one. This is the first time Thuat is working alone at her desk today. Tomorrow, she will also have numerous customer appointments to attend. But that's exactly what she likes most about her job.



6:34 p.m.:

Arriving home, Thuat calmly dedicates herself to the most important people in her life. She spends every free minute with her husband Dang and her son Kelvin. What they do together is usually decided by the youngest member of the family.



+ More pictures of the day with Thuat at globe.georgfischer.com

THAT'S HOW IT WORKS!
THE NEW BALL VALVE 546 PRO

Going with the Flow

GF Piping Systems provides plastic piping systems that make sure water, gases, and chemical substances keep flowing smoothly. Ball valves ensure everything is heading where it is supposed to. Highly durable and long-lasting, these valves reduce maintenance and retrofitting costs just as effectively as they do the risks of operating errors and sabotage. Their modular design means they are prepared for future developments, be it digitalization or changes in regulatory frameworks. Produced in Switzerland, the 546 Pro is the gold standard in ball valves. See in which important sectors the market leader is used – and what it can do.

13.5%
Expected annual growth of the global data center cooling market by 2025

Data center cooling

Large data centers generate massive amounts of heat. Cooling the servers accounts for around 25 to 30% of the technology and electricity costs. This means the equivalent cooling solutions made from plastic offer tremendous savings potential in terms of installation and operation, while also preventing corrosion. Ball valves regulate the system.

Microelectronics and semiconductors

Various piping systems for coolant, wastewater, chemicals, and gases are required in the manufacturing of computer chips and other products in the microelectronics sector. Ball valves are not only used to regulate inlets and outlets, but also to vacuum clean rooms.

USD 535 billion
Estimated value of the global microelectronics market in 2023

278 million metric tons
Approximate annual global production volume of sulfuric acid, the most commonly used chemical, in 2021

The chemical processing sector

With safety being the priority in the chemical industry, leak tight valves are a necessity in applications where hazardous chemicals are handled. The modular GF ball valve is superior in terms of blocking flow. It also allows upgrades to remote control without the need to disassemble the piping system, thus reducing the risk potential.

Water treatment

Clean water is a highly sought-after resource. It comes to no surprise that wastewater treatment is a growing sector, making up 35% of the global water market. Ball valves must withstand high levels of operating and corrosion pressure when treating industrial wastewater and desalinating seawater in particular.

USD 250–300 billion
Total value of global water treatment market in 2019

1/3
Proportion of metal piping systems that can be converted over to plastic piping

Energy sector

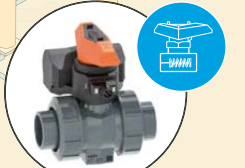
GF Piping Systems supplies energy companies with a range of products that are suitable for denitrification and desulfurization. Plastic pipes make thermic power plants more efficient by lowering maintenance and repair costs as well as reducing the risk of leaks and ruptured pipes caused by corrosive substances. That's where ball valves are used.

Shipbuilding

GF Piping Systems manufactures plastic piping systems for cruise liners, offshore accommodation, ferries, and research vessels worldwide. Light and free from corrosion, pipes, fittings, and ball valves are used to make sure all liquids on board are transported efficiently.

70–85%
Proportion of a ship's value generated by suppliers

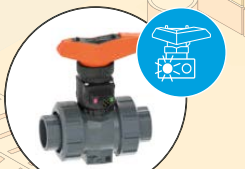
Features of the 546 Pro



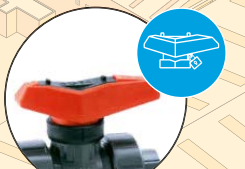
The **dead man's lever** ensures that the ball valve always closes by itself.



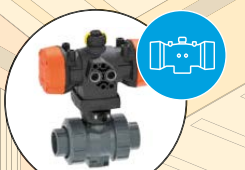
The **data matrix code** provides individual data on the ball valve.



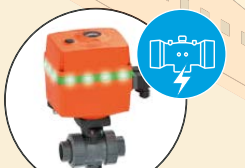
Optional sensors continuously and reliably indicate the valve position via LEDs.



The **ergonomic, lockable lever** makes operation smooth and precise.



The ball valve is also available with an **electric or pneumatic drive**.



Thanks to the **smart actuator**, the commissioning and display of process data are very easy.



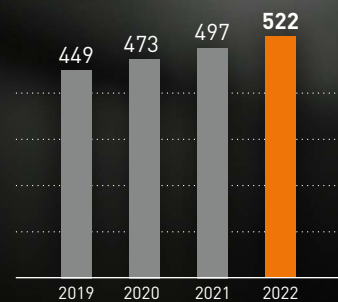
A BOOMING MARKET

13 billion

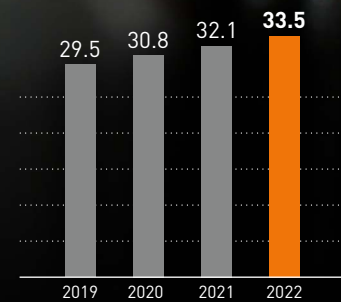
USD is the forecasted volume of the worldwide market for dental implants and prostheses in 2025. Compared to 2019 (USD 9.5 billion), this would represent annual growth of 6.5%.

Source: Statista, Markets and Markets

Medtech in demand
Forecasted revenue in the field of medical technology worldwide from 2019 to 2022 (in billion USD).



Increasing R&D investments
Forecasted worldwide research and development spending in medical technology, 2019 to 2022 (in billion USD).



OUR MARKETS
MEDICAL TECHNOLOGY

Precision Paves the Path into the Future

GF Machining Solutions provides the technologies medical technology manufacturers need most to improve lives. Machining expertise and a new market strategy add up to promising growth in this segment.

Hip replacements revolutionized people's lives in the 1970s. Like many orthopedic implants, however, they can weaken bones by reducing the load they bear, resulting in osteoporosis. Today, many implants are manufactured with Trabecular Titanium structures made on GF machines using 3D printing. These implants complement bones better, allowing normal, healthy loading and providing support while promoting bone growth.

Since the 1960s, GF Machining Solutions has developed solutions for medical technology (medtech) ranging from Milling to Laser texturing, manufacturing hip joints, dental crowns and plates for broken bones. GF Machining Solutions was originally known for its expertise in mold and die in this market – and Medical Segment Manager Erik Poulsen is building on that reputation. "We're looking to expand our reach and our technology profile," says Poulsen, who is responsible for guiding the growth of the medical segment at GF Machining Solutions. His main focus right now is on the growing European market, where GF has the opportunity to more than double its sales in the medical segment.

Connecting with the customer

GF Machining Solutions' Strategy 2020 laid out broad objectives for the medtech market, with a specific goal to increase the market share within its portfolio from six percent in 2018 to ten percent in 2020. A three-step strategy is being followed to meet these objectives: strengthening the share of the German medtech market, increasing the share of the orthopedics market, and equipping sales employees with an understanding of the rules and requirements of this

industry – skills that are needed to earn customers' trust. GF Machining Solutions offers the latest technologies such as Laser texturing and 3D printing – all built for Industry 4.0. But these tools are not enough on their own.

Quality matters most when it comes to people's health and medtech products are often subject to regulatory scrutiny. GF Machining Solutions has the opportunity to set itself apart from its competitors with the quality of the machines it produces, and this process can begin early on through collaboration with manufacturers at the product design stage. Serving an industry with such a dynamic regulatory environment has its challenges. "Our customers have to navigate complex regulatory conditions to succeed," observes Poulsen. "Supporting our sales engineers with the right tools, including presentations and clear responses to technical questions that are specific to the medtech industry, enables them to handle these complexities together with our customers."

Future outlook

Some exciting developments are also underway in the industry. Additive manufacturing (3D printing) is revolutionizing materials used in medical implants. Trabecular Titanium, for example, can only be made using 3D printing – but printing alone isn't sufficient. "In addition to offering printers, we enable customers to automate moving a printed device directly into Milling, along with data management and connection to a customer Manufacturing Resource Planning (MRP) software. We can connect all these building blocks and offer a full value chain" says Erik Poulsen. ■



ADVANCED TECHNOLOGY

Laser technology allows even curved surfaces to be precisely adapted. In addition, this technology and 3D printing enables GF Machining Solutions to respond to individual customer requirements. As one of the market leaders in implant manufacturing technologies, GF Machining Solutions is a sought-after partner for device designers and manufacturers.



Erik Poulsen

As Manager Medical Segment Marketing for GF Machining Solutions in Biel (Switzerland) since 2018, Erik has professional experience in industrial sales and marketing for highly technical products with a deep understanding of the medical device industry in Europe and North America.

OUR CUSTOMERS
REICHLÉ TECHNOLOGIEZENTRUM



Close cooperation: Marco Reichle (right), Co-CEO of Reichle Technologiezentrum GmbH, and Bernd Martiné (left), Key Account Manager at GF Machining Solutions.

9'170 kilograms is the machine's weight. It measures 2.24×3.40×2.93 meters (W×D×H).

The heart of the machine is the Laser head, which features a 3D scanner and is thermo stabilized. This guarantees maximum precision, even over long machining times.



NEW MACHINE
The LASER S 1200 U came onto the market after a field test carried out by GF and Reichle in spring 2019.

A patented software package makes it possible to create laser programs in a user-friendly way.



New Innovations on the Horizon

From a one-man operation to the market leader: Reichle Technologiezentrum uses GF Laser machines to texture precise, complex structures on injection molds, particularly for demanding customers in the automotive industry.

My father is a visionary," says Marco Reichle, who, at just 30 years of age, is co-CEO of Reichle Technologiezentrum GmbH in Bissingen, Germany (close to Stuttgart). The company's history began in 1981, when Marco Reichle's father, Volker Reichle, commenced engraving operations in the basement of his family's home.

Over time, Volker Reichle came to recognize that the future of his business would not lie in manual engraving; he realized that he should develop the company into a service partner for tool and mold making. That is why he procured CNC and laser engraving machines and incorporated laser welding into the company portfolio in 2001. "To this day, we can still remember the long line of customers in front of our building on the first day we offered that technology," says Marco Reichle. Customers from the tool and mold making industry had been eagerly anticipating the then-new technology, since it could work more precisely and reliably than TIG welding, which had been standard up until that point. Reichle has since become the

—
«We have been jointly developing technologies with GF since 2012.»

Marco Reichle
Co-CEO of Reichle
Technologiezentrum

European market leader for laser welding in tool and mold making, and operates worldwide. Around 100 employees work in the company's five Business Units, which cover laser texturing and surface design, surface technologies, laser and TIG welding, laser and CNC engraving, and cast part repair using laser welding. The majority of Reichle's more than 1'000 customers worldwide come from the automotive industry – the company acts as a service provider for tools and molds and repairs serial cast parts. Reichle also serves customers in the cosmetics, packaging, medical, and toy industries.

Marco Reichle oversees the family-run business together with his father, Volker Reichle, and his sister, Marina Reichle. He appreciates the company's flat hierarchies and the fact that he can count on his great, efficient team. Maintaining personal contact with all of the employees is also very important to him, as he recounts. He adds: "Our short decision-making paths also allow us to implement risky, visionary ideas without having to discuss them for months beforehand." The collaboration between Reichle and >



Joint development: Nick Loreth, Product and Surface Designer, Bernd Martiné, Key Account Manager GF Machining Solutions, Marco Reichle, Co-CEO of Reichle Technologiezentrum, and Tom Hartmann, Laser Texturing Applications Engineer (from left to right).

GF Machining Solutions began in 2012, after Volker Reichle attended Euromold in Frankfurt (Germany) a trade fair for tool and mold making, design, and product development. At that year's event, GF was exhibiting the LASER 1000 Laser texturing machines with Workpiece Changers (WPC). Volker Reichle was impressed and recognized the potential that this machine had for his company. He called his son Marco Reichle, and within the space of just a few days they decided to invest in this technology. This decision went on to have far-reaching consequences: Marco Reichle thereby ended his then-employment at an SME automotive supplier to begin working for his family's company full-time, where he was tasked with building up laser texturing.

Determination and energy

"Surface texturing for the automotive industry is a complicated, complex process due to the extremely high requirements of the OEMs and the large number of materials and molds involved. It is extremely difficult to gain a foothold in this business," says Bernd Martiné, Key Account Manager at GF Machining Solutions in Schorndorf (Germany). However, Marco Reichle has been able to draw upon a great deal of energy and determination to lead this Business Unit to success. "Investing in the LASER 1000 was probably the most important factor in our company's success," he says. Although he was barely able to generate revenue during the first year, the demand on the market increased rapidly thereafter. "We were able to double this Business Unit's figures several years in a row," says Marco Reichle. Today,

FACTS AND FIGURES ON REICHLÉ

Reichle Technologiezentrum also specializes in cast part repair: Since 2009, the company's employees have used specially designed laser welding technology to repair over 350'000 cast parts that had been designated scrap.

4'800

square meters is the size of the production facilities in Bissingen.

2'500

tools and molds are textured at Reichle using lasers each year.

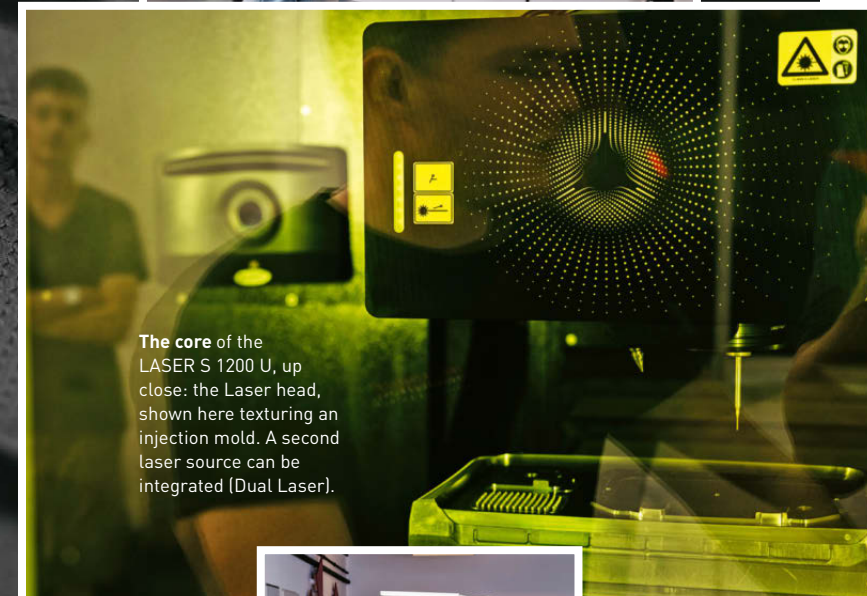
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machines from GF are in use at the Reichle headquarters in Bissingen.

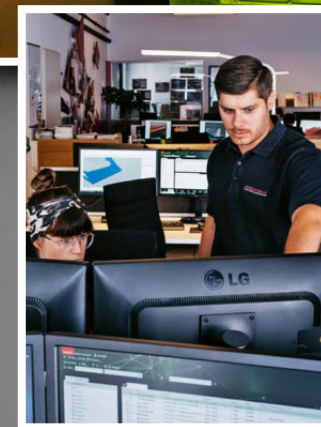
laser texturing makes up 40 to 50 percent of the company's total revenue. Marco Reichle decided back in 2013 to fully discontinue the then-conventional method for texturing surfaces, etching, and to only use laser texturing from that time on.

To this day, Reichle remains the only company in the world to have fully completed this technological shift – and it has had GF as a partner by its side from the start. "We have been jointly developing and refining technologies since 2012," says Marco Reichle. Before the new LASER 1200 Laser texturing machine came onto the market in 2019, GF and Reichle submitted it to exhaustive, jointly executed field testing. "Of course, we also carry out testing in the lab and in our Development department," adds Martiné, "but being able to test machines in daily operation with customers represents a major advantage." Other customers will also benefit from this, since potential malfunctions can be determined and then resolved in advance. Martiné appreciates the fair and reliable collaboration with the company and with Marco Reichle in particular: "Even at challenging points in the process, such as when something didn't work as expected, we always identified the problems together and worked with mutual understanding."

Like his father, Marco Reichle is also always thinking ahead to the future. "The requirements that we place on the machines certainly push the GF employees to the limits of what's possible sometimes," he says. Martiné appreciates Marco Reichle's ideas: "The collaboration occasionally challenges us, but it also always brings us a big step forward together." ■



The core of the LASER S 1200 U, up close: the Laser head, shown here texturing an injection mold. A second laser source can be integrated (Dual Laser).



Suitable concepts: The laser strategy for the customer is created – including all designs, mapping, and programs – at Reichle by an experienced team.

"GF machines ensure higher-quality texturing on the tools"

Marco Reichle is co-CEO of Reichle Technologiezentrum GmbH. In this interview he talks about the innovative field of laser texturing as well as his company's cooperation with GF Machining Solutions.

Mr. Reichle, what is so special about laser texturing?

Laser texturing allows us to carry out tasks such as laser-texturizing richly detailed leather graining onto injection molds so that the grained plastic parts they produce look virtually identical to carrier components covered in leather. Thanks to lasers, we can also implement wholly new designs such as geometric textures, graduated graining, or matt surfaces. This will allow us to continue to meet designers' requirements in the future.

How does GF Machining Solutions support you in this?

We are known for acting aggressively and innovatively on the market with new textures. For instance, we set ourselves the goal of replacing our decades-old chemical etching with laser texturing. Thanks to the LASER S series of GF in particular, we can save a great deal of time to work more economically. Above all, the GF machines ensure a significantly higher level of quality for textures on the tools.

What do you appreciate about the collaboration?

We share the same innovative way of thinking. Our relationship has virtually become a friendship over our many years of strong collaboration. This allows us to jointly discuss and ponder a great deal about future cooperation opportunities or new services, whether these are tailored to us or more generally intended for the market. In the future, we will rely on GF as a partner, and will certainly develop more innovations together.

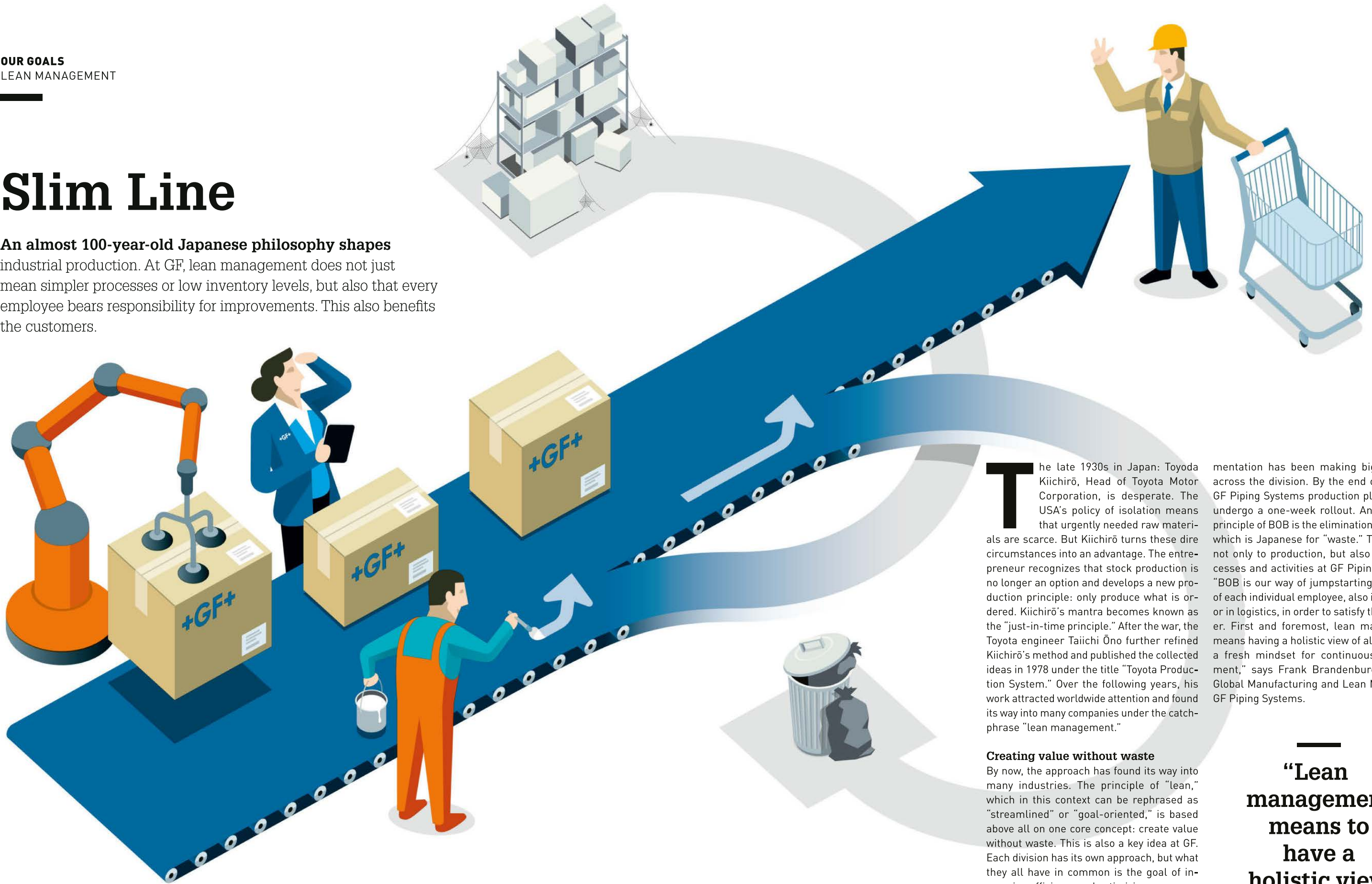


Since he was a child, Marco Reichle has been involved in the family business. He has been responsible for laser texturing there since 2012.

OUR GOALS
LEAN MANAGEMENT

Slim Line

An almost 100-year-old Japanese philosophy shapes industrial production. At GF, lean management does not just mean simpler processes or low inventory levels, but also that every employee bears responsibility for improvements. This also benefits the customers.



The late 1930s in Japan: Toyoda Kiichirō, Head of Toyota Motor Corporation, is desperate. The USA’s policy of isolation means that urgently needed raw materials are scarce. But Kiichirō turns these dire circumstances into an advantage. The entrepreneur recognizes that stock production is no longer an option and develops a new production principle: only produce what is ordered. Kiichirō’s mantra becomes known as the “just-in-time principle.” After the war, the Toyota engineer Taiichi Ōno further refined Kiichirō’s method and published the collected ideas in 1978 under the title “Toyota Production System.” Over the following years, his work attracted worldwide attention and found its way into many companies under the catchphrase “lean management.”

mentation has been making big progress across the division. By the end of 2020, all GF Piping Systems production plants are to undergo a one-week rollout. An important principle of BOB is the elimination of “muda,” which is Japanese for “waste.” This applies not only to production, but also to all processes and activities at GF Piping Systems. “BOB is our way of jumpstarting the power of each individual employee, also in the office or in logistics, in order to satisfy the customer. First and foremost, lean management means having a holistic view of all areas and a fresh mindset for continuous improvement,” says Frank Brandenburg, Head of Global Manufacturing and Lean Manager at GF Piping Systems.

Creating value without waste

By now, the approach has found its way into many industries. The principle of “lean,” which in this context can be rephrased as “streamlined” or “goal-oriented,” is based above all on one core concept: create value without waste. This is also a key idea at GF. Each division has its own approach, but what they all have in common is the goal of increasing efficiency and optimizing processes through streamlining.

GF Piping Systems launched its first global lean initiative at the end of 2018 under the term “BOB.” Ever since, its imple-

“Lean management means to have a holistic view of all areas.”

Frank Brandenburg
GF Piping Systems

GF Machining Solutions, too, employs lean management as a holistic method: "It's all about applying this idea consistently and promoting understanding," says Thomas Weber, Head of Operations Milling Europe at GF Machining Solutions. Although the division is still in the early implementation stage, the move to its new location in Biel is expected to open up completely new lean possibilities. The aim is to eliminate the weak points that characterize comparable production processes from the outset.

Embracing risk

But doesn't every company try to be as profitable as possible and thus avoid waste? While this is true, GF's production operations previously focused on another aspect: minimizing risk. This often led to long idle times for components and products. In addition, this strategy of building up stock levels results in a view that strongly focuses on internal processes.

The lean process, however, takes a wholly different approach. The offer should be tailored as individually as possible to the customer – preferably without wasting time by storing products before delivery. In order to achieve this, rather than basing the production volume on forecasts, it is aligned with the actual, visible order situation. Taiichi Ōno summarized this idea as the "kanban" principle. The Japanese term means "large scoreboard" and is intended to underscore the orientation towards visible orders. In fact,

"It's all about applying lean management consistently."

Thomas Weber
GF Machining Solutions

Ōno had such scoreboards that listed current orders set up in production back when he developed the concept.

A holistic view of the production chain is an important prerequisite for implementing this idea. The potential that this approach holds has been recognized at GF Piping Systems. "Before the BOB rollout at the beginning of the year, every department was trying to individually fine-tune their workflows as well as possible and achieve improvements in this manner," says Frank Brandenburg. "Since then, we've been looking at the entire value chain of our products – from granules through to shipment to the customer." The focus has been shifting from reducing costs to minimizing cycle times. "If we consistently apply the lean philosophy, lower costs are a positive side effect," says Brandenburg, with a happy gleam in his eyes.

Stronger thanks to joining forces

In order for the just-in-time principle to work, potential errors need to be identified and minimized in advance. An important concept of lean management is that, even if processes have already been improved, this does not mean that now everybody can lean back. Instead, processes, in particular those relating to production, should be scrutinized constantly and optimized continuously. Production that can't be further improved? According to Frank Brandenburg, no such thing exists: "When a plant manager tells me that all key figures are 'just perfect,' it's hard to believe.

If the production is running well, you must encourage the system to identify the next error so that it can be optimized further." With "kaizen," GF Piping Systems brought another Japanese principle into the company for the BOB rollout. The core concept is continuous improvement through the participation of everybody. At regular kaizen events, employees and managers work together to develop ideas for how specific processes can be improved and then implement them right away. The sites decide individually how often these events take place. "The biggest change is the bottom-up principle," says Brandenburg. "In this way, our employees are not only actively involved in continuous improvement, but are also key driving forces and implementers."

At GF Casting Solutions, the lean approach has been around for a long time. It was introduced ten years ago and has been pushed ahead ever since. At the Altenmarkt site (Austria), a system is currently being introduced that focuses on lean management and operational excellence based on long-standing and successful manufacturing processes. It involves the optimization of production areas and process steps, the integration of autonomous transport systems, and digital monitoring. The system will be continuously optimized and introduced at all GF Casting Solutions sites worldwide in the future. "The initiation of this change depends above all on our managers," says Frank Brandenburg. This change process takes somewhat longer in areas where managers have a tendency to

keep a tight grip on the reins. In addition to increasing employee participation, a new culture is to be established that focuses on errors. Recognizing a problem is the first and most important step towards solving it. Accordingly, there must also be the freedom to address difficulties and mistakes openly.

New way of thinking

Employees first have to learn that they can and should shape their workplaces and processes themselves. This new way of thinking is normally adopted rather quickly. Managers, on the other hand, might perceive the change partly as a loss of responsibility or control. But Brandenburg is optimistic that change can be achieved. The highest leadership level is helping by strongly encouraging this course: "In terms of employee participation and a more open approach as regards errors, our new CEO Andreas Müller is an important advocate and a helpful role model for us all." Customer orientation and flexibility, employee participation, and a "culture of error" – all of these principles are recognized by companies like GF as effective maxims for action. After all, what the car entrepreneur Toyota Kiichirō thought up in a time of crisis almost 100 years ago is more relevant today than ever. ■



3

QUESTIONS TO CEO ANDREAS MÜLLER

1 Why is lean management important for GF? Lean aims to make us use our resources efficiently and improve processes continuously. This will strengthen our operational excellence, which will benefit not only us, but also our customers. It is important that we are always open to new ideas.

2 What is the most important aspect of lean for you? Continuous improvement – and this does not only apply to production or a management level. Every employee is involved, whether at the machine, in the warehouse, or in the office! We must all take responsibility and address possible improvements. The prerequisite for this is that mistakes are also addressed openly.

3 How do you intend to promote an open "error culture" at GF? It is important to me that we at GF maintain and further develop a culture of open dialog. If something doesn't work as planned, the greatest potential for improvement can usually be found right there. We must not conceal mistakes, but learn from them. Let us learn together continuously!

From Japan to the Rest of the World

1934

Toyota becomes a player in the automotive industry. Toyoda Kiichirō, founder of the car division, discovers flaws in the traditional production process and starts to introduce a holistic approach rather than focusing on isolated sub-processes.



1936

Toyoda develops the first "Kaizen improvement teams."

1950

The engineer and production manager Taiichi Ōno begins to develop the Toyota Production System (TPS).

1951

Toyota introduces a system that allows employees to make suggestions for improvements in production.



1962

The Kanban principle is fully implemented at Toyota.

1970s

The global oil crisis and the associated scarcity of resources are increasingly drawing the attention of Western companies to the TPS.



1978

Taiichi Ōno publishes a book that presents his further development of Toyoda's ideas.



1992

In the European car industry, production principles modelled on Toyota are being established, especially in Germany. Adam Opel AG introduces such a principle in 1992, followed by Mercedes-Benz, MAN, Audi, and VW.

1992

The Toyota Motor Corporation first releases detailed information on their production system to the public.

2006

Economists Daniel Jones and James Womack publish "Lean Thinking," one of the most important standard works on lean management.



OUR LOCATIONS
KUNSHAN (CHINA)



Tale of an Unsung Hero

GF Casting Solutions is celebrating its tenth year in Kunshan, a prosperous city at the heart of China's car-making industry. A slowing auto market puts pressure on all players, but the team of the Kunshan plant is up to the challenge.

When you think of cities that represent China's prosperity, Beijing and Shanghai most likely come to mind. But if you look beyond these model cities, you will find unsung heroes – hundreds of smaller cities that carry the true weight of the economy. Kunshan is at the top of the class: Located about 70 kilometers west of Shanghai, its GDP-per-capita is almost twice that of the nearby mega-city, thanks to the thriving manufacturing and renewable energy industries. Kunshan is also rich in history and culture, being home to Kun Opera, one of the oldest performing arts in Chinese history.

A presence in Kunshan for ten years
Kunshan's modern-day success is attributed to the well-developed transportation network and business-friendly environment. That is also why GF Casting Solutions decided to set up a production facility here over a decade ago. To tap into China's booming automotive market, the Kunshan iron casting plant was officially launched in May 2009, after two years of preparations and construction. Today, the core products of the site are ductile iron, which are used in car chassis,

powertrain and truck parts, as well as industrial applications. Over 300 GF employees work here, serving carmakers including Volkswagen, BMW, Ford, Honda, Saic, Changan and more.

Tremendous growth

"Customers trust our products and services because of our technological capability," says Wei Cui, General Manager of the site. He emphasizes that in addition to technical support from central R&D in Switzerland, the R&D team Asia in the nearby city Suzhou is also very helpful in terms of training employees and designing solutions that meet the increasingly complex customer needs, especially the lightweight requirements of car OEMs.

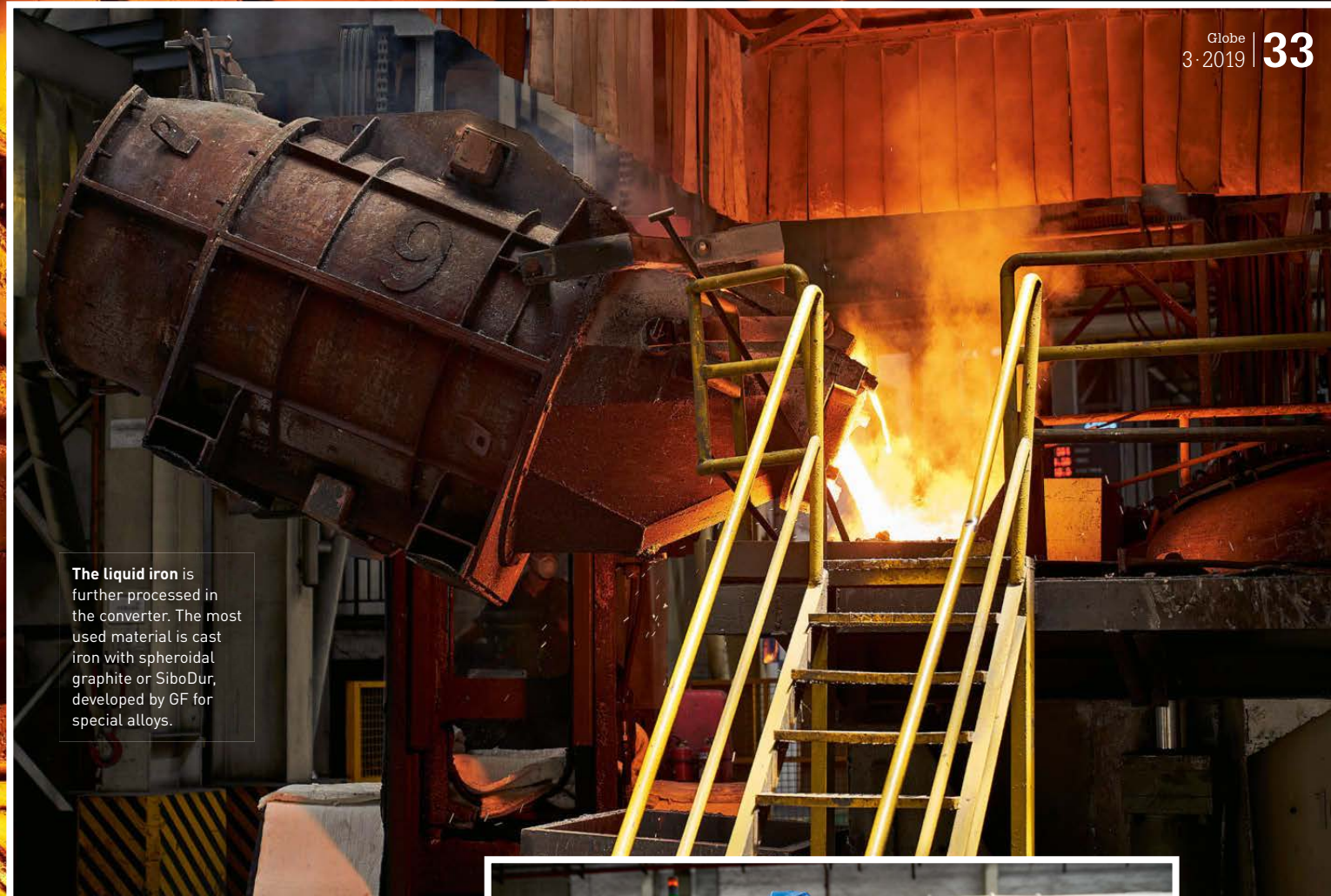
The plant features heavy machinery for melting, molding and core making, as well as sand mixers and shot blasts, so it can get hot and noisy. Its current production capacity is 60'000 tons a year, which is one and a half times more than what it originally started with, according to Wei Cui. "We experienced tremendous growth in the past decade and started to make profits as early as 2012," he says. The success of the Kunshan plant coincides with the market's hunger for car and truck parts. Between 2008 and 2017, car pro-



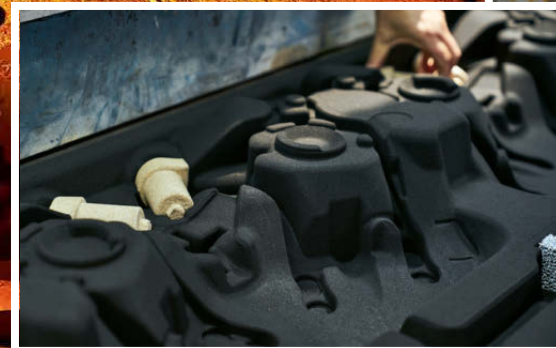
Jeff Wang
Wang is Head of Production at GF Casting Solutions in Kunshan. He joined the company nine years ago. For people who know him well, his pet phrase is that, "two things are important for me: one is enjoying work and working hard, the other is enjoying life and being with my family."



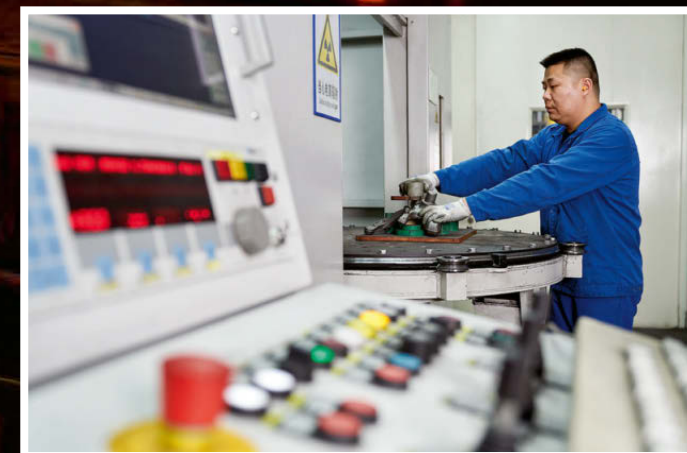
Franz Yu
Yu is Head of Maintenance at the Kunshan plant. He ensures that things go smoothly at the facility as well as in the production line. He finds the job very rewarding because he always deals with new issues, and the challenges improve the team's skills and confidence. In his spare time, he likes watching war films. He also loves taking his family on trips to different places around the world.



The liquid iron is further processed in the converter. The most used material is cast iron with spheroidal graphite or SiboDur, developed by GF for special alloys.



The adjusting plate is where focused and accurate work takes place. The Kunshan plant manufactures popular high-quality components.



Quality assurance by means of x-ray testing, ultrasonic and hardness testing, or fluorescent media is an essential part of the production process.



Bridges and water can be seen anywhere in Kunshan. The old Zhouzhuang district is surrounded by lakes on four sides and belongs to the so-called water cities of the region.



Smelting is a complex process. Production manager Jeff Wang attaches great importance to having well-trained employees.



The cast components produced, such as steering knuckles, wheel carriers, control arms, or differential housings, are stacked in the main warehouse.

duction in China more than tripled, making the country the biggest auto market globally.

A changing market

As the Chinese market nears saturation, coupled with an economic slowdown, the automotive industry is now facing a capacity glut. In 2018, car sales dropped 2.7 percent year-on-year, the very first time in almost three decades.

“We fell short of our 2018 estimate mainly due to the macro environment,” says Wei Cui. Also, more and more manufacturers of high-end and electric cars are using aluminum alloys to replace iron, putting pressure on the company’s market share. Electric car numbers in China rose to over 2.6 million in 2018, which is three times the level of 2015. However, its share of the total market is still less than 0.1 percent.

Although the process is gradual, Wei Cui believes that it is time to adjust the plant’s product offerings to tap new opportunities. “In order to remain competitive, we need to expand the value chain of our products, which may include other solutions such as design, machining and assembly,” Cui Wei says.

As China tries to strengthen its industries, the focus on improving quality and energy efficiency is unprecedented. More and more carmakers are embracing lightweight designs, giving GF Casting Solutions an edge as the company has advantages in engineering such solutions, says Cui Wei. With the assistance of strong brand recognition and loyalty, he adds, the Kunshan plant is set to grow its market share. It seems safe to say that this unsung hero’s tale is to be continued. ■

AT A GLANCE



Location: GF Casting Solutions in Kunshan (China)

In Kunshan since: 2009; the plant opened after two years of construction

Employees: More than 300

Customers: car manufacturers incl. Volkswagen, BMW, Ford, Honda, Saic, Changan

Production capacity: 60’000 tons per annum

Competences: In-house model construction, computer-aided design (CAD) and manufacturing (CAM), delivery of ready-to-mount components, quality assurance in the analysis lab using three-coordinate measuring machines and other testing equipment

Market segments: cast components made of nodular graphite (spheroidal cast iron) used in passenger cars and commercial vehicles



Hans Yu

Yu is Head of Quality at the Kunshan plant. He handles product quality issues both internally and externally every day. He is dedicated to making customers happy and finds solving problems enjoyable. Yu believes in ‘lean thinking’ and wants the team to always put quality first. After work, he enjoys music and poetry. In face of the Chinese market slowdown, he stays optimistic and quotes the English Romantic poet Percy Shelley: “If winter comes, can spring be far behind?”



Houlin Yan

Yan is Head of Technical Department at GF Casting Solutions in Kunshan. He joined the company in 2008. Yan is responsible for tooling design and manufacturing as well as process development and optimization. He is an expert for low-carbon technologies and dedicates himself to developing new environmentally friendly procedures. In his spare time, he enjoys reading books and traveling with his family and friends.

More pictures at globe.georgfischer.com

HEART AND SOUL
ENZYMES



**JOIN IN
AND WIN!**
Are you committed to social causes? Does a colleague of yours do a lot to help those in need? We would like to hear your story:
globe@georgfischer.com
All entries will be included in our competition on page 40.

By growing enzymes, Lena reduces waste and the use of aggressive chemical products.

**Turning Waste
into Treasure**

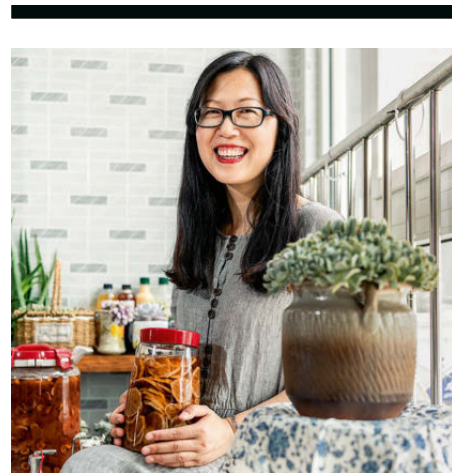
In a time when tapping on your smartphone can buy you almost anything, Lena Ho still enjoys creating things on her own. From cleansers and fertilizer to mosquito repellent and even shampoo, she is able to create those products using not much more than her kitchen garbage.

Lena, Head of Order Processing at GF Machining Solutions in Beijing (China), has been making enzymes at home since 2014. She puts water, a little bit of sugar, and ingredients such as fruit peels and vegetable leaves in plastic bottles to kick off a three-month fermentation process. During this time, Lena has to deflate the bottles a few times, as the reactions may create excessive gas. The result: enzymes that Lena can use for various purposes around

the house. "Traditional cleaning products like bleach are cheap to buy, but they may pollute underground water," Lena says. "Using self-made enzymes instead is a great way to not only dispose of garbage, but also reduce the strain on our public waste management system."

Lena first learned the skills from friends who produce and sell enzymes professionally. Together, they even organize events to pour enzymes into local rivers, which helps purify the water. Though it is hard to keep track of exact results, Lena believes these events are a great way to promote environmental awareness and encourage more people to join. "I want to make as many enzymes as I can and give them to others. Also, I'd like to convince even more friends and colleagues to use enzymes at home—it takes time and effort, but it's good for our environment." ■

For more images, visit globe.georgfischer.com



Lena Ho joined GF Machining Solutions eleven years ago. As Head of Order Processing, she is responsible for order management, product delivery, and the entire order business within the EDM sales organization.

TAKE AWAY
EVERYDAY CYBER-SECURITY

**Always Online –
the Secure Way**

Whether at the office or at home, our life is becoming more digitized by the day. As a result, staying safe in this networked world is more important than ever. The following tips will help you protect against cyber risks. Did you know that...

**...YOU ARE NOT ALWAYS
AUTOMATICALLY LOGGED
OUT FROM WEBSITES?**

Remember to always log off actively – for example, if you only showed your colleagues something on their computers for a short time and logged into your social media account for example. Of course, this also applies to your own computer.



**...THERE ARE SIMPLE
WAYS OF MEMORIZING
SECURE PASSWORDS?**

A secure password has at least ten characters including upper- and lower-case letters, numbers, and special characters. If you change your passwords regularly, as recommended, things can get complicated. Here is our tip: Form sentences that have something to do with the respective application and the current month and then use the initial letters of each word as your password.



**...A SOUND DOSE OF
SKEPTICISM CAN HELP
AVERT MAJOR DAMAGE?**

The senders behind phishing mails are becoming more and more imaginative. For instance, it might happen that you receive a message that looks like it came from a colleague or even your CEO. In case of doubt, please check with them in person before sharing confidential data or opening unknown links.

**...MALWARE IS OFTEN INSTALLED
BY THE USERS THEMSELVES
VIA USB STICKS?**

Hackers can easily get into other computers with USB sticks distributed free of charge. We often simply regard them as a nice promotional gift; but malware or spyware can self-install the moment you connect the stick to your computer.

**...SOFTWARE UPDATES GREATLY
ENHANCE IT SECURITY?**

Most app and system updates come equipped with new security measures in addition to functional improvements. By always enabling the latest versions, you can help to significantly reduce the security risk.

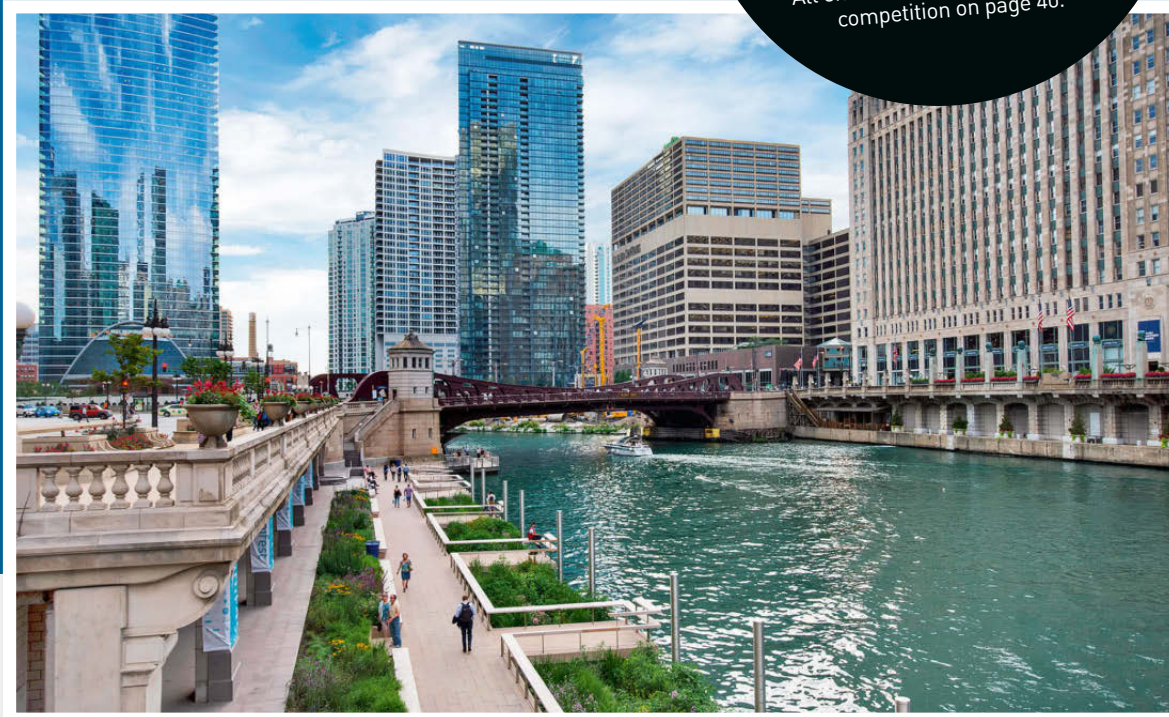
MY HOME
CHICAGO



JOIN IN
AND WIN!

Would you like to present your home to your GF colleagues? If so, please send an e-mail with "My home" in the subject line to globe@georgfischer.com. All entries will be included in our competition on page 40.

The Chicago Riverwalk is a place where pedestrians can stroll through the city center undisturbed by car traffic. Joggers and urban athletes use the promenade to stay in shape.



Thinking Big and Building Tall

Chicago is the "epitome of urban America." Famous personalities like Ernest Hemingway or Harrison Ford were born here. The Bulls, Michael Jordan's legendary basketball team, also have their home here. Rail bridges wind their way through street canyons, and pedestrians cause a hustle and bustle at the feet of gigantic skyscrapers – it's just like Europeans imagine a typical U.S. metropolis.

The decision to go to Chicago was an easy one. When it comes to new places, I'm like a chameleon: Adapting to a new environment comes naturally to me. That's why I felt at home here right away. So much, in fact, that my husband and I eventually bought a house.

Water is ever-present in the cityscape, and not only when the Chicago River is turned

green for St. Patrick's Day. There are countless swimming facilities, even right in the heart of the city. My insider tip: Take a walk along the Chicago Riverwalk. Hardly anyone knows this idyllic path by the water, built on former railroad tracks.

I was born in Leipzig (Germany), so the metropolis Chicago makes for a strong contrast. What I particularly like about this place is the mentality: The Midwest, which is where Chicago is situated, is known for its friendly people. I also appreciate the typically American way of doing things by trial and error. In many ways, our company Microlution is like a start-up. For the most part, we work without tight supervision, and every day we make the most of every opportunity. This makes the work for me, the only project manager on site, particularly exciting. ■



Ann-Charlotte Richter joined GF Machining Solutions in Geneva in 2016 as part of the Graduate Talent Program. Since 2017, she has been working as a project manager at Microlution in Chicago, where she tends to machines from submission of the quotation through to delivery.



MORNINGS

EXERCISING
WITH BEER



During the week, I like to go to Bikram yoga classes in the mornings, while on the weekends I like to do something more unusual, like beer yoga – which is offered at Revolution Brewery, one of the many breweries here in Chicago. At the start of each class, each participant gets a can of beer that they use throughout for balancing and refreshment. After the class, we all enjoy a "post-shavasana" beer; we can choose from among 20 different types of beers.

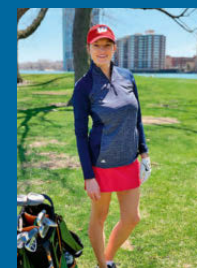
One Day in Chicago



AFTERNOONS

GOLFING
DOWNTOWN

Alongside classic American sports – basketball, football, and baseball – golf is also majorly popular in Chicago. There are a handful of public golf courses located directly at Lake Michigan. Golfing is special for its meditative quality, and the breathtaking views of the lake and the city that golfers enjoy make the experience even better. These golf courses situated right in the city offer natural ambiance and respite without requiring a long car drive.



More impressions of Chicago can be found at globe.georgfischer.com



EVENINGS

PIZZA OR
BURGERS?



Everyone who comes to the city should try the iconic Chicago deep dish pizza, which has a tall crust and lots of filling. I send people who've already tried that to Au Cheval in the evenings, a charming, rustic place where they can eat excellent hamburgers. However, as with all popular spots, the service takes a while; you use an app to get a number and wait in line. I have a hot tip: there's a smaller outpost, Small Cheval, nearby. You can only order burgers there, but you don't have to wait long for them.

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The next issue will be published in December 2019; the editorial deadline is early October 2019.

COMPETITION

Take Your Chance!

Enter our competition for the chance to win an iPad Wi-Fi, Bose wireless headphones, or a JBL Bluetooth speaker. A prize draw will be held among all employees who send in entries for the sections **Hello!**, **3 × 3**, **Heart and Soul**, and **My home**.

Send an e-mail to globe@georgfischer.com with the appropriate subject line. We look forward to hearing from you. The winners will be announced in the next issue of Globe.

Here are the winners of the last competition:

First prize: Tamara Sommer (GF Piping Systems in Switzerland)

Second prize: Georgiana Ungureanu (GF Casting Solutions in Romania)

Third prize: Thomas Bachmann (GF Machining Solutions in Switzerland)

Further entries which could not be included in the printed edition of the magazine can be viewed online at:
globe.georgfischer.com

Submit your entry by the start of October 2019.



1.

iPad Wi-Fi

32 GB

8-megapixel camera

9.7" multi-touch display

2.

Bose SoundSport

Wireless in-ear headphones

Six-hour battery life



3.

JBL Go2

Bluetooth loudspeaker

Waterproof

Conditions of entry

This competition is organized by GF. All employees of GF are entitled to take part in the competition. The winner will be selected by means of a draw held among all submissions that have been entered by the stated competition deadline. Cash payment, payment in kind, and an exchange of prizes are excluded. Participants in the competition agree to their name being published if they win. Any recourse to legal action is excluded.

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