

# NETSHAPE

Hatebur magazine for horizontal cold and hot forming – 2/2012



Matthias Praus, Vice President & General Manager of Metform, Illinois, United States

## CEO'S VOICE

Dear Business Friends,

The title story of this issue informs you about our long-standing customer Metform in the USA, who has taken a significant step towards extending its product portfolio and consolidating its forging competence with the purchase of a Hotmatic AMP 50. The company's employees have gained considerable knowledge of hot forming over the years with nine Hotmatic AMP 20 and AMP 30 machines. The AMP 50 is now opening more doors to the automotive industry.

From our customer service, we report on the renovation of an AMP 70. The whole machine control system has been replaced and updated with the latest technology.

Impressive images show you the manufacturing process of a body for one of our large presses. In the space of just a few minutes, up to 85 tons of molten steel are cast into a raw body for a Hotmatic AMP 50. This completes the first manufacturing step along the way to a highly productive horizontal press. This issue contains all the further information on this story and much more besides.

I now hope for all of us that the positive spectrum of all the many and varied economic forecasts will materialize and we can look forward to fewer negative news stories on the economy in 2013. Wishing you all the very best and much success,



Urs Tschudin



## CONTENTS

- 3 NEWS IN BRIEF**  
Information about Hatebur in short form
- 4 METFORM, USA**  
Ten hatebur hotmatic machines and still growing significantly
- 10 CONVERTING THE CONTROLS TO S7**  
Complete rewiring of all electrics at Forjanor
- 14 THE BARE BONES**  
The cast body of Hatebur machines
- 18 QUALITY ASSURANCE AT HATEBUR**  
Not a book of seven seals
- 20 TRADE FAIRS/EVENTS**



### COVER

Matthias Praus, VP & General Manager of Metform

## LEGAL INFORMATION

NETSHAPE – Hatebur magazine for horizontal cold and hot forming  
[www.fsc.org](http://www.fsc.org)

### Published by:

Hatebur Umformmaschinen AG  
Werbung/Kommunikation  
General Guisan-Strasse 21, CH-4153 Reinach,  
Switzerland

### Editing, layout, production:

Christine Steiner, Thomas Christoffel  
and Köpfl & Partner AG

### Translations:

Star AG, Ramsen, Switzerland

### Printing, litho:

Köpfl & Partner AG, Neuenhof, Switzerland

### Paper/number of copies:

Claro Bulk/2500 copies

© by Hatebur Umformmaschinen AG, 2012



# HAPPY HOLIDAYS AND A SUCCESSFUL 2013 – BEST WISHES AND MANY THANKS

We thank you all for the enjoyable cooperation and look forward to a continued successful partnership. Wishing you and your families a happy holiday period and a successful new year.

## 2013 WALL CALENDAR – ALSO AVAILABLE NEXT YEAR



For the coming year, Hatebur is again producing a wall calendar with pictures from Switzerland. These will be delivered to the agencies in December and can then be personally handed over to customers from there. Companies with direct contact with Hatebur Reinach will receive the calendar through the post.

## HOTMATIC AMP 20 S – REVISED BROCHURE NOW AVAILABLE IN JAPANESE

Over the last few months, the brochure for the AMP 20 S has been revised and adapted to the new design. In addition to the current languages of German, English and Chinese, it will also be available in Japanese from 2013.



# METFORM, USA – TEN HATEBUR HOTMATIC MACHINES AND STILL GROWING SIGNIFICANTLY

📄 Jeff Jones + Christine Steiner   📍 Metform + Girard + Thomas Christoffel

**In addition to the nine existing Hatebur Hotformers, the company Metform, a MacLean-Fogg Company, installed a new Hatebur AMP 50XL (HFE) in August 2011. With the increased range of parts up to 110 mm, Metform has the opportunity to quote a large family of parts. The production of bigger parts is now possible and the AMP 50XL (HFE) will bring in fresh business and will also be one of the key drivers for the general growth of the company in the years to come.**

Metform is part of MacLean-Fogg Component Solutions which is a privately owned company with its headquarter in Mundelein, Illinois. Founded in 1976, Metform was to become the hot-forging division of MacLean-Fogg and was the first off-site facility built by MacLean-Fogg outside Chicago. Today Metform consists of three

operates ten Hatebur Hotformers: five AMP 20, four AMP 30, and has just recently installed an AMP 50.

The new AMP 50 machine was set on the foundation early July 2011 and the first parts were produced by the first week of September 2011. Within a 6-month period, Metform completed the installation and was able to produce parts in a very short time. Metform had then prototyped and launched more than 20 part numbers between October 2011 and December 2011.

About 80–85% of Metform’s products are going to customers in the North American market, including Mexico where the market is growing at a rapid rate. Metform also supplies components to the European and Japanese markets. The makeup of parts supplied to the markets is a healthy and diversified mix between automotive, heavy truck and niches in the off-highway, agricultural, mining and energy sector.

The customers are well known in the automotive industry, such as reputable OEM and Tier customers. On the heavy-truck side, everybody knows International, Freightliner Trucks or Paccar and Metform is a long-standing partner. Metform also supplies to a significant number of North American, European and Japanese Tier-1 customers supporting engine, transmission and driveline applications. Customer and market diversification has always been a

*“Help the industry, and we will help ourselves. Solve the customer’s problems, at a fair price, and on time.”*

*Duncan MacLean (His philosophy for the company)*

primary locations: two in Savanna, IL, and one in Mt. Carroll, IL. All three plants are focusing on hot forming and cold forming plus highest-precision CNC machining of complex drive line components. Metform has overall 275 employees within these facilities. However, the MacLean-Fogg Component Solutions Group has other plants throughout the Midwestern States and Europe.

## **A BUSINESS WITH CONTINUOUS GROWTH**

The Metform hot-forming division traditionally focused on fastener manufacturing and over the years developed into special formed components. Metform currently



strength of Metform along ongoing product and process development.

During recent years, Metform produced their parts on Hatebur AMP 20s and AMP 30s. The reason to invest in a larger AMP 50 Hotformer was a result of a comprehensive market study and research. The company identified new opportunities in the market place. Some of these opportunities came from new demands and programs in the automotive sector, for example when vehicles become more compact, some of the traditionally larger components “shrink in size”, so to speak. The addition of the Hatebur AMP 50 Hotformer is a significant milestone for Metform to reach the full-range Hatebur capabilities in the future.

### **SUPPORTING THE NEED FOR LARGER PART DIAMETERS**

Customer inquiries for large sourcing packages showed the need to offer a wider range of components rather than only parts produced on AMP 20s (small components) and on AMP 30s (medium-sized components). The demand for larger components was apparent. In addition, the market for more precise-forged and -machined components was growing in larger areas. These opportunities were the driving reason for Metform to increase their capability as far as size range and precision forming.

Since last September when the machine has been installed and went into production, business opportunities also changed. With the increased range of parts up to 110 mm, Metform now has the chance to quote packages. Before the AMP 50 has been in production, the company could not provide a quotation for bigger parts other than going to an external source. In a number of instances, Metform even won additional work for the AMP 20s and AMP 30s which they probably would not have received before the new machine was implemented.

When asked about the best feature on the new Hotmatic AMP 50, Steve Whiting (Di-



*From left to right: Jeff Jones of Girard (Hatebur’s North America Representative), Thomas Christoffel of Hatebur, Nick Bird (Director of Engineering), Steve Whiting (Director of Operations) and Matthias Praus (Vice President & General Manager) of Metform discuss the successful installation of the new Hatebur AMP 50.*

rector of Operations) and Nick Bird (Director of Engineering) commented on the ability to quickly change over from one part to the next. Once they have a tool set designed into the system, it becomes very easy to repeat and achieve changeover times under 1.5 hours. The wedgeless ram system is much faster than on the AMP 20s and AMP 30s historically. A big advantage and very much appreciated by Metform employees.

The differences in process and tool designs are apparent. The AMP 50 has four stations instead of three on the smaller machines at Metform. In addition, the gripper timing is different and of course the complexity of parts which can be produced is a huge difference. These are the biggest changes encountered by Metform staff.

Metform’s tool design approach to larger parts is based on utilizing simulation software. The FORGE simulation package is used to help design all forming operations of the part. The forging simulation is very successful in terms of designing the tools, planning the parts for the first time and going into production. This also will help lead to a planned very high utilization of the machine within the first two years.

*After the new Hotmatic AMP 50 machine has been installed successfully, Metform received a congratulations poster from Hatebur.*



The typical lot sizes depend on the product groups. Normally, Metform tries to limit their lot size to 10,000 pieces or more, but they also run as many as 800,000 parts on the AMP 20s. On the smaller machines, a tool change from one part to the next takes approximately 1.5 hours, a little longer if they need to change the infeed rolls.

#### **NEW CONTRACTS PRIOR TO MACHINE INSTALLATION**

The investments in the new AMP 50 Hotformer also lead to new customers. Eight new customers are now receiving parts and components, many of them are a part of the automotive industry, some non-automotive. These companies' interest peaked when they realized that this new machine increased the size capability and the precision capability of Metform. A good number of these customers also brought other business to Metform which can be handled by the AMP 20s and AMP 30s machines.

Some of the new customers of Metform heard about the new machine during project phase or while the machine was installed, and contacted the company for

further information which lead to further conversion about the project. The result was a good number of customers' commitments with firm contracts for parts before the machine actually arrived. This commitment from customers was due to their confidence in Metform which has over 30 years in the hotforming business.

Before Metform actually kicked off the AMP 50 project, everyone clearly outlined the opportunities in the market place and they also convinced a good number of customers. They not only approached this project from the commercial side, but also on the technical engineering side. This coordinated effort between team Metform and the MacLean-Fogg Business Development group finally lead to the approval of the investment of the Hatebur AMP 50XL Hotformer.

#### **METFORM SHOWS COMMITMENT AND CONFIDENCE IN THE LOCATION**

The reaction of Metform staff to the new investment was pure excitement. During the last couple of years, this kind of investment has been considered and discussed more than once. Therefore, the staff was glad to learn that with the AMP 50, Metform could get into larger and even more precision components. This investment was the largest in MacLean-Fogg's history and would be located right here in Savanna, IL.

Built on the solid base of more than 30 years of hot-forming experience around nine machines, five AMP 20s and four AMP 30s, this investment without question strengthens the solid base and offers the opportunity for growth and capability of product offerings to the customer. In addition, it consolidated the success and outstanding reputation Metform has in the market today. It sets stage to reach the full-range capabilities using the proven Hatebur technology.

About 50% of the components that are produced by Metform are fasteners, mainly spindle fasteners for transmissions or for

wheel end applications. In addition to this, they produce spindle nuts that hold the front and/or the rear spindle in place. A significant portion of Metform business is also related to power-train components, e.g. for transmission. A good example of parts in the automotive industry is the new generation of automatic transmission for a high selling pick-up trucks for which Metform is providing many of the sun gears for this application. Another example is a large German SUV OEM which has four spindle nuts in each vehicle that come from Metform in Savanna. In the future, you will find Metform gear blanks in 8, 9 and 10-speed transmissions that will be installed in many cars built in NAFTA.

On the heavy-truck side, most heavy trucks use Metform's Securex® Wheel Nuts which are the preferred first choice for virtually all hub, drum and wheel applications by OEM's in the United States.

The material forged varies from standard carbon steels like 1045 or European Nomenclature C45 for fasteners to gear blank materials such as SAE5020, SAE8620 and SAE4023 and also bearing grades like 52100/100Cr6.

Due to the investment in the Hatebur Hotmatic AMP 50, it was necessary for Metform to acquire additional new equipment for processing after the forging. A new manufacturing plant is currently under construction that will house new equipment for CNC machining operations.

### **SUCCESSFUL PROJECT WITHIN SHORT TIME FRAME**

Metform emphasizes the team work between Metform, Girard (Hatebur's North American Representative) and Hatebur during the project was a success story with a very short time frame from placing the order to the installation of the machine. The required time of only about nine months overall to the first part produced speaks for itself. It clearly shows the partnership and business relationship that

these three companies have built up over the past 30 years.

An important ingredient for such team work is the understanding of each other, to know what Metform needs and wants to accomplish and on the other side to see what support in certain activities and project steps is necessary for Hatebur. This understanding was the key factor for the success of the project which ensured that it was completed on time, with the quality of the systems as expected and as a true team effort between everybody involved.

### **IT ALL DEPENDS ON THE PEOPLE**

The key strength of Metform are the people – everything starts with the people, the know-how and the skill set as a business in the forging business for almost 36 years. People at Metform have further developed their strengths in the core processes hot forging, cold forming and CNC machining. These people are really outstanding at Metform. Another key strength is the fact that Metform is a diversified company in the sense of what markets are being served and the strong emphasis on continued product and process development. This is a fundamental aspect for Metform to drive the business forward as part of the MacLean-Fogg company which is a strong, dedicated, innovative and passionate family owned company.



*Matthias Praus, Vice President & General Manager, and Nick Bird, Director of Engineering, examine a hot part from the new AMP 50 machine.*



*From left to right: Steve Whiting, Director of Operations, Nick Bird, Director of Engineering, and Matthias Praus, Vice President & General Manager, are happy to open the new production line on time.*



*A shaft application for a transmission produced on the new AMP 50.*

## FUTURE GROWTH

For the future, Metform will continue with their strategy to remain diversified as far as markets, customers and products are concerned. One fundamental aspect will be the continuously further development of their product offering as far as size, wise and special formed components. From this perspective, the AMP 50 was the next logical step to enhance and build upon the established AMP 20/AMP 30 capabilities.

Metform will continue to search for opportunities in the market on regular basis and look for the possibility to getting closer to an overall full-range capability situation. Over the past eight years, they have consequently developed precision components, but appreciate that the more traditional standard components drive the business activity and cannot be neglected. The challenge for Metform will be to utilize their skills and talents in the forging business to go into more precision-formed components and precision machine components where they have already put a lot of emphasis and effort. This is more from a complexity perspective and the Hatebur AMP 50 will continue to bring in fresh business and be one of the key drivers for the general growth of the Metform business in the years to come.

Customers who do not know the Hatebur system are always concerned what is going to happen if they buy a Hatebur from one

company and the induction heater from another. And, Metform had a lot of confidence in Girard Associates and their reputation as the official Hatebur representation in the US. From this Metform had confidence to acquire an induction heater from CEFI. Hatebur made a clear vote that purchasing a CEFI induction heater since this would be the best solution for Metform adding reliability and competitiveness. And it comes back to the team work here: In the end, it was an excellent solution for Metform that supports the tremendous growth and business success.



**MacLean-Fogg**  
COMPONENT SOLUTIONS

*From left to right: Nick Bird, Director of Engineering, Dennis Neyens, Forming Specialist, Matthias Praus, Vice President & General Manager, Steve Whiting, Director of Operations, and Shawn Tholen, Hatebur Operator, are excited to have the new machines available.*







## FACTS & FIGURES METFORM – HOME TO MORE HATEBUR HORIZONTAL HOT FORGING MACHINES THAN ANY OTHER SUPPLIER IN NORTH AMERICA

### KEY PRODUCTS:

Axilok  
Integralok  
Securex  
Hot Forged Gear Blanks  
Hot Forged Spindle Nuts  
Hot Forged Large Industrial Nuts  
Large Bolts Pins  
Bearing Races



### INDUSTRIES SERVED:

Automotive  
Heavy-Duty Truck  
Heavy-Duty Trailer  
Industrial Engine  
Agriculture



### Locations:

905 South Jackson Street, Mt. Carroll, IL 61053  
7034 Route 84 South, Savanna, IL 61074  
2551 Wacker Road, Savanna, IL 61074  
P +1 248 853 2525 · MFCS@macleanfogg.com  
www.macleanfoggcs.com



**MacLean-Fogg**  
COMPONENT SOLUTIONS

## CONVERTING THE CONTROLS TO S7 – COMPLETE REWIRING OF ALL ELECTRICS AT FORJANOR

📄 Hansjörg Gebhard 📷 ASK

**A continually decreasing availability of spare parts, combined with high demands on production reliability, is forcing all operators of older production plants around the world into action. The danger of no longer being able to offer a competitive edge in the long term, and no longer being able to guarantee deliveries, can quickly marginalize a supplier operation in the market. Production reliability plays an important role for end customers and OEMs in the selection of suppliers.**

Hatebur has now been manufacturing forming machines for the production of an extremely wide variety of parts in cold and hot forming for over 8 decades. As a result of robust construction and good maintenance, many machines are still running after 40 years of active use in production. Even after this length of time, Hatebur is still able to supply every mechanically manufactured component.

Unfortunately, this does not apply to hydraulic and pneumatic or electrical components. Electrical components, in particular, have obliged operators to make further investments which are sometimes unavoidable.

Hatebur provides customers with the necessary support and can offer a conversion from an old contactor control or S5



*From left to right: Fernando Velasco (Forjanor), Antonio González (Forjanor), Stefan Götz (Hatebur), Rafael Quesada (Forjanor). Even during the preliminary discussions, the specialists set the course and prepare the team deployment.*

control to an up-to date control system, as was recently undertaken at the company Forjanor in Spain. Forjanor decided to modernize their AMP70-M050 with a Siemens-S7 control. This machine was delivered in 1987 and was still equipped with contactor controls.

Besides the problems of spare parts availability, the availability of the machine also played an important role. This is considerably increased and offers their customers the necessary reliability.

### QUOTATION AND SCOPE OF THE QUOTATION

In order to prepare the quote as precisely as possible, it is necessary to discuss all points in advance.

- Is a complete rewiring the machine necessary or advisable?
- Who coordinates the installation and who performs it?
- Should possible modifications and conversions be considered at this stage?

- Is a new motor or even an AC motor advisable or necessary?
- How much time is available for the modernization and how much time is actually required?
- Who is responsible for which part, and where do the interfaces lie?
- Which safety aspects have to be taken into account and adapted to comply with new guidelines and directives?

As a result of the new machine directives, which place high demands for the safety of the personnel working on the plant, a detailed inspection is necessary.

The upgrade to an S7 control is classed as a major modification and requires special measures. As a machinery manufacturer, Hatebur has the knowledge and capability to ensure the modification is performed properly.



*Horst Hülpsch from Hatebur knows the unspectacular-looking control cabinets inside out and is aware of their importance for flawless work with Hatebur forming machines.*

### PREPARATION

Following receipt of the order, the wiring diagrams are created by the Hatebur electrical technical unit and the provision of the controls is commissioned. Before shipping to the customer, the machine undergoes a full inspection and preliminary approval, in the presence of the customer, if applicable.

### IMPLEMENTATION

In order to perform a full rewiring of an old system, it is necessary to dismantle all the major components.

The new installation on the machine can be performed by the customer or by Hatebur and is supervised by an experienced Hatebur engineer. Work is usually performed in shifts to keep the turnaround time to a minimum.

The electrical cabinets and control desk are also set up and connected. Once the installation is complete, the machine is re-assembled.

A functional inspection, including all the switches and functional components on the machine is now once again performed by a Hatebur electrical engineer.

The project is concluded with commissioning, inspection of the safety system and handover to production, ready for operation.



*This order too demonstrates that teamwork is essential and leads to shared success. From left to right: Antonio González (Forjanor), Stefan Götz (Hatebur), Oliver Borgolte (Hatebur), Fernando Velasco (Forjanor), Rafael Quesada (Forjanor).*





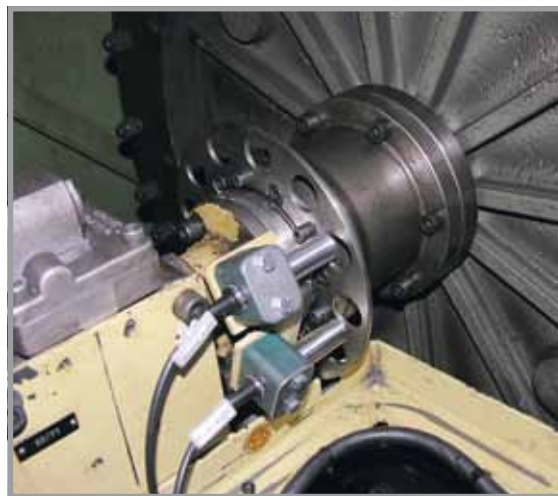
*Installation and wiring on the main terminal box on the machine.*



*Installation of various new terminal boxes, incl. safety system.*



*The newly positioned and installed control for the machine, the ESA600, press load monitor and the heating unit.*



*The standstill monitor and locking systems from Garrison and Schmersal are necessary and an essential component for complying with the statutory regulations of the machine guidelines.*

# THE BARE BONES – THE CAST BODY OF HATEBUR MACHINES

 Christine Steiner and Max Teichmann  Max Teichmann

**The Hatebur Hotmatic and Coldmatic machines all consist of a large body part, usually weighing several tons. This block is manufactured by our suppliers in metal casting. The following photo reportage shows the different steps involved in manufacturing a body.**

Casting is an ancient manufacturing method, and was used in the Middle East to cast and forge gold as early as 5000 BC. Nowadays, cast components are used everywhere, and the smallest to the very biggest components are created from cast metal.

Large components can only be manufactured in a casting production process. Milling a large component from a solid block, for example, would require the machining of several cubic meters of metal. Furthermore, cranes and chipping machinery would also be required that could handle a block weighing several hundred tons. The body of a Hatebur machine also cannot be manufactured using forming operations such as forging, due to its dimensions and internal hollow spaces. The only practicable manufacturing process for these large components is therefore to pour liquid metal into a mold which has been previously prepared. In this process, the manufacturer differentiates whether the mold or the model of the cast component can be used once (lost-mold casting) or several times (permanent mold casting).

The company Tamaris Industries in France has been supplying Hatebur with cast components for Hotmatic AMP 20 and AMP 50 models for several years.

Tamaris Industries has approx. 100 employees and belongs to the SEKCO Group. In 2011, the group generated an income

of 100 million euros and employed around 1250 workers. It is active in the areas of casting and forging operations in France, Germany, and Poland.

## THE MOST IMPORTANT PROCESS STEPS IN BODY CASTING

1. Order to Tamaris
2. Project planning
3. Prepare or repair models
4. Create the mold (molding)
5. Prepare the molten metal in the furnace
6. Prepare the casting ladles (incl. heating up)
7. Provide the rail transport for the casting ladles
8. Remove the slag
9. Measure the temperature
10. Check the chemical composition of the molten metal
11. Position the casting ladle next to the furnace
12. Fill the casting ladles with molten steel
13. Cover the molten metal with a covering flux
14. Transport to the molding shop
15. Position the casting ladles
16. Pour the liquid steel into the mold
17. Allow the cast to cool
18. Excavate the raw cast component
19. Transport for mechanical processing
20. Separate the feeder system
21. Sand-blasting /rough machining
22. Heat treatment/welding/ heat treatment
23. Painting/priming



*The mold is created.  
(molding)*



*The prepared mold in the pit.*



*Preparation of the molten metal,  
e.g. in a 50-ton furnace. The tem-  
perature is measured through the slag  
opening. The casting temperature is  
reached at 1650 °C.*



*The casting ladles are prepared and heated up.*



*The rail transport of the casting ladles  
is prepared.*



*Slag is drawn off several times. The  
material sample from the furnace is  
immediately examined using spec-  
tral analysis, before the material is  
emptied into the casting ladle. The  
next material sample is taken from the  
casting ladle. The molten metal is only  
released for pouring if the material  
samples are judged acceptable in the  
inspection.*





*The 60-ton casting ladle is prepared next to the furnace. The casting ladle is then lowered in the pit next to the furnace and 52 tons of liquid steel shoot into the ladle. As soon as the ladle is full, the molten metal is covered with a covering flux to prevent it from cooling down until it is poured off.*



*Exactly the same process is used with the second casting ladle, which is also moved into position next to the 35-ton furnace, and filled.*

*Transporting the casting ladle to the molding shop to pour off the material.*

*The second casting ladle is also transported away.*



*The teams for the two casting ladles come to their final agreement on how to proceed, then it's down to business. The two casting ladles must be positioned precisely over the openings of the mold, which requires precision work!*





*The casting process is completed.*



*In less than ten minutes, 85 tons of liquid steel have disappeared into the earth.*



*The cast now has to rest for two weeks in the earth until it has cooled down.*



*The excavated raw cast component*



*In mechanical processing, the feeder system is separated and the body is sand-blasted before being rough-machined and primed. Only then is the body ready for normal further processing to become the next Hatebur machine.*

For further process steps, see the next issue of Netshape in mid 2013.

# QUALITY ASSURANCE AT HATEBUR – NOT A BOOK WITH SEVEN SEALS

 and  Christine Steiner

**“Quality is the opposite of coincidence.” This quote from a member of the executive board of the German post office is a cornerstone of the Hatebur philosophy. Chocolate, clocks, pen knives, cheese – the excellent quality of these products has earned Switzerland an international reputation. Similarly, Hatebur forming machines have also long been renowned around the world and undisputed among experts for their reliable quality.**

Hatebur is an engineering and service company that commissions the construction of the machines they have developed in-house, and is responsible for service and customer care after the machines have been completed. The employees also work on resolving problems in tooling and process development.

The very close collaboration with suppliers guarantees that internal knowledge is continually passed on. The cooperation is based on clearly defined requirements. The overall control is performed by the quality assurance department with quality inspections and goods receipt inspections.

Hatebur outsources the production of all machine components to the most competent manufacturers in the relevant fields. The company has therefore long had a definitive quality assurance structure in place. The data is documented and can be viewed by customers on request. For first-time deliveries and complex components, collaboration in cross-company project teams is very intensive. Hatebur provides clear specifications and, in addition to the drawing, also provides Hatebur quality instructions with detailed specifications. These act as a guide to correct manufacturing and delivery for our international suppliers. Similarly, partners also receive information on the dimensions to be inspected, and the acceptance protocol that must be performed.

## CLOSE COLLABORATION WITH SUPPLIERS

When necessary, suppliers are provided with demonstration materials for the critical components. This collaborative culture means that suppliers contact Hatebur with any questions, uncertainties or deviations at an early stage during the production process. If faults occur, Hatebur provides suggested repairs, which then undergo intensive scrutiny in the later goods receipt inspection. Since this affects single items rather than series production, rapid and regular communication is of the utmost importance, in order to avoid unnecessary costs and delayed deadlines. Hatebur is regarded by suppliers as a very open company, which makes it simple for partners to report problems quickly and find a solution together. If necessary, the production processes are optimized jointly.

The suppliers are assessed based on the results of the incoming goods inspection. For A-suppliers, goods receipt is still only checked on a random sample basis. For new suppliers, or for suppliers from whom faulty deliveries have been received, a thorough goods receipt inspection is performed.

## TRACEABILITY AND CONSTANT DOCUMENTATION

Some of the incoming goods are destined for the Hatebur spare parts warehouse,

while other deliveries are specifically intended for customer machines. These are delivered directly to our assembly plant, which also performs a similarly rigorous incoming goods inspection. If faults are identified, Hatebur quality assurance receives a deviation report. This information is used as a basis for deciding how to proceed. The traceability of reports and decisions is therefore guaranteed.

### IMPLEMENTATION IN THE ASSEMBLY PLANTS ...

The external assembly plants inspect their own work and report all deviations from requirements at an early stage. In addition, the plants are also intensively supported by assembly supervisors. Before releasing a complete machine, a precisely defined process with a range of inspections takes place.

### ... AND WITH THE DEPLOYMENT OF HATEBUR EMPLOYEES AT CUSTOMER SITES

The service technicians work on the basis of clear installation, repair, and maintenance manuals and regulations. Internal training is very intensive, and until they have the required experience, all service technicians are accompanied by experienced colleagues on customer visits. All work is documented using installer reports and communicated to the different departments within Hatebur as a further work instrument and to increase internal knowledge.

### NO CERTIFICATION NECESSARY

All Swiss safety guidelines and machine directives are complied with. Hatebur thus secures successful market access.

Since documentation and traceability have always played an important role at Hatebur, no moves towards certification are currently intended. The personnel resources are instead deployed in the development of products and for providing customer service.



*Left to right: Beat Hayer (Supervisor Quality Control), Ulrich Hinz (Quality Management), Antonio Mauro, Vincenzo Cristofano, Mehmet Oezbey (all three Quality Inspectors): A 100% dimension and quality inspection is performed on the die and punch holder of the HM 75 Hotmatic before Kanisial coating.*

### THE WORKFLOW BEFORE A MACHINE IS RELEASED

- Function and control inspection of the machine in the assembly plant by Hatebur employee
- Documented and traceable preliminary acceptance in the assembly plant
- Customer acceptance in the assembly plant before shipping
- Dismantling and transport to the customer
- Assembly at the customer site by Hatebur engineers
- Comparison of production, incl. safety, with the requirements in the purchase order
- On-site acceptance by customer
- Documented and traceable final approval and release by the customer





## TRADE FAIRS / EVENTS

### TRADE FAIR PARTICIPATION AT SIMTOS 2012 IN SOUTH KOREA

Hatebur's Korean representative, SQ Tech Corp., successfully took part in the SIMTOS 2012 trade fair in Seoul. Visitors exhibited a high level of interest in the range from the Swiss machinery manufacturer and welcomed the opportunity to obtain detailed information at the trade fair.



*Through its visual appeal, the stand by SQ Tech Corp. at SIMTOS 2012 also drew attention to the Hatebur representation.*

### ■ IN CHINA

On the occasion of MetalForm China 2012, the parallel event of the 13th ChinaForge Fair 2012 also took place. The Hatebur (Shanghai) Technology Co. Ltd. was successfully represented with its own stand in the China International Exhibition Center.

The 13th CIBIE (China International Bearing Industry Exhibition) took place from September 20 to 23 2012 in the Shanghai Expo Theme Pavilion. Around 600 exhibitors from 18 countries and regions welcomed the 50,000 visitors in a vast exhibition space of 42,000m<sup>2</sup>. Our subsidiary Hatebur (Shanghai) Technology Co. Ltd. was also represented with its own stand on-site at the Bearing in Shanghai.

### ■ IN TURKEY

From 2 to 7 October 2012, Hatebur, together with the company Boztas, Makina Sanayi de Dis Ticaret A.S. (our new representative in Turkey) was represented with its own stand at TATEF in Istanbul. TATEF is the largest Turkish specialist trade fair for the metal processing industry, and is among the most important industrial exhibitions in the world. International exhibitors showed off their new developments, innovative products and technologies.