Ensinger

impulse

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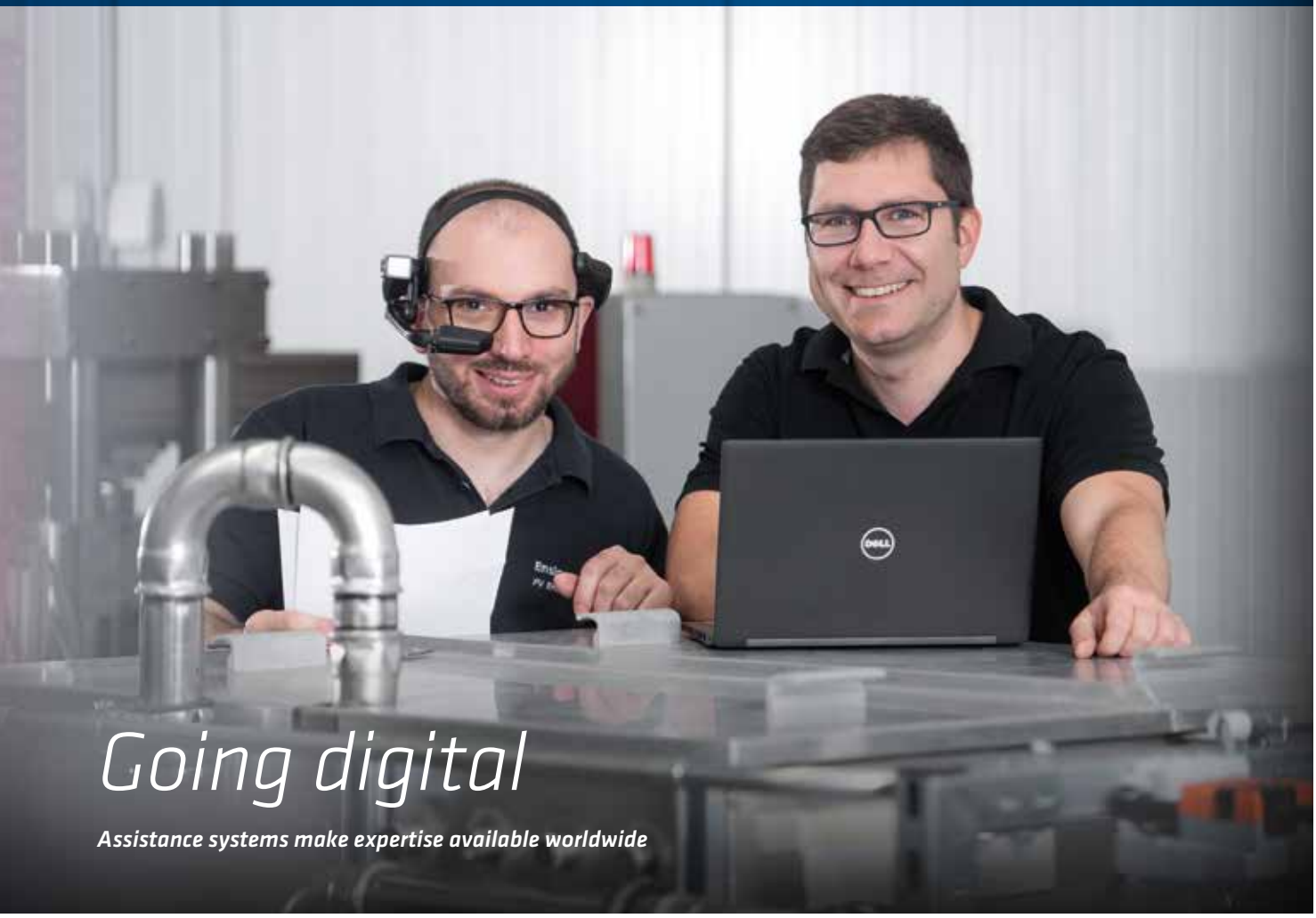

Going digital

Assistance systems make expertise available worldwide

Dear Readers,

The last restructuring at Ensinger was twenty years ago. Back then we took the core areas which had emerged from the different manufacturing processes and product groups and combined them into divisions. Since then the company has been subdivided into Profit Centers operating independently on the market, and these are supported by central technical and commercial units.

The change to the organisational form brought with it a positive energy. Talented staff seized their opportunity and drove their departments forward independently. More precisely tailored decisions were made which ultimately benefited the customer and us.

At first, however, internal resistance was considerable. People worried that the team spirit would be lost. But no system is perfect, and everything takes time. I can remember discussions during which I witnessed the sluggish response of the old organisation and stuck intuitively (or maybe stubbornly) to the principle that the customer, not the company's central organisation, had to benefit.

In the past few years the demands of our environment have changed. The rapid growth entailed too many individual solutions and too many duplications, resulting in too few standards and too little use of synergies or fulfilled potential. Close collaboration among the management and the initiative of several employees have pushed these deficiencies into the foreground, and so we have looked for ways and means of remedying them. One example is coordinated market development: groups have formed within the divisions to support customers from certain industries. They can independently organise support from other departments and thus offer a better service. This model is actively used and is growing in significance.

A few months ago we decided to assign each Managing Director a cross-departmental technical remit. My task will therefore be to drive forward the work on new products and development of core technologies in the company. My colleague Roland Reber will be dealing with sales strategies and everyday Key Accounting practice. For the equally important issue of Operational Excellence – improvement of core processes resulting in high and competitive performance standards – we now have a new Managing Director on our team in the form of established expert and esteemed colleague Oliver Frey.

A company is always changing and there is always something to improve. But we are confident that, in this new organisational structure, we have found a response to the challenges.

Yours,

Klaus Ensinger

Questions, suggestions, different opinions? Write to us at *impulse@ensingerplastics.com*

Imprint

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Ensinger GmbH
Rudolf-Diesel-Str. 8
71154 Nufringen
Tel. +49 7032 819 0
Fax +49 7032 819 100
ensingerplastics.com

Publisher:
Klaus Ensinger
Dr. Oliver Frey
Dr. Roland Reber

Editor:
Jörg Franke
Layout / Production:
Corinna Kohler

Cover photo:
KD Busch
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Ensinger expands Management Board

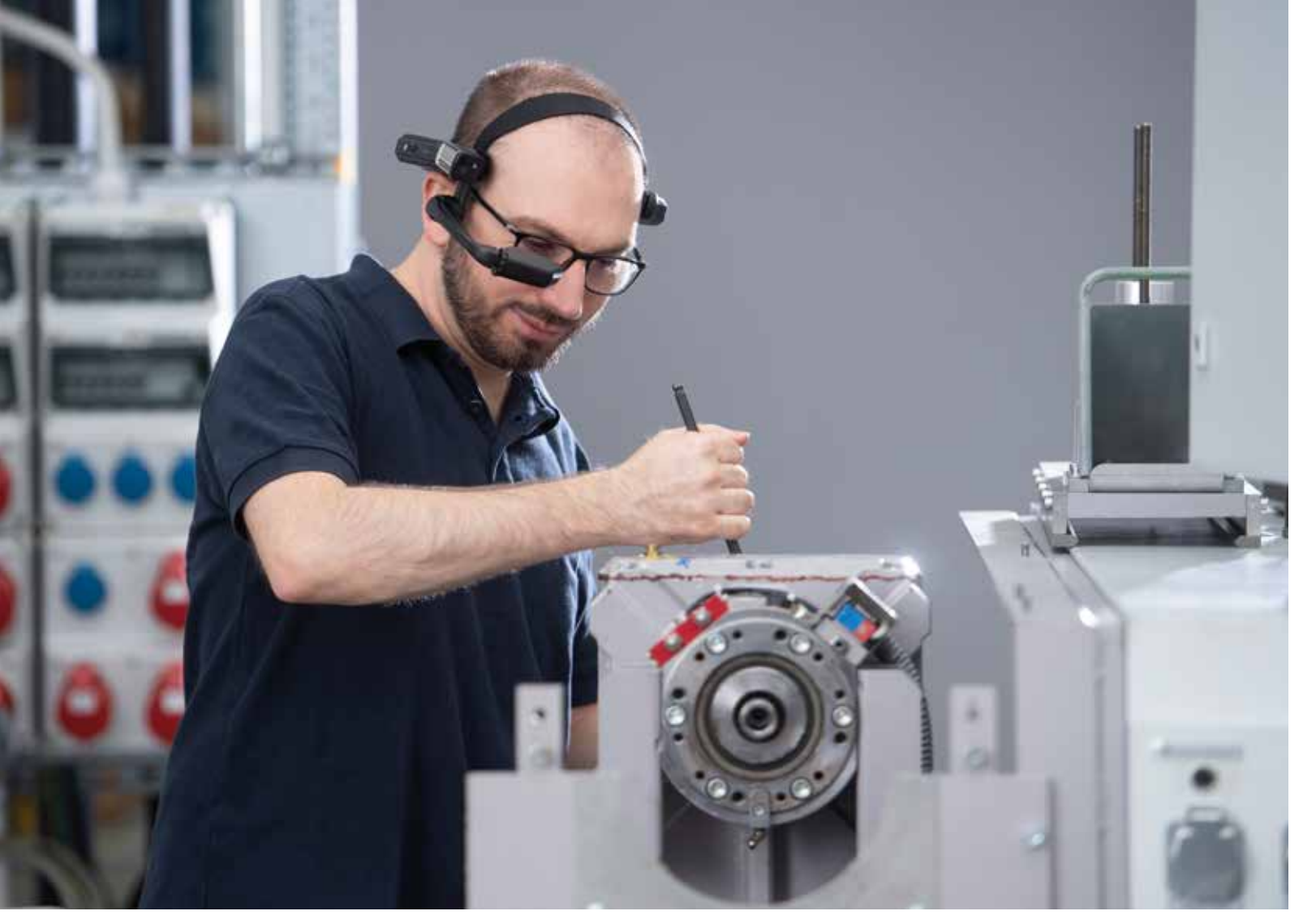
Oliver Frey becomes Managing Director alongside Klaus Ensinger and Roland Reber

Ensinger will now be run by three Managing Directors: Klaus Ensinger (left), Dr. Roland Reber (centre) and Dr. Oliver Frey (right)

Ensinger has strengthened its management team. Dr. Oliver Frey was appointed Managing Director of Ensinger GmbH and the Ensinger Group on 1 July 2019, in addition to the long-standing Managing Directors Klaus Ensinger and Dr. Roland Reber. Frey, who has a PhD in chemistry, previously ran the Compounds Division. For the time being he will continue doing this alongside his role as Managing Director. He will also, on an interim basis, be in charge of the insulbar Division.

"Oliver Frey's work has gained him much recognition and support among both the general Ensinger workforce and the management, and we are therefore delighted that he has agreed to work for us in a more extensive role as Managing Director", said Klaus Ensinger.

Before Oliver Frey joined Ensinger in 2012, he had worked in several divisions and subsidiaries of the technology group 3M. His work mainly revolved around management tasks in the fields of Research and Development, Business Development and Marketing. At the fluoroplastics manufacturer Dyneon, he was responsible for application engineering.



Esref Halil demonstrates the data glasses in the Extrusion Engineering Service Center. With the video communication from expert to user, service activities can be supported visually and guided step by step.

Making expertise available worldwide

Using data glasses in production

With the introduction of the SAP system, the commercial processes and control of production at Ensinger have continued to grow together. Digitalisation pervades the entire value chain from product development to distribution. In the area of production, various digital assistance systems will be used in the future. The data glasses introduced in the Extrusion Engineering Service Center are one example, which facilitates technical support and contributes to networking of the international production sites.

One April day on the Johor site in Malaysia: A switchboard malfunctions; there is a risk of an expensive production failure at the newest plant in the shapes division. The electrician started at Ensinger only a few weeks ago and even the experienced staff cannot find a solution. The shift manager knows where to ask for technical support. He calls Nufringen and describes the problem. Then he goes to the switchboard and puts on a pair of data glasses. Via an audio-visual link, he is connected to the team of electricians in Nufringen. Both sides have the same live image in front of them, provided via the data glasses on location and displayed on a notebook in Nufringen. The electricians direct the colleague in Johor to the area of the switchboard where something needs to be done and guide him through the next steps. The voice instructions are complemented by direction arrows projected onto the data glasses by the electricians to highlight a small cable. All the important information remains in view; the technician has both hands free and can immediately execute the expert's instructions. After a few minutes, the repair is finished – a production stoppage and downtime costs have been avoided.

The outlined use in Malaysia is a fictitious example but not an unrealistic vision of the future. The Extrusion Engineering Service Center has tested the use of digital assistance systems in practice over a prolonged period. As part of a pilot project, data glasses were purchased to help with maintenance and servicing processes across sites. Integrating augmented reality (AR, cf. box) into the support processes has long been on the agenda for head of division Dr Christoph Krohmer and it has finally been implemented in collaboration with a robotics and digitalisation specialist.

Christoph Lutz, development engineer and head of the AR project, is convinced of the benefit of the data glasses: "As we look after several extrusion sites from Nufringen, we can simply connect the technical expert with machine operators on site in case of a fault. Even for complex support work, it is therefore guaranteed that the technicians always take the right actions and lose no time on trial and error."

Knowledge transfer in both directions

Meanwhile, the Service Center has successfully completed the international tests. Little by little, the infrastructure is being built up. Effective knowledge transfer should take place in both directions from the outset; it is not only the subsidiaries overseas that will benefit from the digital assistance system but also the main plant in Nufringen. If a fault occurs there on the night shift, for example, experienced American specialists can help if necessary to analyse and repair the problem during their day shift using AR.

Other applications

"As well as the troubleshooting and technical advice described, other applications are conceivable, for example remote maintenance, preventive servicing and augmented instructions, i.e. instructions for training purposes," Christoph Lutz explains. "The acquisition costs of the systems should quickly pay for themselves purely from the saving on travel costs for our technicians."

The digital revolution in the factory

Industry 4.0 is understood as the fourth industrial revolution, which is made possible by digitalisation. With networked systems and facilities, it should become possible to optimise no longer just one production stage but rather an entire value chain. People, machines, logistics and products communicate and cooperate directly with one another in Industry 4.0. The aim is to include all phases of the product lifecycle – from development and production through use and maintenance to recycling.

The programmatic designation alludes to the previous three industrial revolutions. The first was the use of the steam engine in the 18th century, the second was the commencement of electrification and assembly line production around the turn of the 19th to 20th century, the third was the emerging automation accelerated by electronics after the Second World War. Now, all sectors have begun digitalisation of previously analogue processes in production.

Augmented reality (**AR**) is understood as the computer-aided augmentation of reality perception. This information can appeal to all the human senses. However, augmented reality is frequently understood as only the visual representation of information, i.e. images or videos supplemented with computer-generated additional information or virtual objects by means of superimposition or overlaying.

Data glasses (also called augmented reality glasses or smart glasses) are wearable computers with which information can be projected before the eyes of the wearer.

“We rely on the cooperation of people and machines”

Interview with Dr. Ing. Christoph Krohmer and Christoph Lutz

Christoph Lutz (development engineer) and Dr. Christoph Krohmer (head of Extrusion Engineering Service Center, with data glasses)

Mr Lutz, you led the “augmented reality” pilot project in the Extrusion Engineering Service Center. Can you also see possible applications of data glasses in other divisions?

Christoph Lutz: The divisions that operate branches in remote locations in particular can benefit from technical support with data glasses. Modern machines contain a multitude of sensors, which constantly monitor the status and detect in advance if a malfunction is imminent anywhere. When installing a spare part, a technician from the manufacturer or a colleague from the Ensinger Group can control the machine by means of a “digital twin”, i.e. by simulation of the system. Here, he can give instructions to the fitter on site or send instructions on the digital glasses.

The data glasses are intended to be permanently online during use. Is data protection guaranteed?

CL: As sound and video recordings are possible, we have resolved the data protection issues with the specialist departments. There must be no breach of privacy rights, including of third parties who are not wearing data glasses themselves but who are within the potential recording radius. The use of these digital assistance systems at Ensinger will therefore be essentially voluntary and self-determined. Technical IT security is guaranteed by encryption of the data transmission.

In various branches of industry, robots perform tasks that are subject to errors, strenuous and unsafe. Ensinger too uses modern handling systems in the production halls. Will automation move into the extrusion lines in a similar way?

Dr. Ing. Christoph Krohmer: So-called “autonomation” – an intermediate stage – will play a greater role in the manufacture of semi-finished products. With this type of automation, part of the process know ledge is integrated into the system components. For example, if a sensor detects a critical machine status, the production employee responsible is informed via a mobile device and then has time to respond before the machine automatically switches off. The digitalisation of individual process stages is therefore not only about the work processes becoming faster or more reliable but also about employees being relieved of monotonous tasks such as system monitoring. Networked systems allow rapid fault detection and the possibility of intervention, fewer pathways, better quality and less waste.

How will the factories at Ensinger look in ten years’ time?

CK: Our production processes will not change suddenly but rather continuously and organically. The management has decided to promote digitalisation consistently where the change is sensible for the process technology and technologically feasible. In a few years, some of the processes will be self-optimising or controlled from user interfaces that are easy to operate. What we will not see at Ensinger is the absence of people and a factory that is 100-per-cent autonomously controlled. We continue to rely on the collaboration of people and machines, as we believe that both together achieve far better results than each side on its own. Ultimately, it is important for the staff to have good working conditions – these then automatically become a location advantage.

SAP connects

by Jochen Genterczewsky, Head of Applications

Since the ERP system switchover in April 2017, the majority of Ensinger GmbH’s employees are linked by SAP. Whether order processing, production or administrative accounting, all central business processes are running on this platform. Since the start of the year there has been ongoing introduction of SAP at sites abroad. Firstly this was simple order registration, e.g. in Italy or Spain; from 2020 it will be introduced in its full scope in additional countries. The plan envisages the subsidiaries in Denmark, Poland and Spain being integrated on the central SAP platform in the next three years.

The integration means greater transparency and a better overview of requirements and warehouse stocks, enabling shorter response times for material requests. To further increase customer focus, the Shapes Division has been working with IT on the next building block of the digitalisation strategy: the introduction of an integrated SAP web shop, which permits easy selection and ordering of stock shapes.

International SAP training at Ensinger Danmark in Ringsted (f.l.t.r.): Dominik Grohs (Germany), Githa Hansen and Søren Nissen (Denmark), Nicole Weber (Germany), Susanne Hansen (Denmark) and Paul Rudd (UK)

A warm welcome …

Employees who have joined Ensinger GmbH:

Nufringen

Compounds
Dennis Hertkorn

Industrial Profiles & Tubes
Eric Klinger
Lukas Nafz

IT
Andre Steffen

Shapes
Basri Avci
Niclas Marquardt
Fabian Mensch
Tatjana Riebe
Matthias Schroth
Kandeepan Yogarajah

Technical Management
Filippo Di Dio Ragusa
Michael Kraml

Tooling
Tobias Dengler
Thorsten Schweikert

Ergenzingen

Injection Moulding
Halit Akcan
Dilara Balmuk
Denis Friedrich
Sam Hess
Pinar Karagülle
Danny Lukas
Sebastian Mensch
Sergej Odnodworski
Steffen Prieps
Ramona Schlatter
Regine Schmolla
Maurice Speidel

Cham

HR
Alexander Groitl

insulbar
Steve Beilstein
Dr. Björn Bergmann
Josef Deml
Katharina Neubig
Lukas Peinelt
Sebastian Schröpfer

Machined Parts
Radu Andriuca
Josef Daschner
Benji Durka
Dominik Holzfurtner
Nico Roßmann

Thermix
Thomas Frisch
Viatcheslav Skorik

Ravensburg

Thermix
Benjamin Mohn

With the best thanks …

This year the following employees celebrate their company anniversaries at Ensinger GmbH:

25

Nufringen

Wolfgang Burkhardt
Franz Holzberger
Hartmut Leimbrink
Monika Scheurenbrand
Markus Schroth
Thorsten Wuttke

Ergenzingen

Emil Seckler
Michael Werner

Cham

Anna Maria Amann
Klaus Bergmann
Markus Dierl
Christian Ederer
Oliver Gall
Viktor Gerzen
Dieter Girgnhuber
Max Gruber
Peter Hamfler
Rupert Holzer
Erwin Kollmer
Michael Lang
Walter Lankes
Oliver Lerp
Josef Obl
Klaus Schwendemann
Christian Serve
Konrad Wagner
Andreas Wanninger
Erich Weinfurter
Roland Weingärtner
Mario Wernemoser

40

Nufringen

Harald Siesser

Volunteering-friendly employer

The state of Baden-Württemberg has officially recognised Ensinger as a “volunteering-friendly employer in civil protection”. For many years, the family business has enabled its employees to volunteer for the public good during working hours. At the Nufringen and Rottenburg-Ergenzingen sites there are several employees who are members of the fire brigade or technical emergency services. They are ready for action at any time in the event of traffic accidents and other incidents or natural disasters, and ensure that citizens can count on getting rapid assistance in an emergency.
Last year Baden-Württemberg’s Ministry of the Interior officially recognised a total of 41 companies and institutions as “volunteering-friendly employers”. The idea of proposing Ensinger for this honour came from Markus Stolzer, Quality Engineer at the injection moulding plant in Rottenburg-Ergenzingen.

Frank Hermle (left, HR Business Partner) and Markus Stolzer (right, Quality Engineer) present the certificate signifying the Ministry of the Interior’s appreciation and recognition of the support of civil protection by the employer and its employees. Both colleagues volunteer with the fire brigade and the technical relief service THW.

Ensinger mourns the loss of Klaus Pascher

Once again, and much too soon, we have had to say a sad goodbye to a colleague from Cham. Klaus Pascher died on 9 July 2019 aged 56, following a serious illness.

Extracts from the eulogy by Fred Nass, a friend of the Pascher family:

“That inconceivable prospect hanging over us so ominously the past months, weeks and days, has become a reality overnight. We must comprehend the incomprehensible. Right until the end, we had believed and hoped that Klaus Pascher would win his tough battle and come back to us. The news of his death – which was unexpectedly sudden after all – came as a hard shock which we were not prepared for.
The company Ensinger, the Managing Directors and all employees mourn the loss of Klaus Pascher. Both in Cham and in the other sites he had often visited he was a widely valued colleague. With his passing, our family business has lost a role model, who stood for fulfilment of duty and reliability.
Klaus Pascher held important roles in our company for nearly 30 years. He first worked in production planning before switching to costing. From 2005 onwards he was Sales Manager for the Machined Parts Division. His professional skills, extensive experience and confident manner quickly made him an expert contact for our business partners.
We already miss his philanthropic nature and his calming and cheerful manner. He frequently lightened the mood of the working day with his kindness and sense of humour. But we won’t only miss his laughter. For many of us, Klaus Pascher was more than just a colleague. He was a friend you could rely on and on whom you could count when you needed him.
Words cannot do justice to what Klaus Pascher was for us and what he achieved for us. He will always remain one of us and we will honour his memory.
Our deepest sympathies go in particular to the deceased’s family and relatives.”

Like

A new video provides information about the dual study programme and training opportunities

The new training year is about to start but tens of thousands of places in Germany are still vacant. Manufacturers of consumer goods find it easier to recruit apprentices thank to their well-known brand names and products. But how does a hidden champion like Ensinger make itself known? One answer is a film aimed at trainees with strong, persuasive images.

"We didn't want a conventional – and in most cases expensive – promotional film, but rather a different, emotional approach. We were able to recruit the SRH University Heidelberg, which offers a course in Media and Communications Management at the Calw Campus, as a partner", explains Mandy Belitz, HR Business partner and head of the film project.

"Apprenticeships and the dual study programme at Ensinger" is the name of the film, which is just under two minutes long. Its key focus is Ensinger's apprentices and dual curriculum students. They say in their own words how they find their working day.

"We had specific ideas about what content we wanted to convey. Our aim was to create an emotional 'door-opener' to get people's attention, with the aim, in a second step, of then providing more information about us as company and our training", says Miriam Fiedler, Head of Personnel Development and Training. "By going to our career website, the candidates then find detailed information about all the opportunities at the training sites of Nufringen and Cham."

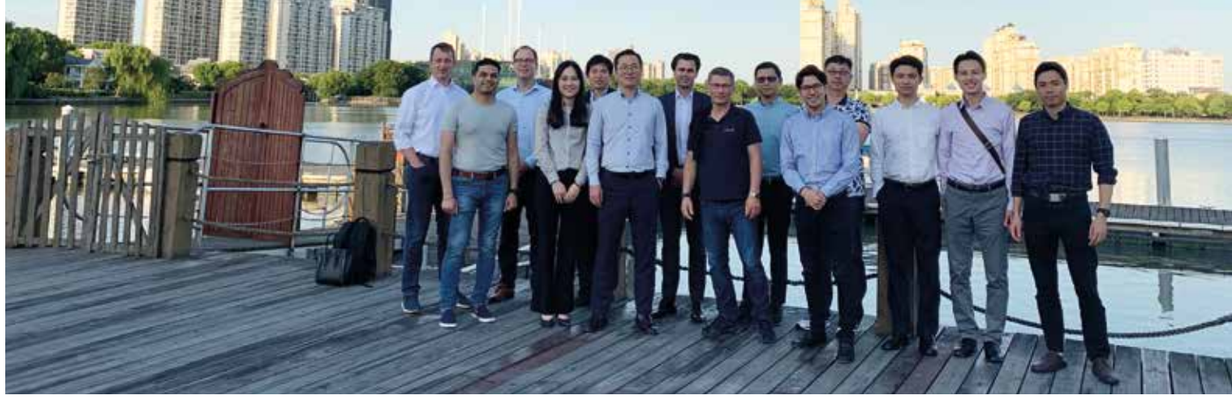
The response has exceeded expectations: on Facebook alone the video has been called up more than 14,000 times since April, and the post has been shared by several employees and people outside the company.

Links to the video

youtube.com/watch?v=mUumvR3FdD4

facebook.com/ensinger.gmbh

ensingerplastics.com/de-de/karriere/ausbildung-nufringen



In Shanghai (f.l.t.r.): Ralph Pernizsak (Germany), Nikhil Tiwari (India), Jan van Schaik (Germany), Joanne Yuan (China), Dong Ruxun (China), Jinho Park (South Korea), Gordon Banks (Singapore), Martin Baras (Germany), Anuwat Mekhin (Thailand), Nami Lohbeck (Japan), Taizo Seto (Japan), Lucas Yu (China), Tim Chang (Taiwan) and Leo Qiu (China)

Exchange in Shanghai

At the end of May, management staff from the Shapes Division met for an international strategy meeting in Shanghai. In attendance were Nami Lohbeck, Anuwat Mekhin, Lucas Yu and Joanne Yuan. The four young executives are participating in an on-the-job management study programme run by the School of International Business and Entrepreneurship (SIBE) at Steinbeis University. They have the task of expanding the business of the divisions at Ensinger's Asian sites.

Plastics processors continue to see, in these growth markets, lots of potential for stock shapes and finished parts. Ensinger has also expanded its capacities in Asia in recent years. Now the Group has three sites in China, one plant in Malaysia and branches in India, Japan, Singapore, South Korea and Taiwan. Smaller sales offices have also been opened in several countries in South-East Asia.

Dong Ruxun, Managing Director for Ensinger China and a former student of the SIBE, has a particular connection to the Steinbeis programme. Ruxun studied for two years in Berlin and Stuttgart. He completed his multi-stage work placement at Ensinger in Nufringen. There he got to know all the departments – from Production through to Administration. In 2002 he opened Ensinger's first representative office in Shanghai. Today he is responsible not only for the stock shapes business but also coordinates the activities of the other divisions in China.

'Personal best' for Grenloch

Company Safety Program systematically implemented

1,000 days without a lost time accident – cause for celebration for the team in Grenloch

By Susan Cancglin, HR Manager, Ensinger Inc., Grenloch

On June 11, the Grenloch site in New Jersey had cause for celebration: 1,000 days without a lost time accident. This 'personal best' is the result of a safety-focused culture observed by management and by the whole workforce. A group of employees and specialists, the Safety Task Force, has ensured systematic implementation of the safety and occupational health program, and sets an example in everyday production practices. Important elements include quarterly inspections, dedicated occupational safety projects and Safety Suggestion Awards.

All of the 50 employees at the site participate in monthly online training sessions and safety meetings. Since the management are responsible for the well-being and safety of their staff, active involvement in the field of occupational safety is an important criterion in annual performance reviews.

The Grenloch facility produces extruded sheets, cast materials and the window insulating profile insulbar. Bruce Tichenor recently retired as Head of the U.S. insulbar Division and General Manager for the site. The success of the Company Safety Program is also down to him.

EVI celebrates anniversary

Employees shape and improve the workflows

Since 2009, the divisions and Service Center have been using the Ensinger Improvement Tool (EVI). It has been ten years of highs and lows, but now the CIP (continuous improvement process) is on a solid footing. The EVI department supports the company with implementation of the EVI strategy through training sessions, project management, workshops and consultation.

Right after the introduction of EVI in spring 2009, a number of things were set in motion in Nufringen and Ergenzingen using the CI programme: in the production departments employees weeded out superfluous tools and equipment, while in the administrative areas the teams got rid of archive folders and office materials which they had never used. After the first workshops, the pools of ideas and action plans were as overflowing as the intermediate storage for the old furniture and machines. A year later, EVI was also launched in Cham.

While initially the focus was on workplace design and linear processes, the following years saw cross-departmental process optimisations, set-up workshops and sophisticated improvement projects having a more important role.

Accompanied by management staff and facilitators, employees were able to demonstrate optimisation potential, come up with joint solutions and implement these improvements in a coordinated way. Most divisions and Service Centers made long-lasting progress on the basis of standards they themselves had developed. But in some company departments EVI came to a standstill. Solutions for complex issues could not always be implemented, or the number of measures was too great for the teams to directly implement. This discouraged staff from holding further workshops.

Advice and training

In order to develop the system further and make it even more accessible to the divisions and Service Centers, three years ago the steering committee made the decision to set up a specialist CIP team. Klaus Mauderer, who as a Lean Six Sigma Master Black Belt can contribute many years of experience in Lean Management, was put in charge. Now the EVI department in Nufringen and Cham employ four full-time CIP specialists. The team advises the departments and offers training sessions for all management staff and employees. Piece by piece, the introduction of CIP systems at the sites abroad is also being supervised.

Projects, workshops and EVI to go

With **EVI to go**, employees or teams use tried-and-tested methods and make improvements themselves. If an issue requires more work, then all employees can convene a facilitated **EVI workshop** or request support from the EVI team

Big changes are being developed with **EVI projects**. Diverse analysis tools, key performance indicators and statistics play a particular role in the methodology, which follows the Lean Six Sigma project structure.

“Instead of working through several measures, we believe in prioritisation”, says Klaus Mauderer. “Key figures give us information as to which type of workshops and projects are most useful.” Today, with a specially developed KPI system, it is possible to assess both the monetary and non-monetary value of the different EVI measures.

In the future the focus will continue to be on empowering and supporting management staff and employees and carrying out CIP measures independently, in order to further promote the company’s improvement culture.

Do you have a question, issue or suggestions concerning CIP?
You can contact us centrally via the e-mail address
evi@ensingerplastics.com

Regulation with control cycles

The Shapes Division is optimising stock availability
– by Hansi Lörcher, Global Supply Chain Manager, Nufringen

Have the right goods in stock when they are requested by the customer. This imperative does not only dominate online trading of consumer goods, but for a plastics processor such as Ensinger availability of products from stock is also of crucial importance. Facing tough pressure from competitors, our customers have to keep adapting their product ranges to the market. In order to be able to meet the changing demands at short notice, our common stock shapes need to always be available, where possible.

Our product portfolio – which is tailored to the market – gives customers the advantage of not having to keep unnecessarily large warehouse stocks. For Ensinger, flexible production and good delivery capacity have a positive effect on the order situation whatever the economic conditions. For this reason, the Supply Chain Management department headed by Kai Faller is giving particular attention to the improvement of stock availability.

Inter-departmental coordination

A stock availability committee acts as a central information and coordination platform. The monthly meetings in Nufringen are attended by Supply Chain Management and the head of the division, but also by the Production, Sales, Product Management and Purchasing departments and by specialists from the Compounds Division; they discuss problems and define appropriate measures for continuous improvement.

In order to align the stock availability towards the most important stock shapes, the portfolio has been subdivided into A, B and C materials. Thanks to systematic prioritisation, the Production planning team led by Carsten Perger have achieved a higher-than-average increase in the availability of the “highrunners”, i.e. A and B materials.

Control in the ERP system

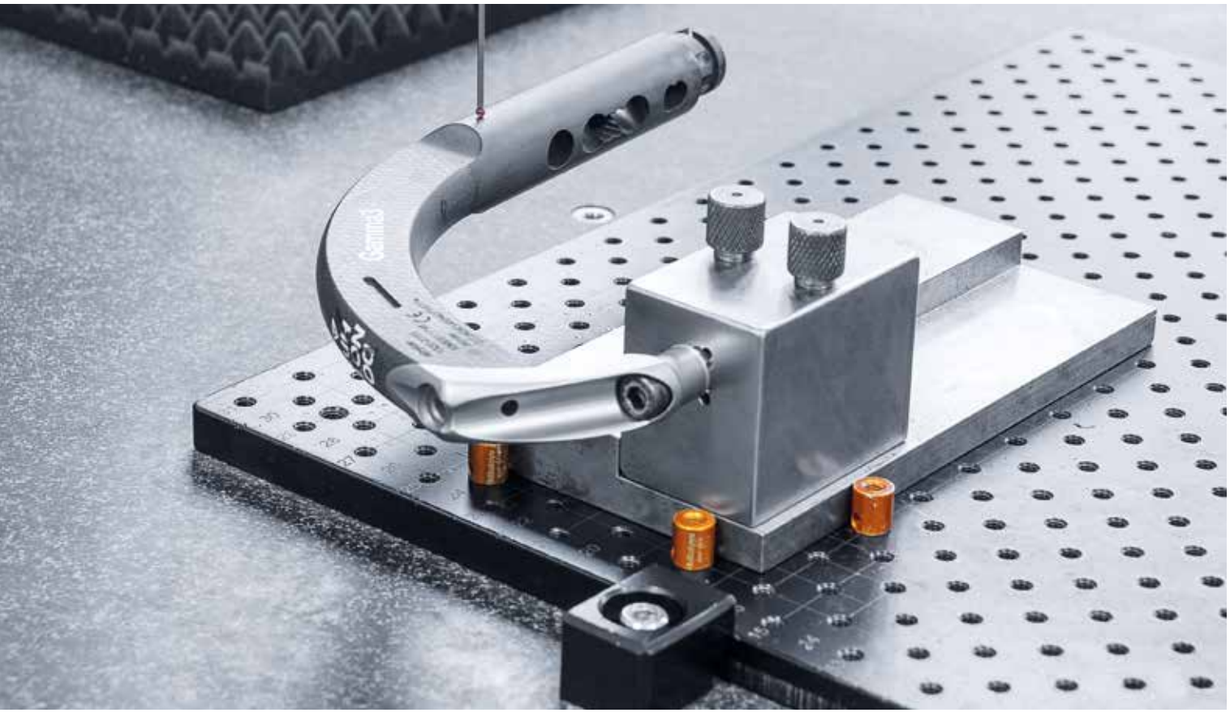
Control of the stock availability essentially takes place by means of two SAP control cycles: The small control cycle serves to regulate supply bottlenecks as quickly as possible and to optimise the availability. The large control cycle ensures, in the long term, that demand and capacities are balanced. For this purpose, a coordinated demand plan is determined which is contrasted with the available resources.

Two years after the process changeover in Nufringen, the outcome is a positive one. If all product groups are considered, the availability of stock shapes has increased from 70 percent to over 90 percent. This increase is not an end in itself but an advantage for customers who benefit noticeably from the vast material availability.

To calculate the stock availability, the stock is considered in relation to the planned material requirement for a comparable period. At the stock shapes warehouse in Nufringen, the cumulative value has increased to around 90 percent.

Surgical instruments made from hybrid materials

The acquisition of Moll / Wenglon complements Ensinger's medical technology portfolio



Lightweight hybrid construction for trauma surgery: The target device for intramedullary nailing produced by Moll Engineering for Stryker permits a precise, secure screw attachment to the fractured femur. The tolerances of medical technology products are often in the range of a thousandth.

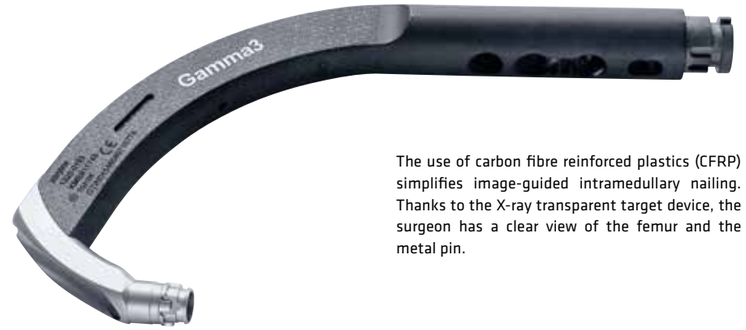
In January Ensinger acquired the medical technology manufacturer Moll Engineering. The owner-operated company based in Lübeck manufactures products from carbon fibre-reinforced high-performance plastics, stainless steel and titanium. Moll's core competence lies in target devices for trauma surgery, retractors and other medical instruments. Components for automation technology and aviation round off its portfolio.

The acquisition also includes the takeover of the manufacturing company Wenglon GmbH, which makes products on Moll's behalf in Dobra, near Szczecin (Poland). Engineering and Sales are based at the Lübeck site. A total of 70 employees work for Moll and Wenglon.

Technical solutions from a single source

"We are delighted about this new addition, which introduces an attractive technology range into the corporate group", said Dr. Roland Reber, Managing Director at Ensinger. "The combination of carbon fibre-reinforced plastics and metals is the ideal solution for many medical applications, particularly in orthopedics and trauma surgery. We look forward to our new colleagues and welcome them!".

Ensinger already develops plastic compounds for the medical technology sector, provides stock shapes made from carbon fibre composite and other materials, and produces a variety of machined parts, including trial implants and sterilisable cases and trays. Besides, the subsidiary Ensinger Composites Switzerland is developing new technologies for the processing of thermoplastic fibre composites. These different process technologies open up diverse options for customers for developing and manufacturing products together with Ensinger along the value added chain.



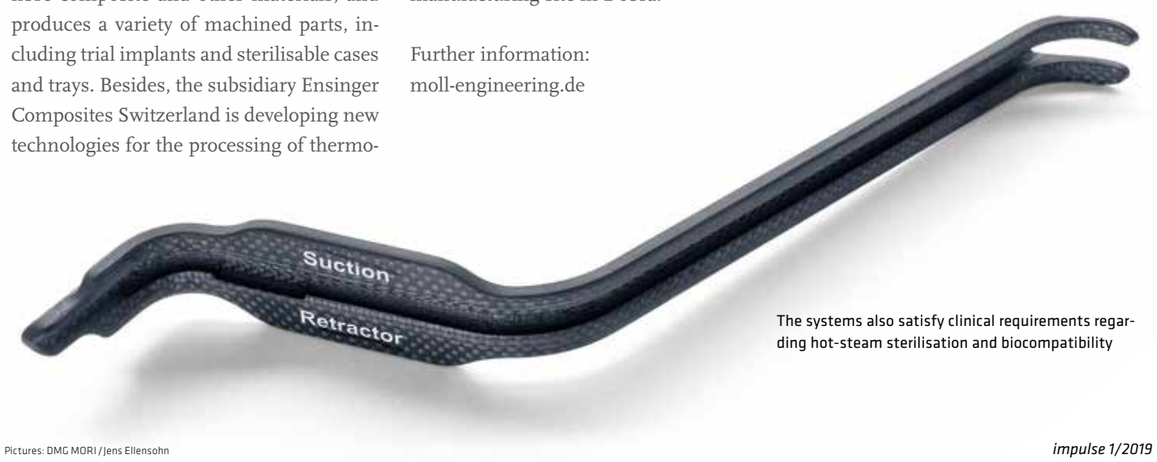
The use of carbon fibre reinforced plastics (CFRP) simplifies image-guided intramedullary nailing. Thanks to the X-ray transparent target device, the surgeon has a clear view of the femur and the metal pin.

Lübeck remains headquarters of Moll Engineering

Moll Engineering, whose business was previously of a more regional nature despite the company's expansion, will obtain better access to the global markets in the future thanks to its integration into the Ensinger Group. "The wide platform offers the company, and my employees, good prospects for the future", says Stefan Moll. He will continue to be in charge of the business of the company he co-founded in 1996. Continuity is also being maintained as far as the sites are concerned: Moll is to keep its headquarters in Lübeck, and there are further investments planned for the manufacturing site in Dobra.

Further information:
moll-engineering.de

Stefan Moll, Managing Director at Moll Engineering



The systems also satisfy clinical requirements regarding hot-steam sterilisation and biocompatibility

Pictures: DMG MORI / Jens Ellensohn

Image: ESA

TECASINT on its way to Mercury

For just under a year, “BepiColombo” has been on its way to Mercury. The space probe is transporting two satellites designed to research the magnetic field and the surface of the planet, which is the smallest and closest to the sun. The mission, named after the Italian mathematician and engineer Giuseppe “Bepi” Colombo, is a collaborative project between the European Space Agency ESA and the Japanese space agency JAXA.

Minus 270 °C on the side of Mercury facing away from the sun and up to 400 °C on the side facing towards it – this temperature range places huge challenges on the material. To enable the space probe to withstand such massive stresses, a Thermal Control System had to be developed. This is designed in such a way that the maximum temperatures to which the sensors and other sensitive components are exposed do not exceed 250 °C in any phase of the mission. The thermal decoupling is enabled by distance washers made from TECASINT 1011. The polyimide material made by Ensinger stands out for extremely high long-term thermal resistance and low outgassing. Even with heating – of short duration – to 350 °C TECASINT 1011 does not soften. This property is necessary to ensure that the high attraction force of the screws is preserved for the entire flight duration of BepiColombo.

The arrival in the target orbits is scheduled for December 2025. By this point, the space probe will have covered a distance of 9 billion kilometres.

Further information:
ensingerplastics.com/en/aircraft-aerospace