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NetShape

02 | 2022



Customer story

Heading for new shores 05–08
with the *HOTmatic* HM 75 XL

Focus

Simulation as the key 12–15
to success

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HATEBUR

Personal

Dear business associates,

We are seeing a significant increase in volatility of crises, which affects us in our private lives as well as in business, in general life and in our personal spheres. The challenges are becoming increasing large and complex. We can no longer expect this to calm down – we will certainly have to adapt to it. That's why we're no longer going to place particular emphasis on it, since we will always be dealing with one crisis or another.

In this edition of NetShape, we'd like to tell you about clever solutions which can offer you economic advantages, bold decisions by companies keen to invest, as well as attractive and positive topics.

Read about this in the cover story of Longteng Special Steel from northwest Shanghai. Find out about the challenges we faced over the last two years in procurement, construction and installation for the Hatebur *HOTmatic* HM 75 – and how we overcame them together.

In addition, you will discover some technical gems, such as the revised Hatebur *HOTmatic* HM 35 with local drives that we are presenting here for the first time. Furthermore, another article shows the benefits of these drives for forged rolling bearing rings.


The latest additions to the virtual showroom, a look back on the success of Wire 2022 in Düsseldorf and an interview from Italy round off the magazine.

I hope you enjoy reading this edition.
And stay resilient when faced with crises!

Kind regards
Thomas Christoffel
CEO



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Cover image: Shawn Xu, Vice President of Longteng Special Steel, wants to change the DNA of his company with the HOTmatic HM 75 XL.

Legal information

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Latest news

42 million cut-offs in five years

We received two impressive reports of success from the automotive manufacturer Hirschvogel in the Bavarian municipality of Denklingen. In June 2022, the 140,000,000th forging was pressed on the HOTmatic HM 75. This servohydraulic bar stop system, developed by Hatebur, has been in use for five years. During this time, over 42 million cut-offs with optimized HOTmatic shearing quality have been produced. For background: The Hirschvogel Group runs one of the largest forming plants in the world at its headquarters in Denklingen, Germany, and the fully automated multi-stage press HM 75 XL has been in operation there since 2004. The international company, which started out as a village forge, has subsidiaries in China, Germany, India, Poland, Mexico and the USA.

Successfully completed studies



After four years of training at Hatebur, Eliane Hess has successfully completed her apprenticeship as a designer for the engineering and technical sector. Here, Eliane gained an insight into numerous different areas of the company: "Hatebur has very interesting machines, which are made up of so many different parts. That also makes the work very varied," she says, looking back. "It is especially exciting in the Brugg assembly plant, as that's where you can see the theory from the textbook translate into practice."

Twentieth anniversary at Hatebur



Name: **Eva Lehmann**
Position: **Head of Human Resources/ Central Services**

Eva Lehmann took on management of the Human Resources department in September 2002. Important milestones in her 20-year career at Hatebur include the introduction of a new payroll program (2013), changing over contract applications to a new solution (2019) and in-service training to become an employee benefits administrator. We look forward to further collaboration with Eva Lehmann. Despite "officially" retiring, she will stay until June 2023 to support her successor Simone Buchmüller, who has already taken on her role.

Fortieth anniversary at Hatebur



Name: **Heinz Stutzmann**
Position: **Process technology specialist**

Heinz Stutzmann started out in machine and tool design, becoming a specialist in process technology for HOTmatics over the course of his career. He celebrated his fortieth anniversary back in August 2022. His hugely diverse area of responsibility ranges from forging evaluation for customers to process and kinematics simulations, as well as determining sequences of forming stages to perfectly supporting planning in the machine. With his expert knowledge, he not only contributes across departments, but also leads customer training for machines and tools across the world. Technical requirements and cultural inputs are very important to him.


Heading to new shores with the *HOTmatic* HM 75 XL

Text: Bernhard Hagen, Hagen PR
Images: Longteng Special Steel

Changshu, China — When the Chinese steel producer Longteng Special Steel ordered a Hatebur *HOTmatic* HM 75 XL, the goal was not to merely optimize a certain process. The goal was to change the DNA of the company itself.

Approximately 100 kilometers north-west of Shanghai, in the province of Jiangsu, lies the county-level city of Changshu. Changshu is where the private company Longteng Special Steel was founded in 1993. The Longteng factory site in Changshu's eastern suburb Meili Town is impressively big: On the car ride through the factory premises to the main office building, large warehouses, sky-high industrial chimneys, hundreds of trucks, and multiple blast furnaces and steel production sites pass by the window.

With 5,500 employees, Longteng Special Steel has focused on integrated steelmaking for almost 30 years. The steel mill's main incentive is to supply raw materials for downstream processing – with sintering, iron making, steel making, steel rolling, metal processing, power generation, and scientific research being the main fields of activity. “We have always focused on niche markets, for example the production of tailor-made steel bars for customers in the shipbuilding industry,” explains Mr. Shawn Xu, Vice President of the enterprise. The output of various special steels reaches 4.5 million tons annually – a quarter of which is exported to markets all around the world. The most important industry segments for Longteng Special Steel are mining and shipbuilding. The company's total assets amount to 15 billion Chinese yuan (2.1 billion Swiss francs).

 Longteng Special Steel is a leading Chinese steel producer based in Changshu, Jiangsu province.





➤ Easy handling via touchscreen: A Longteng Special Steel engineer controls the HOTmatic HM 75 XL.



➤ Currently, the company uses the HOTmatic HM 75 XL to produce flanges. In the future, it will manufacture precision parts for the automotive and electric mobility sector.

Thinking big

However, the steelmaking business also has its risks and challenges: oversupply is an issue; steel prices are fluctuating heavily. “We recently bought the Hatebur HOTmatic HM 75 XL because of our strategic decision to invest in our downstream processing capabilities, to open up new markets and possibilities, create added value and to mitigate risks of an overly one-sided company portfolio. We think big, and our vision is to become a leading manufacturer in certain niche markets – producing high-precision parts for booming industry segments such as electric mobility, wind and solar power, as well as new and clean energy,” says Mr. Xu. “The HOTmatic HM 75 XL gives us the opportunity to take a big step in that direction!”

In the summer of 2022, Hatebur’s biggest hotformer went into operation at the Longteng Special Steel facilities. The journey to change the company’s DNA, however, began a few years earlier: Longteng first experimented with a smaller forging machine and produced small bearing balls for customers in the wind power industry. In 2020, in pursuit of higher volumes, added value, and new possibilities, the company got in contact with Hatebur Shanghai. “When we talked to the Hatebur experts, our eyes quickly fell on the HOTmatic HM 75 XL. Not only because we like big machines and big potential – but also because we saw the chance to differentiate ourselves from others in the market. Not many companies can take this step,” emphasizes Mr. Xu.

First in China

In fact, Longteng Special Steel became the first company in China to buy the HOTmatic HM 75 XL – the largest horizontal hotformer. When visitors witness the machine live in operation in the Longteng factory, it becomes clear why the company’s Vice President is proud of the investment: The HOTmatic HM 75 XL is truly impressive with its innovative servo-infeed, shearing concept, transfer unit with individually adjustable and monitored transport grippers, superior technical design and outstanding features for forward extrusion operations. The four-station hotformer can process steel bars with a diameter of up to 90 mm and a length of 12 meters. The press capacity is 20,000 kN, and the output is up to 80 parts per minute. The machine manufactures parts with a maximum input weight of 7.5 kg and a diameter of up to 180 mm. The servo-infeed in combination with ESA 600 the bar-end detection system guarantees maximum process reliability and minimum material waste. The Longteng Special Steel engineer, visibly delighted to operate this huge machine, controls it effortlessly and quickly via an innovative touchscreen.



➤ The *HOTmatic* HM 75 XL in the Longteng Special Steel facility is the first of its kind in China.

Second generation

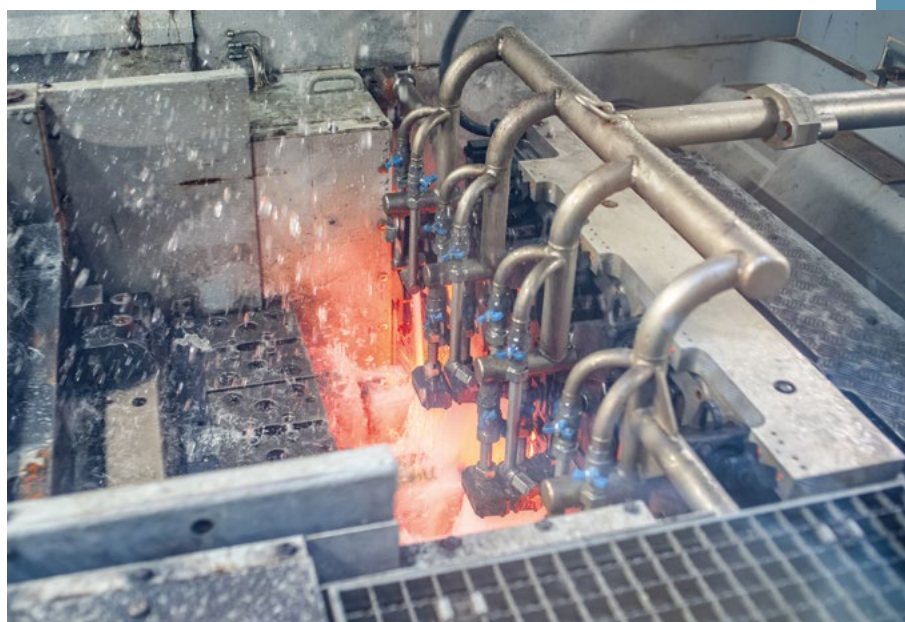
Shawn Xu is a young, dynamic, and smart executive who is leading Longteng Special Steel in the second generation. His father founded the company. Mr. Xu, a Changshu native, studied in Australia and entered the enterprise 12 years ago. “There are cultural differences between China and the West when it comes to doing business. While many Western companies might spend years assessing risks and potential, we – as a private company – take decisions quickly. As long as we can manage the risks, we want to grab opportunities as fast as possible,” he says. Longteng has proven this quick decision-making when it came to the investment in the *HOTmatic* HM 75 XL. Mr. Xu: “We were and are investigating market chances in new vehicles, electric mobility, and new materials. These seminal markets are developing fast – and the lead time for ordering a machine of this size is two years. We decided to invest in the future. With the forging possibilities in-house, we can become a first mover and produce for these growing markets.”

Overcoming Covid-19 roadblocks

After the *HOTmatic* HM 75 XL was delivered to Changshu, the installation and commissioning process started. Because of the ongoing Covid-19 pandemic and travel restrictions in China, Hatebur could not send a technician from the Swiss headquarters, but the experienced engineers and technicians from the Shanghai office stood ready. In close cooperation with Longteng Special Steel, the installation and commissioning process was successfully completed in less than three months, efficient and quick for a machine of this size.

“Initially we had hoped it would be possible for an expert from the Hatebur headquarters to come and oversee this difficult and important process. But then the Hatebur Shanghai team managed the commissioning very well – I am very satisfied with the service quality and support,” explains Mr. Xu.

➤ Top precision: The *HOTmatic* HM 75 XL processes bars with a diameter of up to 90 mm and a length of 12 meters.



Fifteen specialists from Longteng Special Steel were involved in the whole process and received in-depth training, including long video conferences with Hatebur experts in Switzerland and comprehensive training on the machine. Mr. Xu says: "This know-how is crucial. After all, we plan to make full use of the *HOTmatic* HM 75 XL in order to maximize its output and the benefit for our company. Our team will work in three shifts around the clock on the machine."

Right now, Longteng sources and buys some of the materials that are being processed. The company is planning for all of its steel materials to be provided directly by its own upstream facilities in the near future maximizing efficiency and productivity. After the forging processes, Longteng Special Steel also runs subsequent machining steps to make final parts. Mr. Xu explains: "We are keeping an eye on this and may further expand the machining processes in the future."



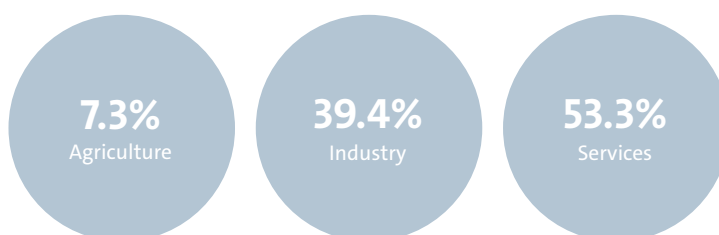
Currently, the *HOTmatic* HM 75 XL is used for the production of flanges for the oil and gas industry – but that will change soon. The engineers of Longteng Special Steel work on a part design for the electric mobility market, and first test runs for this part are about to start. "While we are still evaluating possibilities, we have already ordered our second Hatebur machine, the AMP 70, which is in assembly and will be delivered in early 2023. It will further increase our part output," explains Mr. Xu. "We see huge potential in the electric mobility market, and if production goes as planned, we will order more machines soon."

➤ A Longteng Special Steel engineer oversees the wire feed.

➤ The Longteng Special Steel forging team.



Facts and figures China



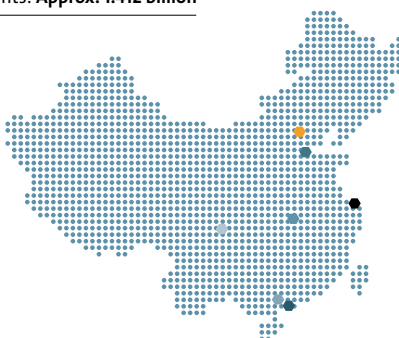
People's Republic of China at a glance

● Capital city: **Beijing (19.0 million inhabitants)** 33 areas with province status: 22 provinces, five autonomous regions, four municipalities, two special administrative zones

Area: **Approx. 9.597 million km²** Inhabitants: **Approx. 1.412 billion**

Largest cities:

- Shanghai, 21.9 million
- Beijing, 19.0 million
- Shenzhen, 17.5 million
- Guangzhou, 16.1 million
- Chengdu, 13.6 million
- Tianjin, 11.1 million
- Wuhan, 10.4 million



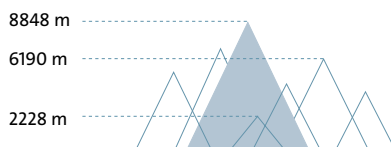
Longest river

Yangtze (6300 km)



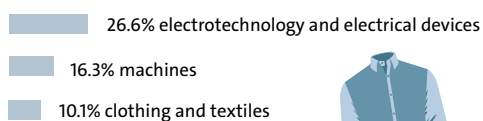
Highest mountain

Qomolangma or Mount Everest (8848.86 m)

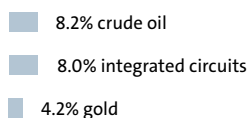


Economy

Most important exported goods



Most important imported goods



14,732
billion GDP, in USD for 2019

Cuisine

China has an unbelievably diverse cuisine with great regional differences. Here is a small selection of typical dishes:

Sichuan hot pot – a kind of (spicy) fondue
Mapo tofu – beef and tofu, very spicy
Paomo – lamb broth with bread and meat
Roujiamo – a “meat sandwich”
Wontons – and other dumplings
Peking duck – probably the most famous Chinese dish

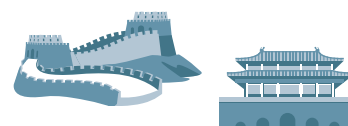


Lucky and unlucky numbers

In China, numbers frequently have a deeper meaning, often linked to their phonetics. The most well-known lucky number is eight (among other things because it sounds similar to the word for wealth) and the most important unlucky number is four (because it is pronounced in a similar way to the word for death).

World heritage in China

China shares the top spot for the most **UNESCO world heritage sites** with Italy. Of these, 37 fall in the category of culture, 14 in nature and four in the mixed category. The most famous of these include the 6260-kilometer **Great Wall**, the **Forbidden City** in Beijing and the mausoleum of the First Qin Emperor with its famous **terracotta warriors**.



Hatebur *HOTmatic* HM 35: A step ahead with SAM technology

Text: Carsten Sieber

Photos: Hatebur

Reinach — After the servohydraulic bar stop was successfully integrated into the HM 75 XL and the AMP 70, Hatebur has been pursuing local drive technology for ejectors. The first introduction to the product range is set to be in the Hatebur *HOTmatic* HM 35.

At Hatebur, we have been working hard for several years to develop and optimize SAM technology (servohydraulic ejector module). Various tests have been carried out with a prototype on a dedicated testing station and on the AMP 30 in the demonstration center. The results are overwhelmingly positive, meaning SAM technology is now ready for productive use by our customers.

The technical solution in detail

Using servohydraulic ejector components makes the mechanical ejector components superfluous to requirements. A further advantage of this local approach is that the axes can be individually controlled and optimally adjusted to production requirements. For example, the ejector forces can be monitored or new processing possibilities can be created. This is possible because the ejector return can be powerfully braked or blocked at the required moment, which in turn enables an intermediate forming step to be executed. But more on that later.

The electronic control for the ejectors allows all settings to be loaded and modified on the HMI at the touch of a button, leading to significantly reduced retooling times, since the manual tasks for the ejector are no longer required. Previously, the ejector functions

were tied to fixed curve laws. With SAM, many of the previous restrictions are already a thing of the past.

The ejection process for forgings from the die with the servo-hydraulic ejector modules takes place in two phases: Loosening the part with a strong force and pushing out the part at high speed. A sophisticated cylinder design means that energy consumption for these movements has been successfully reduced to a minimum, thereby developing an energy-saving solution in keeping with the spirit of the times. Regulating the oil flow in the cylinder ensures a constant wear-free braking function for the ejector.

Combined processing possibilities

The valve technology makes it possible to modify the oil flow very quickly to suit the current requirements. This means, for example, that the ejector can be fully braked while a blank is being inserted into the die. Through successful tests and test runs with SAM technology, we were able to optimize familiar processes and even lay the foundations for completely new processes. For example, sheared cut-offs can be descaled in the press using a SAM module in the first station, and can even be made into the required shape in a die in the same forming process.

Thanks to part geometry, it is possible to achieve a very slim slug, particularly when manufacturing combination rings. For this process, the ejector is braked until stationary in an intermediate position on the return. Since the slug is formed in this intermediate

position and not at the forward dead center of the press movement, the slug thickness can be significantly reduced owing to the freer material flow. As material is the greatest cost driver in the production of forgings, this method results in considerable cost benefits for operators.

Forming stations in which several process steps are combined are nothing new in and of themselves. Hatebur has thus already been offering the piercing/separating method for several decades. Yet with a SAM module, this can be simplified yet further, whereby the parts can be discharged even more softly and the whole sequence of movements for the ejector can be monitored.

All these combined processes are based on flexible control for the ejector function, which allows retention in an intermediate position with great supporting forces. This not only simply saves tool costs as the steps need not be divided into several stations, but also allows challenging parts to be produced with comparatively low production resources.

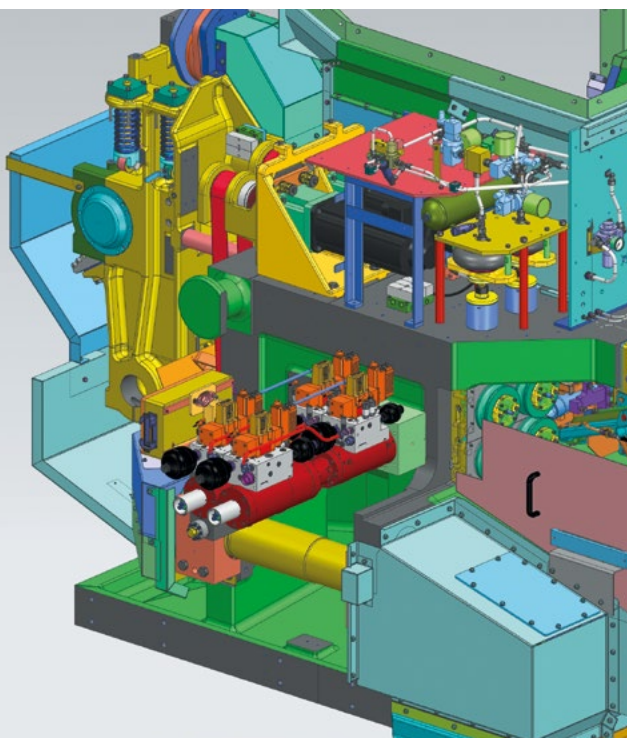
Hatebur HOTmatic HM 35: Integration into the machine range

In addition to automotive parts, production of bearing components is also a focus for the HM 35 product launch. In view of the ever increasing price pressure in the bearing sector, the new SAM technology creates pioneering potential for material-saving and therefore cost-effective production. In addition to these cost advantages, a variety of other quality requirements are met, such as a descaling station, which does not generate any additional tool costs and is independent of body deflection during bar transitions. A user-friendly surface on the HMI completes these new options, which allows for rapid retooling, making the Hatebur HOTmatic HM 35 an ideal production resource for bearing components up to 68 mm over four forming stations.

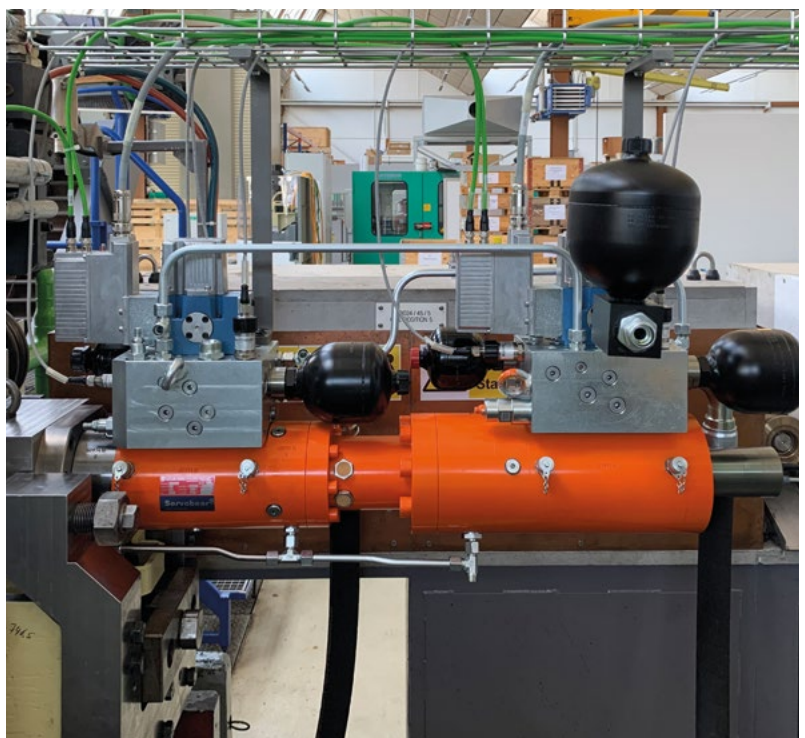
Your advantage:

- Cost savings thanks to process combinations
- Faster retooling
- Ejector timing can be freely selected
- Integrated wear-free braking function
- Integrated electronic overload protection without shear bolts

HM 35 with SAM in the first two stations



SAM test setup at the AMP 30 in the demonstration center in Reinach



Simulation as the key to success

Text: **Stephan Leibundgut, Mihai Vulcan, Michael Suter**
 Images: **Hatebur**

Reinach For new developments, Hatebur makes the most of the latest simulation methods to validate the feasibility of innovative technological concepts and to achieve the highest level of output and maximum reliability for your forming machines under a wide range of working conditions.

Such simulations make it possible to check various solution approaches even before sourcing and comparing the first components. In doing so, Hatebur ensures that the expectations for efficient, material-saving processes can be fulfilled, as well as long, reliable operation.

System simulation of physical-technical systems and installations

Hatebur uses the system simulation not only for the final design validation and adjustment of parameters, but also for a deeper understanding of all physical interactions in the complex high-performance systems. In order to be truly innovative and a leader in the sector, engineers must understand all influences and dependencies in the functional system to find robust solutions for the challenges. It is therefore essential to model all relevant physical phenomena accurately. If the machine does not behave as expected, a system simulation model offers a unique

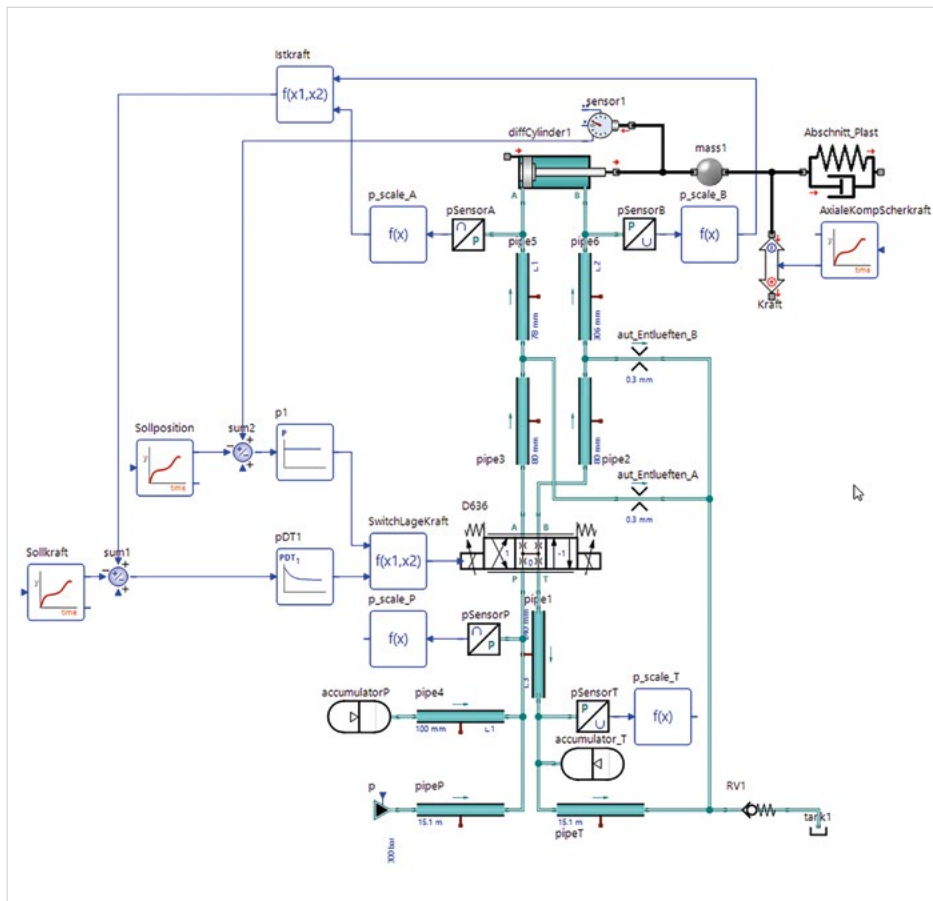
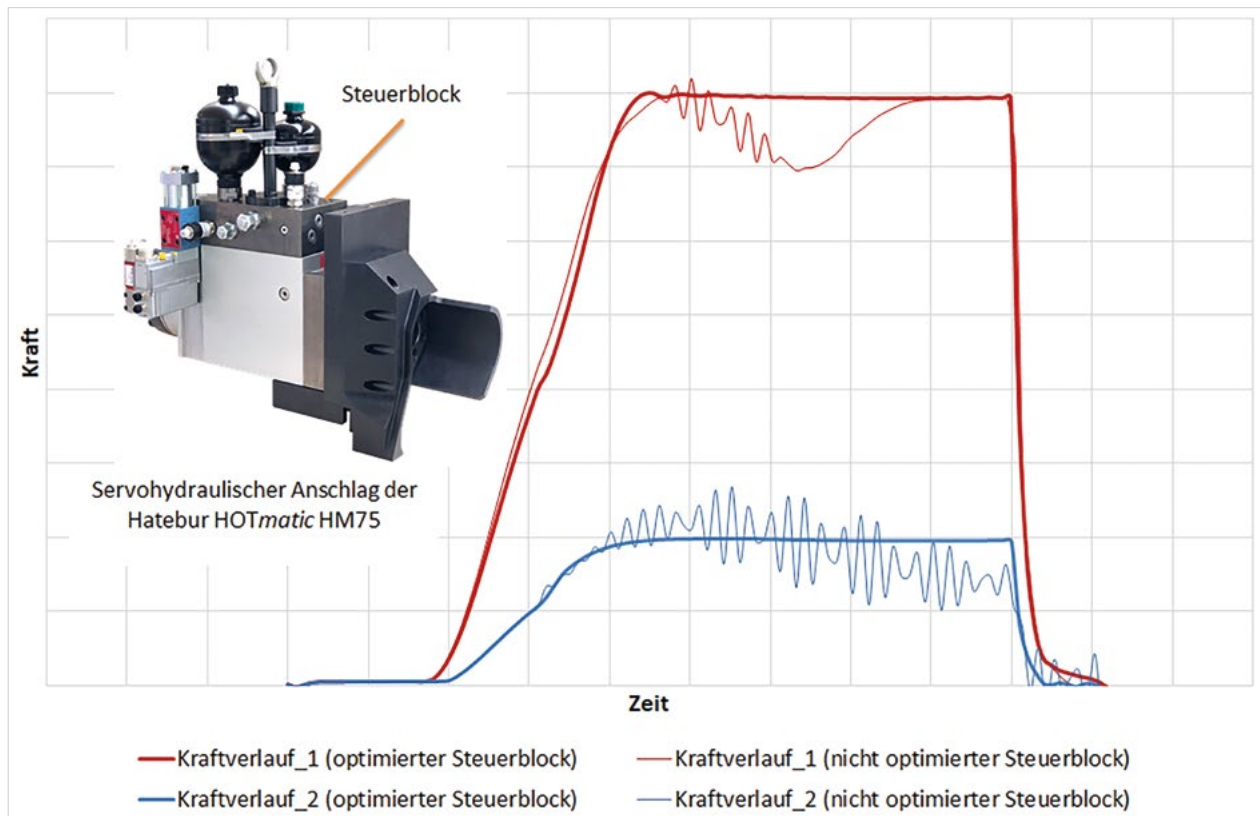


Illustration 1: Simulation model for the servohydraulic bar stop: As we know, the physical limits of the drive cannot be overcome, even with the best of controllers. This is listed in illustration 2 as an example.



➤ Illustration 2: Influence of the control block design on the process variable of force: A control block that has not been correctly fluidically designed leads to considerable fluctuations in pressure in the servo cylinder. Therefore, the most important influencing variable for the shear fracture, namely the power interaction during the shearing process, can no longer be controlled. Shear fractures may form unchecked as a consequence. The disturbance variables for the control circuit are eliminated by the design-optimized control block. Robust operation of the servo axis over the entire working area is thus guaranteed.

insight into the physics of all functional subsystems and components, which helps considerably to facilitate troubleshooting and overcome these challenges.

Investment in a system model for functional validation and optimization is worth the effort, not only through a reduced number of prototypes, but also through accelerated machine commissioning. The machine's behavior is reliably predictable, regardless of its production or assembly status. This is true for purely mechanical, electrical and hydraulic control systems, as well as electrohydraulic and electromechanical control systems and regulation.

“Servohydraulic bar stop” case study

Hatebur puts into practice the physical-forming technology approach that “compres-

sive stress increases deformability” for hot shearing using the servohydraulic bar stop. This minimizes or even eliminates shear fractures. This was reported in detail in NetShape edition 2/2018. The precise power interaction during the shearing process occurs at an interval that is up to five times shorter than that of the blink of an eye. Therefore, particular attention has been paid to the design of the process unit (cylinder, servo valve, stroke measuring system, pressure sensors and control unit). The modeling of the drive was performed using SimulationX (illustration 1).

Simulation using the finite element method

Thanks to more in-depth calculation for individual components or whole functional assemblies, reliable statements regarding load or deformation behavior of a system under operating conditions can be made

using the FE method. At Hatebur, we rely on the extremely efficient Ansys software. The starting position for the use of an FEM calculation can differ greatly: Proof of fatigue strength for new or existing systems, weight optimization for a yet more efficient design for kinematic systems, verification of solutions, long before the components are used in practice.

**“Production of new forging geometries”
case study**

For efficient production of new forging geometries, innovative solutions are required when designing the sequence of operation. These new forming sequences have a direct influence on the load of the whole forming machine. In an iterative interaction between the method development and product development, the new requirements from the processes are harmonized with the options of existing and future forming machines. Various load patterns are analyzed in depth using focused FEM calculations. The focus is on the components, which are directly under load

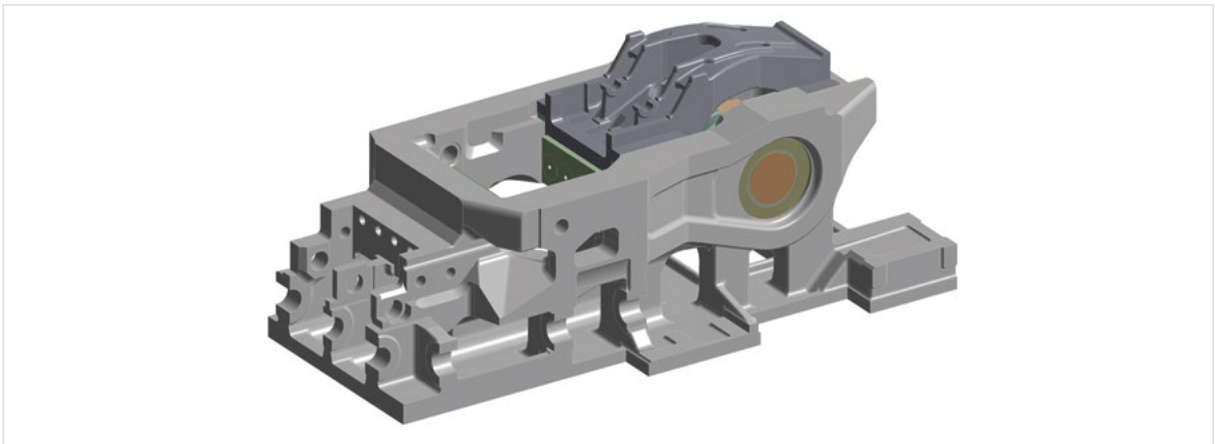
due to the flux of the forming process. Using a comprehensive simulation model, the complete system is displayed with all relevant components.

The requirements from the various forming sequences are systematically calculated using this model. The results, such as voltages, elongations or contact behavior, are then analyzed by the expert team, which discusses optimization possibilities. The approaches disclosed are integrated into the simulation via several iteration steps, which drives the solution finding step by step.

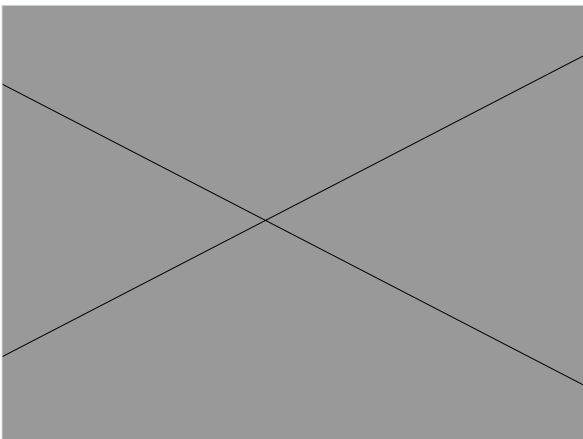
Basic information for the calculation:

- Number of considered components: 33
- Number of elements (networking): 4.7–6.1 million
- Calculation time for a loading condition: 7.5–15 hours

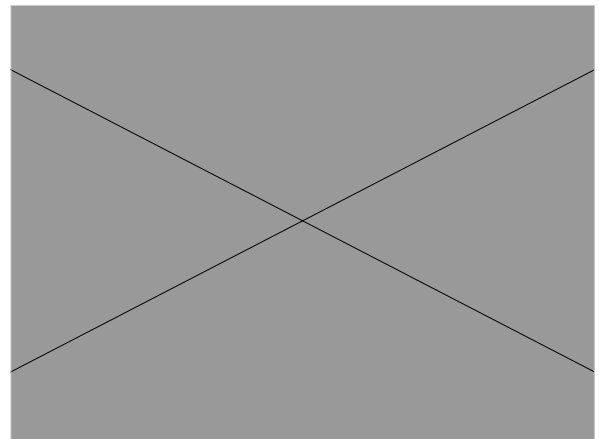
Thirty-three components imported into Ansys and contingent on constraints



Cross section through the assembly with variable crosslink density



Cross section enlarged, with the calculated stress curve



Based on decades of experience of using the finite element method with the Ansys software, geometry optimizations can be designed for key components which facilitate a significant reduction in component loads at particularly sensitive points for new as well as existing load patterns.

Simulation in software development

Work is done with simulations in software development too. New functions are tested after programming in the simulation environment. This reduces the commissioning time and increases the process security. In the event of changes to existing machines, new program parts can be loaded onto the machine control system via remote maintenance after successfully passing tests.

The simulation also comes in handy in the event of difficult conditions in the supply chain. This means that software can be developed and tested for a new machine in the simulation environment, even if the hardware is not yet available.



➔ New function played on the customer machine via remote maintenance

➔ Simulated visualization and simulated program code

Zangenkonfiguration

	Winkelstellung übrn.	Dauer Öffnen			Dauer Schliessen			Winkelstellung übrn.	Fallen lassen aktivieren	Zangenkraft	
		Start Öffnen	Standard	Ende Öffnen	Start Schliessen	Standard	Ende Schliessen			Transport	Halten
1	SET	310,0°	41,5°	351,5°	53,5°	41,5°	95,0°		100 %	100 %	
2	SET	325,0°	41,5°	6,5°	8,5°	41,5°	41,5°	35,0°	30,0°		
3	SET	303,0°	41,5°	344,5°	5,5°	41,5°					
4	SET	305,0°	41,5°	346,5°	15,5°	41,5°					
5	SET	305,0°	41,5°	346,5°	20,5°	41,5°					
6	SET	300,0°	41,5°	341,5°	21,5°	41,5°					
7	SET	300,0°	41,5°	341,5°	27,5°	41,5°					
8	SET	300,0°	41,5°	341,5°	58,5°	41,5°					

Netzwerk 15: Fkt[9] Gripper timing collision open and close

Saving potential with the servohydraulic ejector module

Text: Kim Weber

Photos: Hatebur

Reinach Hatebur recently developed a new servohydraulic ejector module and checked it extensively at a test station. After positive results from the test run, the module was installed on the *HOTmatic AMP 30* and successfully tested under real production conditions at the test center in Reinach.

By using servohydraulic axles, the highly dynamic position, force and speed controls can be realized in the whole forging process. The movement of each individual module can be selected independently of the machine movement and so can be optimally designed to suit the process. For a tool change, the ejector stroke does not have to be manually adjusted like before. Instead,

it can simply be entered on the machine's touch screen. The ejector module has an integrated pressure and position measuring system, with which the ejector movement can be exactly determined together with the ejector force.

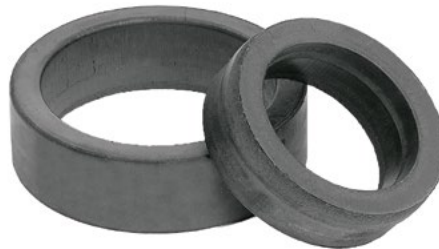
One of the new functions of the module is descaling/in-die forming. This combination makes it possible to handle two process steps in one stage. In the first step, the scale in front of the die is removed during a compressing process. Thanks to the controllable oil flow in the ejector cylinder, the cut-off is descaled before the die and inserted into the die in which it is pressed into the required form. This process combination of descaling outside the die, which is comparable to a conventional descaling station, means that Hatebur *HOTmatic* operators benefit from a longer tool service life as well as fewer machining allowances on the forging.

↓ Slim slug process, in which the slug height can be significantly reduced



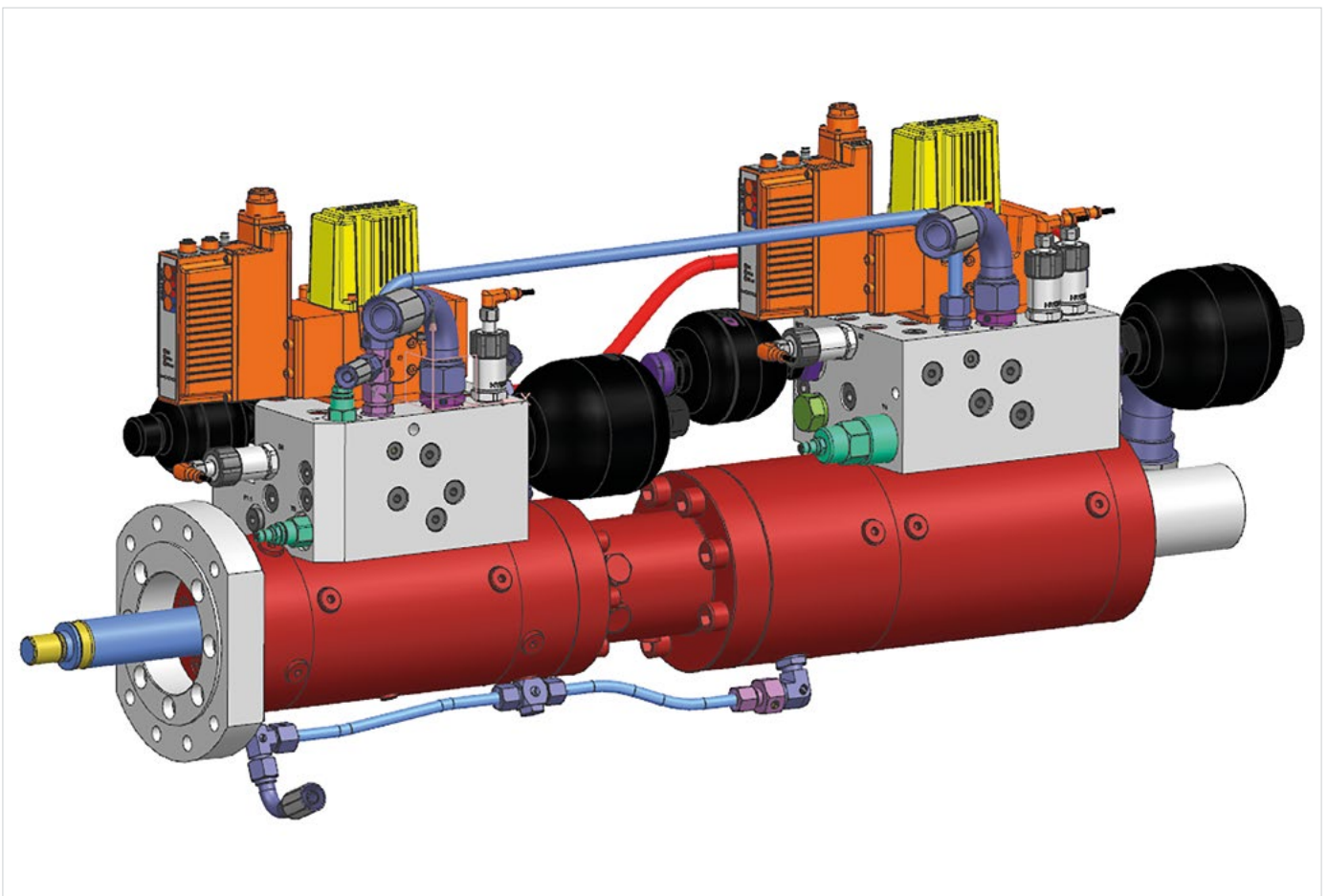
An important topic nowadays is raw material saving. In order to meet expectations in this regard, the Hatebur development team uses a “slim slug process”. A reduced slug thickness is achieved thanks to a modified position when forming between the ejector and the punch. When the corresponding position is reached, the ejector moves to the required height of the finished part and the forging is pressed into its final shape. Depending on the configuration of the rings, the slug thickness can even be reduced to almost half its original thickness. The tool service lives are comparable with the process today, thereby not resulting in any more downtime for the *HOTmatic* production system. For example, this slim slug process can save around 25 grams of raw material with a combination ring 6008 blank. This generates an incredible saving of 250 tons for an annual volume of 10 million parts.

The piercing/separating procedure and separation of the rings results in a considerable increase in process reliability with the ejector module. Thanks to the adjustable movement of the module, accurate pierce positioning is no problem for the cylinder’s position measurement system. The easily adjustable starting position of the ejector allows the inner ring to be ejected in a slow, gentle way without impact because the return stroke is eliminated. Furthermore, the function enables both rings in the machine to be brought out separately and the loads to be monitored. With this new ejector system, old systems such as water cushions or piercing/separating curves can be replaced. This leads to a simpler construction in the tool, which in turn lowers tool costs.



Combination ring process through piercing/separating procedure

Servo-hydraulic ejector module



Interview



 Federica Aurora

Name: **Federica Aurora**

Position: **Financial Controller**

Working at Carlo Salvi: **Since November 2019.**

What is your role at Carlo Salvi and how long have you been working for the company?

I've been a financial controller at Carlo Salvi since November 2019.

Have you always had this position since you started?

Yes, this has always been my role at Carlo Salvi.

What is your educational background?

I attended Scientific High School, then I studied at Bicocca University in Milan, where I obtained my degree in Business and Economics, followed by a master's degree in Audit and Control.

Did you know Carlo Salvi and the company's machines before you started your job?

No, I didn't know the company, but I was interested in switching from the consultancy world to an industrial one. You see, I worked at KPMG, an auditing firm, for four years before joining Carlo Salvi.

Please describe a typical day at work.

It depends on what's going on. In general, I'm in charge of checking the financial and economic performance of the company, preparing many weekly or monthly reports to be shared with the parent company.

Then there are some periods dedicated to specific activities. For example, from September to October I work on the budget for the next year, while from December until March I'm fully dedicated to the year-end financial statement.

Lastly, I'm also busy in other activities such as dealing with the auditing firm and the other supervisory bodies, privacy issues, compliance, and I have daily contact with our affiliates.

What are your favorite tasks and why?

I like analysing specific areas of the financial statement, such as inventory or trade receivables. I've always liked those types of analysis: they might seem useless, but they're actually important for understanding the company's performance and which strategies need to be followed. Also, cash flow analysis is "fun" – at the end of the day, understanding inflows and outflows is what we do – or should do – for our personal savings!

Are you part of a team or do you work alone in your field? Are you frequently in contact with customers or suppliers?

I'm not in contact with customers or suppliers, only with a few external consultants. In Garlate, I'm the only one in my role, but I usually collaborate with colleagues at Hatebur with the same role.

If you could change anything about your job, what would it be?

I'd like to have more time for new projects, instead of always chasing deadlines!

Are you married? Do you have children?

No, I'm not married and I don't have any children.

What do you like to do in your spare time? Do you have any hobbies?

Since I was a child, I've loved dancing, in fact I attended a dancing school for 22 years. Then it was no longer possible to match dance with work, but my passion for dancing and music is still alive. I also like going to concerts and watching films or TV series.

The virtual showroom is growing and thriving

Text: Can Çay
Images: Hatebur

Reinach In 2021, we introduced customers from all over the world to our virtual showroom for the first time. Many additional features have since been integrated to increase the added value of this offer. The showroom will also undergo continuous further development in future.

The COVID-19 pandemic has required a great deal of endurance and flexibility – not forgetting resourcefulness. This also led to numerous innovations, which no-one now wants to do without. A prime example of this is our virtual showroom. With this platform that

can be accessed from anywhere, we have created a way to experience and get to know our product range as directly as possible, despite limited travel possibilities.

The world of Hatebur – live and in color

In an initial step, the showroom was used primarily for presenting new machines. The feedback from customers was more than clear – the offer provoked great interest and was used readily and extensively. We understood this message to be both a direct work order to expand the platform and to supplement it with additional useful functions. As a

📍 Showroom view servo infeed



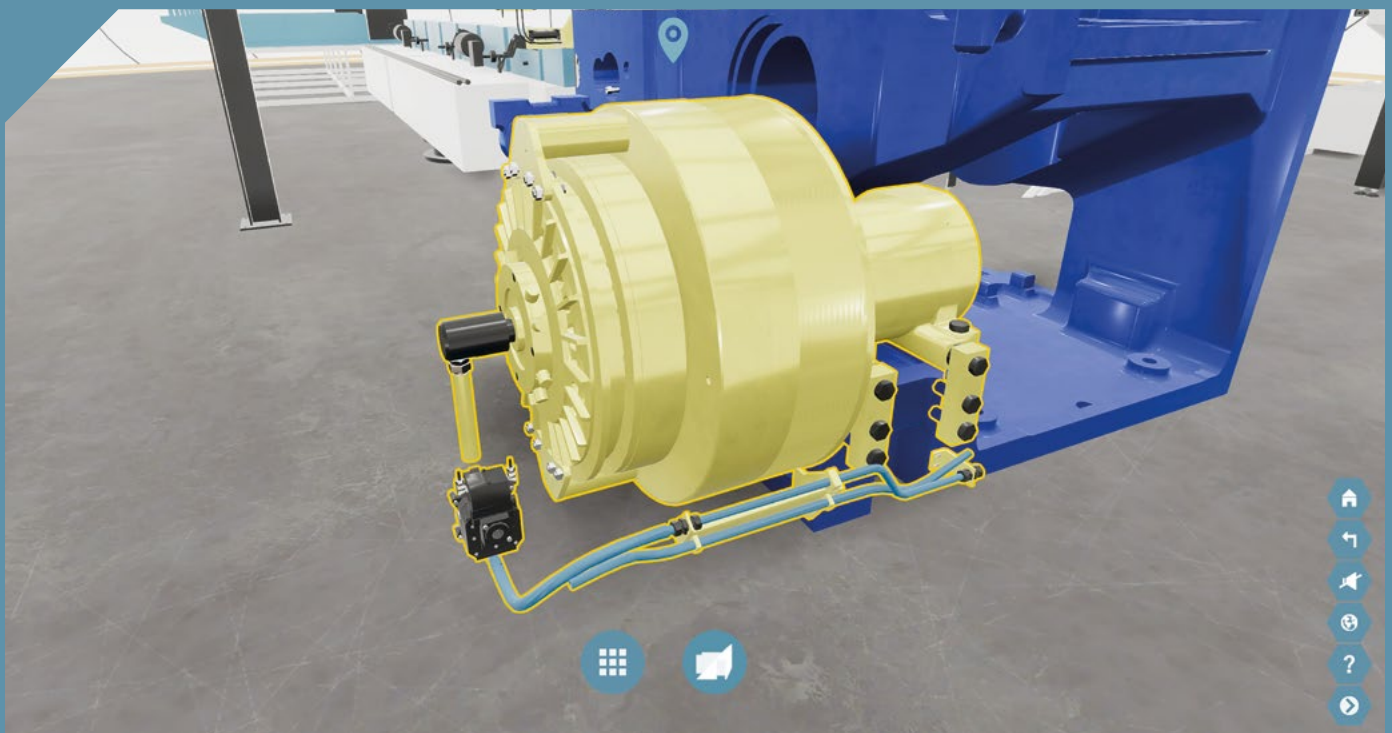
result, we began to integrate service products and services into the platform and make it accessible to users in spring 2022. For the *HOTmatic AMP 50*, for example, the possible modifications and upgrades are already available in the showroom. This means we can show straight away the extent of the intended conversion and which machine parts are concerned. On other machine models and conversions, we work with high pressure, including the technical data sheets which are also available in the showroom.

Economic and ecological innovation

We are proud to be making a valuable contribution in two respects with this project. We offer potential customers and existing customers the opportunity to enter the world of Hatebur live, without having to travel a long way to do so. The resulting positive effect on time and budget planning is evident. What's more, every air-mile saved is one step further towards more sustainability and greater protection of our environment.

We value this innovative method of communication and virtual collaboration, but we also know that it acts here as a supplement, and in no way as a replacement for in-person meetings. We are all aware of the importance of face-to-face interaction, conversations in confidence and partnerships developed in the long term. That's why we are already looking forward to seeing you again soon at a trade fair, on your premises or here at our headquarters in Reinach, Switzerland.

📍 Showroom view clutch/brake combination



June 11–13, 2022

23rd International Forging Congress (IFC) 2022

Location: Chicago, USA

Company: Hatebur Umformmaschinen AG

Text: Christian Becker

Images: Hatebur

After the IFC planned for 2020 had to be canceled due to COVID-19, the event was able to take place from June 11–13, 2022 on its customary scale. Over 300 participants from all over the world came together in Chicago to discuss and find out about trends, technologies and current processes in the forging industry.

The specialist presentations were all interesting and very detailed. They covered a variety of topics, including the general development of the market, as well as opportunities and new solutions in forging. Forging trends from the USA, Europe, China, Japan and India were presented in detail and illustrated with interesting examples.

Sustainability is undoubtedly now one of the most important topics in the forging industry – and with it, the recognition that sustainability must be seen as the crucial key to success in the future. In keeping with this, various solutions in the area of energy efficiency were presented, such as drive concepts with a kinetic energy recovery system (KERS) or intelligent control systems for increasing energy efficiency.

Hatebur had a booth at the IFC, which we shared with our US representative, Forging Equipment Solutions (FES). As expected, participating in the conference was eminently valuable; existing contacts were finally able to be developed in person after a long time and new contacts could be made too.

June 16–21, 2022

IMTEX Forming 2022

Location: **Bangalore, India**

Company: **Hatebur Umformmaschinen AG**

Text: **Reinhard Bühner**

Images: **Hatebur**

After an interruption brought about by the pandemic, south-east Asia's largest exhibition for forming technologies, IMTEX Forming 2022, took place in person again after 30 months and on its usual scale in the Exhibition Center (BIEC), Bangalore. The exhibitors displayed technologies that are essential for production. Regardless of the difficult market conditions, IMTEX remains an important market leader in promoting growth in the tool machine and manufacturing industry in India.

- Forming
- Welding and joining
- Robotics and automation in sheet metal working
- Forming
- Welding and joining

Hatebur was represented at this year's IMTEX Forming once more with its own booth, where many existing contacts could be developed and new contacts made. Our technological solutions and wide range of forming machines for cold and hot forming generated a great deal of interest.





June 20–24, 2022

Wire 2022

Location: **Düsseldorf, Germany**
Company: **Hatebur Umformmaschinen AG**
Trade fair highlight: **Carlo Salvi CS 513 TH,
new servo technologies**



Text: **Hatebur**
Images: **Hatebur**

After being canceled in 2020 and another postponement in spring 2022, the Wire trade fair was finally able to take place in person in Düsseldorf once again. Hatebur and Carlo Salvi used this opportunity to present a impressive joint booth to the expert audience for the second time.

Topics in this year's appearance covered the new multi-stage press CS 513 TH from Carlo Salvi, which combines forming of screw blanks with integrated thread rolling, as well as innovative servo technologies from the Hatebur Group, which in particular have been installed in the CM 725 from Hatebur, opening up new possibilities for users.

The biggest star of the Wire booth was the multi-stage press CS 513 TH, developed by Carlo Salvi. This multi-talent integrates a five-station cold-forming header for wire diameters up to 13.5 mm and an output of up to 180 parts per minute with a thread rolling unit in a unique machine. The CS 513 TH was able to be demonstrated live in production at the booth and generated a great deal of interest from the expert audience.

With two separate exhibits, the numerous interested visitors were shown the possibilities presented by the innovative servo technologies from Hatebur. The servo transfer unit, already installed in the COLDMatic CM 725, received a great response with its separately programmable grippers, also driven with servo technology, the highly precise servo linear infeed and the new servo direct drive, which facilitates increases in the machine's output. Not forgetting the new digital services, which are summarized under the keyword "Hatebur Connect" and were widely discussed in detail.

A generous catering area was used by booth staff to talk to customers and other experts all through the day. This meant that what was on show could be discussed in more depth over an Italian espresso and a lunch menu that changed every day. Given all the global economic and geopolitical challenges, this was a very welcome moment to have face-to-face discussions and have confidence in the future.

See us live!



January 12–15, 2023
**Auto Expo 2023 –
Components**

Location: **New Delhi, India**
Company: **Hatebur
Umformmaschinen AG**

March 21–23, 2023
Fastener Fair Global 2023

Location: **Stuttgart, Germany**
Company: **Carlo Salvi S.p.A.**

May 16–17, 2023
Fastener Fair USA 2023

Location: **Nashville, TN, USA**
Company: **Carlo Salvi S.p.A.**

May 23–25, 2023
Forge Fair 2023

Location: **Cleveland, OH, USA**
Company: **Hatebur
Umformmaschinen AG**

July 12–15, 2023
MF-Tokyo 2023

Location: **Tokyo, Japan**
Company: **Hatebur
Umformmaschinen AG**

**We look forward to seeing
you there!**

All dates are correct as of June 2022 –
please search for the latest dates online
before attending an event.

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