

impulse

Issue 1/2016

Employee and business partner magazine

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Working arm in arm

Automation in the Cham factory simplifies processes and everyday work for employees of the Cast Nylon Division.

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Dear Reader,

This issue marks the fiftieth anniversary of our company. My thoughts surrounding this landmark are focused on a single emotion: that of gratitude. Gratitude for the pioneering spirit displayed by the founders, Wilfried and Martha Ensinger. For the commitment of our workforce both at home and abroad. For the confidence and loyalty shown by our customers. For the privilege of being allowed to work in this environment and to look forward to each new day with its challenges and interaction.

Many employees and partners feel a fondness for our company. Particularly gratifying is that this affinity can create a bridge of reconciliation to those who may have parted company in disagreement. Because even those who have moved on still hold a place for Ensinger in their heart. This special empathy creates a connection, no matter how opinions may differ.

Alongside the overwhelming sense of gratitude, the weight of anxiety is naturally never far away. The responsibility of ensuring the survival of the company can grow into more of a burden with every passing decade and generation. Who would want to be the one to break with or even end a successful tradition?

But a company's purpose is not set in stone. It has to change to suit its customers. Ensuring its survival in a form which is beneficial to all - this is the essence and extent of the responsibility held by both management and employees. We have a duty to take stock and to turn things upside down, even if this

means breaking with tradition altogether for the common good.

But opinions diverge when it comes to deciding what needs to change and what should stay as it is. Members of the older generation sometimes miss the personal contacts and the decisive courage of the founding generation, and dislike formalism and political manoeuvring. The younger generation is frustrated by what it considers an excessively casual and insufficiently systematic approach, by the suggestion that traditional methods succeeded for a reason.

How we address these differences, whether right or wrong, will impact heavily on how we prepare for future challenges. There is a clearly visible tendency in our company that success and motivation are best achieved by bringing these two poles together in a melting pot of old and new approaches. These solutions tend to be more balanced and bear more weight. Representatives of the different positions feel heard and respected, and are themselves capable of making moves towards change. The culmination of this process is a move away from "them and us" towards "we". Under the bottom line, this is what forms the substance of the company and the affinity we all feel after fifty years of Ensinger.

Very truly yours,

K. Ensinger
Klaus Ensinger

News channel picks Ensinger as "Hidden Champion"



Frank Killinger and Marnie Röder at the award ceremony in Frankfurt

The German news channel n-tv picked out the hidden champions among Germany's small- and medium-sized companies. The annual awarded prize is aimed at owner-managed companies who, with their work, have rendered particularly outstanding services to the success of the German economy. In November, Ensinger took part in this contest for the first time. The insulating profile insulbar RE won

1st place in the category of sustainability. insulbar RE is made of 100 per cent recycled plastic. This brings about a critical improvement in the life cycle assessment of these systems. Frank Killinger, Head of Sales for the company's insulbar division, and Marnie Röder, who is responsible for marketing this product line, took receipt of the award during a ceremony in Frankfurt am Main.

For quality and logistics

For the third time in a row, automotive industry suppliers Schaeffler and Continental have awarded Ensinger's injection moulding division the honour of "premium supplier". A total of 37 international companies were given this status. For the suppliers, inclusion in the "premium supplier circle" has the advantage that they become involved at an early stage in product development projects. The selection criteria of the Schaeffler-Continental purchasing cooperation arrangement include not only fully developed quality management but also good logistics performance with a global and regional presence. Reimar Olderog, head of the injection moulding division, thanked the employees at the Rottenburg-Ergenzingen site. "Being awarded the honour of premium supplier shows that our collective efforts from the last few years, including those to keep on improving, have been worth it."



Stress test for fibre-reinforced plastics

The way in which fibre-reinforced plastics react to mechanical stress was the subject addressed by Dr. Matthias Zschehye in his doctoral thesis at the Dresden University of Technology. The Scientific Alliance of the University Professors of Plastics Technology (WAK) selected this thesis as the winner of the Wilfried-Ensinger Prize. The findings elaborated by Zschehye, now employed as "High-Performance Polymers" Group Leader at the Fraunhofer Institute for Mechanics of Materials IWM in Halle, can make a contribution in fields such as arming the bodywork components of cars to more effectively resist crash loads.

Wilfried
Ensinger
Stiftung

Questions, suggestions, different opinions? Write to us at impulseredaktion@de.ensinger-online.com

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Top-scoring car nut

Manuel Mühlbauer likes nothing better than messing about with his cars – he applied the same enthusiasm to his studies as a process mechanic. The 22 year old from Oberpfalz achieved the best final exam in the whole of Germany.



Manuel Mühlbauer's pride and joy: his Opel Astra is his constant companion wherever he goes.

When you visit Manuel Mühlbauer you are likely to find him in the garage. Before he shakes your hand, he wipes his oily fingers. Replacing a radiator or changing the oil are a piece of cake for him. "I've always been passionate about cars," he says. "My stepfather was a car mechanic and he taught me a lot. We repair everything ourselves – at least what we can manage without the workshop." Manuel Mühlbauer bought his first car when he was 18 – a silver-grey Opel Astra. "I know the car is getting a bit old now, but I haven't been able to part with it yet," he admits with a grin. He bought his second Opel with his trainee salary. This time a more powerful blue Astra OPC. "I want to make sure both cars get used regularly so I drive the old one in the winter and the new one in the summer," he explains. Technical skills weren't the only thing Mühlbauer learned from his stepfather – he also learned how to persevere. And the 22 year old put this determination to good use when he completed his training as process mechanic for plastic and rubber technology. "Preparation for the exams here at

work was great," remembers Mühlbauer. "I had already predicted I would pass the theory and practical, but when I was named Germany's best student in the field of semi-finished products by the IHK – I was gobsmacked!" Since last July, Mühlbauer has been plant and machine operator in the insulbar division. "Every apprentice was allowed to choose a shift before the takeover," he says. "I wanted to go to shift 3 because even while I was training I was getting on really well with the colleagues. If I don't know something, there is always someone there I can turn to." As soon as Mühlbauer clocks in, he pulls on his safety shoes and receives his instructions from his shift manager. Then he sets up the extruder with the appropriate tools, for instance, and prepares the production. He works shifts. "I always have two early, two late and two night shifts, and then four days off," he says. "That suits me better than having just Saturday and Sunday free." His girlfriend moved back to Innsbruck some time ago to study there. But he's happy to drive the 370 kilometres. He just turns up the music and enjoys the drive – and the hours of work he's invested in his car are well worth the effort.

Toolmaking in sector competition

In November, Ensinger took part in the "Toolmaker of the year" competition for the first time, achieving a very respectable result. Of the 295 companies, the Nufringen toolmaking plant achieved 40th place, closely followed by colleagues at the Cham plant in 43rd place. In the comparator group "Toolmakers with fewer than 50 employees", Ensinger was placed in the top third (Nufringen at 9th, and Cham 10th).

The award "Toolmaker of the year" is presented jointly by the Fraunhofer Institute for Production Technology IPT and RWTH Aachen's Laboratory of Machine Tools and Production Engineering as part of the "Excellence in Production" (EIP) competition. The teams of experts in the jury evaluate the technological performance of the companies, as well as organisational and strategic aspects.

A warm welcome...

Employees who have joined Ensinger:

Nufringen

Industrial Electrics
Marius Marinescu

Shapes
Rebecca Ehrmann
Ramona Heckel
Thomas Kächele
Ünal Kurt

HR
Annette Schieber
Janine Schulz

Industrial Profiles and Tubes
Dr. Milan Cavic
Nenad Jokic

insulbar®
Antje Christine Will

IT
Robert Veit
Janusch Zygodlewicz

Quality Management
Belinda Böckle

Ergenzingen

Injection moulding
Sebastian Armbruster
Magnus Faßnacht
Sebastian Gärtner
Ahmet Karayilan
Svenja Lupold
Tom Michael Mayer

Cham

insulbar®
Josef Adam
Wolfgang Berzl
Sandra Bösl
Benjamin Breu
Tobias Liebl
Martin Luger
Josef Rabenbauer
Thomas Röckl

IT
Josef Schmuderer

Tool making
Roman Feldbauer

Machining
Maximilian Auer
Brigitta Bonati
Andrea Breu
Christian Brunn
Stephanie Fischer
Thomas Hausladen
Martin Kaiser
Martina Laumer
Tobias Röckl
Patrick Stracker

With best thanks...

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

25

Nufringen

Mario Bache
Marianne Bühler
Anica Gorse
Götz Hausotte
Bert Meiner
Carsten Perger
Harald Sauer

Klaus Schäfer
Thomas Walz
Nicole Weber

Cham

Ludwig Angermeier
Martin Balk
Josef Fisch
Franz Forster
Markus Göttlinger
Lothar Haubner
Alexander Lausser

Helmut Luger
Klaus Pascher
Klaus Rödel
Arnold Schuster
Ludwig Spinnler
Herbert Wache
Konrad Wiederer

40

Nufringen

Willi Wörner



“Change is a wonderful thing”

In the past two years Ralph Pernizsak, head of the Shapes Division, has made a lot of changes at Ensinger. He explains here why this was important and what his goals are for the future.

■ *When you started at Ensinger at the beginning of 2014, what situation did you find?*

A Swabian family-owned company of international standing – dynamic, with committed employees who identify strongly with Ensinger. Yet it was often in fire-fighting mode. Production hall employees solved acute problems but there were scarcely any calm discussions on how to tackle the long-term causes. As I walked through the factory I often saw hectic scenes.

What do you mean? Why was that?

Only too obvious – the stock shapes division had grown enormously in recent years. This

had also created disorder. This was compounded by the fact that Ensinger didn't realise how big it was and hadn't yet become properly accustomed to being a global Group. Many departments and sites hadn't joined up the dots. But we need a comprehensive overview of things: how do the processes within the company and in the individual production plants fit together? What do we need to focus on? What are our priorities?

What have you done since joining?

First of all we defined our objectives. On the one hand we wanted to make processes more efficient. Closely associated with that is the second objective of increasing productivity. And of course we were pushing for strong growth, and still are. These three objectives require permanent effort. We implemented the core elements of this production programme, which we call TECAsport, with assistance from management consultants from Porsche Consulting. Their teams of experts are results-oriented and very demanding, but they go about things intelligently. The consultancy assignment lasted three months, up to June 2014. Together we devised plans for the months and years ahead, which we have been implementing ever since

Can you give us an example of such a measure?

The pilot project was the cutting service in Nufringen. This exemplified all the problems. Orders were going unfulfilled, everyone was stressed out, overtime, frustration, and high rates of sick leave. In only two weeks we had reorganised the cutting service and introduced textbook flexible production methods, so-called lean management. For example, we changed the work processes – previously, each individual plastics joiner was responsible for picking up his order, obtaining the material, programming the saw, sawing, cleaning the saw, filling out

the paperwork and removing the completed material. During an eight-hour shift, the saw was operating for a mere 45 minutes! But the cutting service only earns money when the saw is running. So we assigned work packages and linked them together: one person plans, another one fetches, another one removes and everyone else saws. After just a short time, what we saw was that there was no more overtime, no Saturday working – but despite that we were able to handle more orders. Suddenly the mad rush in the cutting service had ceased, and the employees were once again working calmly and with concentration. Obviously a restructuring such as this isn't concluded and firmly established after just two weeks. But thanks to the early evidence of success, a willingness to change has developed within the workforce. This openness underpins the measures being continued independently.

The TECAsport programme measures are costly. Has it been worth it?

I think so. The machine operating times have increased, and productivity with it. This is evident from the OEE metric: Overall Equipment Effectiveness. Before TECAsport kicked off, everyone in Nufringen was in agreement, “We have gone as far as we can with efficiency. We need more employees, a new production hall, more machines!” What is now apparent is that just through better organisation we have been able to achieve quite a bit! But we're still a long way short of our goal. There's still a lot to do.

Are there any more examples of better organisation?

We are now focusing more on work processes. There was a long-standing culture at Ensinger of tackling improved productivity by technical means alone. One example – setting up a particular machine takes four hours. There was some idea of reducing that to three hours with robotic assistance. But on average, it took six hours until an employ-

ee had any time at all to do the set-up. During that time the machine was idle. It was these six hours that had to be tackled first, not the four hour set-up time! Because that's just a coordination task. For example, to help with this, there are now detailed planning boards in the factory that employees can use to organise themselves. They think about what helps to create value, what the major levers are – and what constitutes waste.

What else has changed?

The employees' mindset. That is far more important to me than any figure on the balance sheet. People are communicating with one another, improving processes and mak-

It's more important to me than a figure on the balance sheet: the mindset has changed.

ing their own decisions. The willingness to change can be seen in the numerous CIP workshops as part of our EVI improvement tool. But it isn't just here that you can see employees using their initiative. Recently I overheard a couple of colleagues during the breakfast break. One of them was saying that he had been researching packaging materials for our semi-finished engineering products at home on the Internet, and wanted to try out something new. That made me think: “wow! It worked.”

Change is a wonderful thing – this attitude is now part of our life. That makes me happy, because we never stop changing. Change is a continuous process. Do you know what? It isn't at all difficult to get the teams to do something – the employees have know-how,

will and energy in abundance! We are all following one plan and setting clear priorities.

But there have been some personnel changes as well.

Yes, that's true. I expect all employees to buy into and help shape the change process within the company. As part of that I, together with my managers, have to support and assist the employees. What I expect from managers themselves is that they let their employees try their hand, giving them the opportunity to develop in the process. If I see, as I did on the production side, that individuals are not walking this common path even after several lengthy conversations, then at some point I have to make tough decisions. Obviously this also affects colleagues who have contributed to Ensinger over many years – there's no doubt about that. I'm also aware what a decision such as this means for the individual and his family. I don't take this decision lightly. But I also feel that it has to be made. With many colleagues, it has become apparent that the changes in our division have created new development prospects for them personally, which is an additional win for the entire company.

What other changes are imminent?

In our production sites we are slimming down processes and linking them together, initially in logistics, then in production and finally in sales. We also want to introduce yet more global standards in all areas. Quality assurance involves organising significantly more training courses for our employees. Also, Ensinger has loads of experienced hands who are technically very clued up. We have brought them together with our active experts and set up a "machine optimisation task force", with impressive results. When they all get in a huddle over a piece of equipment, with new spirit and a willingness to change, they all contribute their experience, which significantly boosts output – combined with top-quality. This knowledge must

not be lost! This needs to be passed on to the younger generations.

What other plans do you have in store for the shapes division?

Strategically, we have a lot in mind. We want to improve the cross-connectivity and standardisation of our international sites. As far as portfolio and quality are concerned, it shouldn't make any difference to the customer whether he orders from Ensinger Poland or Ensinger Taiwan. This is where the standards come into play again. We also want to understand our customers better. At the moment it is still frequently like this – we have a great product and are looking for someone who can use it. We need to turn that on its head. We have to offer our customers what they need. To do that we need to know their needs and speak their language. Part of that also is building bridges internally within Ensinger. At the end of the day our broad-based value chain – from compounding, via semi-finished products to precision parts and profiles – is a unique selling proposition. It enables us to offer the customer the best solution for his specific requirement. To sum up – better cross-connectivity between all locations, thinking from the customer's perspective and the lean production I described initially, combined with a strong CIP mentality – those are the central pillars of our strategy.

And how does the customer benefit from all these changes?

Market dynamism has increased enormously. We are witnessing strong competition on the customer side, logistics challenges as a result of just-in-time production and the shrinking of inventories tying up lots of capital. Our customers benefit directly from the changes introduced at Ensinger in the production, logistics and sales fields. They can order from us in significantly shorter cycles, our portfolio has expanded and become more stable and the customer appreciates us now being far better at putting ourselves in



Ralph Pernizsak worked in Japan for seven years, where he became acquainted with different corporate organization models.

his shoes. We openly communicate our initiatives outside the company. Our experience of this has been positive.

Brief CV

Ralph Pernizsak grew up in Linsenhofen near Nürtingen and studied aeronautical engineering in Stuttgart. After his first step on the career ladder as a product manager with automation specialist Festo in Esslingen, he went to Japan: in Tokyo, he held management positions at Festo and technology and service provider Technotrans. In Hong Kong, he headed up Technotrans's Asian businesses before returning to Germany four years ago. The five-strong family (the children are aged 11, 9 and 6) found and settled into a house in Herrenberg, not far from Nufringen. In his leisure time Ralph Pernizsak is a keen mountain biker.

A shade more precise

For over 50 years, machining specialist Trig Engineering has been supplying international customers from the aviation industry and the offshore sector. Lisa-Jayne Burman introduces us to the Ensinger subsidiary.

■ Percy Triggol founded Trig Engineering in 1965 in a backyard workshop in North Petherton, UK. In 1994, the the company was acquired by the Ensinger Group, and three years later it moved to a modern production hall in Bridgwater, Somerset. Trig now employs eighty members of staff on the site. Together with the subsidiary Ensinger Precision Engineering (EPE), Trig Engineering forms Ensinger's "Machined Parts Division". This division specialises in the manufacture of precision components from high-performance plastics and is one of the biggest suppliers on the British market. A small management team from both companies run the machining unit, headed up by Terry Maggs.

Close ties to customers

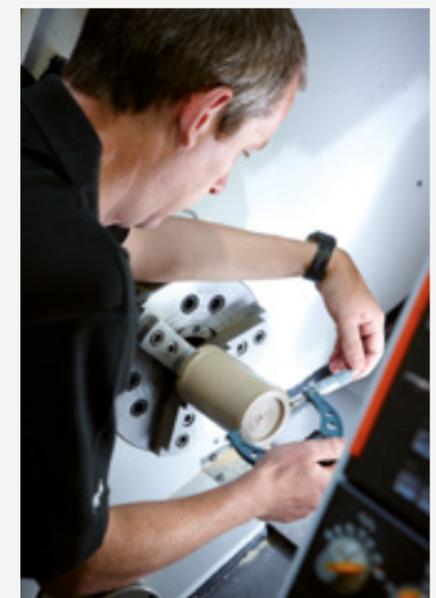
Trig manufactures components for the most challenging sectors in the world, including defence and oil and gas, with the aerospace market continuing to be the root of success. Its performance has enabled the company to develop strong, long-lasting relationships with customers such as Airbus, Messier-Dowty, Rolls Royce and Siemens.

3-D CNC coordinate measuring

Trig is an expert in both manual and CNC turning, along with milling and cutting. On this basis, experienced engineers and skilled machine operators produce complex components and assemblies – that are often difficult to process – from high-performance plastics.

The specialists at Trig are also proud of their performance in finishing and further processing techniques such as ultrasonic cleaning, heat treatment, parts labelling and deburring, and the assembly service. This know-how, together with state-of-the-art and high-quality technical equipment like the three-dimensional CNC coordinate measuring machine, enable exceptionally high quality throughout the entire manufacturing process. Here, a role is also played by the certified quality assurance in line with ISO 9001, 2008 and AS EN 9100.

Lisa-Jayne Burman is Marketing Assistant at Ensinger Ltd., Tonyrefail



Klaus Ensinger (left) congratulates Terry Maggs (2nd from the left) on the 50th anniversary of Trig Engineering. As the founding Managing Director of Ensinger Ltd., John Speirs (right) followed the development of the machining specialist over many years. Right: Precision and modern quality management are vital prerequisites to success in demanding sectors such as the aerospace industry. Another is an experienced workforce capable of tackling even the most complex orders.

50 Years Ensinger: Founded to last

Ensinger will be celebrating its 50-year company jubilee on June 17 and 18th. What better time to take a look back at the early days of the company in Ehningen and the period of diversification and expansion. In the next issue of Impulse, we will be providing impressions from the years following the change of generation. A detailed chronicle of the company's history is provided online at <http://bit.ly/ensinger-history>



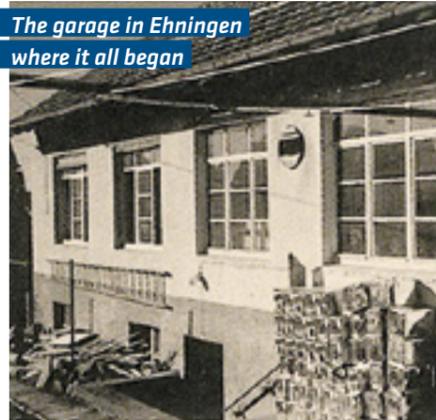
Multitasking in the sixties:
Wilfried Ensinger at work with
his oldest daughter Eva



Martha and Wilfried Ensinger
in the nineties



The first branch abroad:
Ensinger Inc., founded in 1986 in Washington/PA



The garage in Ehningen
where it all began



Wilfried Ensinger (2nd from the left) and his older brother Werner (left) with
Richard Pflüger (2nd from the right) and Wolfgang Balbach (right) at the Extruder.
When producing pipes, extrusion had to take place through
the open garage door out into the Yard



Booth at the K fair 1975:
Small but nice

The chemical industry had already developed a number of high temperature-resistant polymers to the market stage when Wilfried Ensinger launched his first extrusion experiments in 1966 in Ehningen. The then thirty year-old engineer had ambitions to produce high-grade semi-finished products and machine elements using the up-and-coming glass and carbon fibre-filled materials. With the support of his wife Martha and his untiring staff, Wilfried Ensinger developed new extrusion methods using self-constructed plant and machinery. His enthusiasm and personal integrity – coupled with technical foresight and willingness to take risks – formed the basis for the close, trusting ties he forged with

customers, suppliers and employees alike. Wilfried Ensinger chose the right course for the successful development of the family firm right from those very early days. Pivotal to the company's success were the on-going modernization of its manufacturing processes, the development of additional areas of business, new technical applications and international expansion with the foundation of branches in Europe, America and Asia. None of this would have been possible without the commitment and sense of responsibility demonstrated by the company's qualified technical personnel and its capable management team, many of whom have remained loyal to the company to the present day.



Future CEO Klaus Ensinger
takes his first steps in the company



Relocation of the company headquarters from Ehningen to nearby Nufringen
marked the beginning of decades of headlong growth



After a three-year development period,
Ensinger delivered its first insulating
profiles for windows and facades in 1977



A growing shortage of skilled personnel in the Stuttgart region
prompted Ensinger to establish a branch plant in Cham



Good cooperation between the departments and information management is vital to the successful introduction of a new ERP platform. At Ensinger, the Divisions and Service Center benefit from the support of experienced SAP specialists. Impulse talked to two of them about their sphere of work: Gerd Johannsen (left) is responsible for master data management. As Business Process Manager, Thomas Dressler (right) is in charge of scrutinizing the company's work flows. They share an office in the IT building in Nufringen.

Implementation gets under way

Well on the way to the new ERP platform: Successful conclusion of the technical concept phase
 – by Dr. Erwin Schuster (CIO) and Jochen Genterczewsky (ERP Project Manager)

Success in the implementation of a project improves motivation. Achieving a key milestone helps create confidence in our own abilities and brings the assurance of a successful outcome. And yes: The project team has met with success, first and foremost the key users. By wrapping up the technical concept phase, the ERP has achieved a major milestone.

Documenting all the ideas, concepts and SAP-specific processes and moulding them into a structured form – as so-called business blueprints – involved a lot of communication and collaboration work at times. The responsible Heads of Division and other senior management members have now fully endorsed the technical concept. This provides the foundation stone for the next stage of the ERP project: the implementation phase.

Implementation of SAP processes

Now comes the moment when the processes, many of them only worked out theoretically, have to be mapped out – one step at a time – in the software. This means that it is now actually possible to see in the SAP how Ensinger will be processing its orders, starting logistic processes, planning production or integrating complex systems such as high-bay warehouses in the future. The challenges faced along the way will include the introduction of an integrated system of batch management, the definition of a new process for handling semi-finished short lengths or rebuilding our article structure.

The main objective of the implementation phase is to map out and safeguard the SAP processes to ensure that everything functions smoothly day-to-day. It is up to all

those involved in project to make this work: The key users acting in the role of experts in their departments to check technical correctness; the representatives from Finance/Controlling who ensure that entered values are assigned to the correct accounts; and importantly also the IT department, whose job it is to ensure that the interfaces work and the software runs reliably. Needless to say, these are only a handful of examples from the long list of tasks to be completed.

Next step: Integration tests

The implementation phase including all the module tests, will take until the end of September 2016. After this, the production preparation phase begins. A major element of this are integration tests which allow us to ensure that integrative processes overarching the different divisions run without any glitches in the SAP. The next issue of “Impulse” will be reporting on this in more detail.

Everything grinds to a halt without master data

– by Gerd Johannsen
 (Head of Master Data Management)

All of us here at Ensinger, no matter in which part of the company we work, are dependent on the existence of good quality master data. Planning, producing, selling or receiving our monthly salary by bank transfer – a countless number of processes are regulated by master data. As this operationally relevant basic information is entered, for instance into customer master data sets, the company address, name of the contact, bank data and so on do not need to be entered again with every order. In this way, the existence of master data prevents redundant processes and the expense involved in the multiple entry of data.

Because a master data strategy generally hinges around the customers, the master data and associated organizational structures have to be developed at the same time and be capable of adaptation to dynamically changing market requirements. At Ensinger, the same applies as for many companies: The more branches there are accessing the same basic information (and updating, i.e. editing this master data), the more important it is to have the necessary regulations (master data processes), as well as fields of responsibility and authority in place.

On the data field level, deficiencies are documented, for instance by means of non-conformance lists, and transferred to the data object owners for correction. This degree of regularity helps generate a high and sustainable standard of data quality. To ensure that the master data logger is automatically provided with a preselection, fields are pre-populated in the system; this means significantly fewer errors when entering data than when using free text fields.

Changeover to the new ERP system offers the opportunity to part company with “data corpses”. However, for “master data people”, the concern is less about the number of different applications the IT department uses to support division strategies, and more about creating awareness that poor, faulty data and unregulated fields of responsibility across all the sequences and processes which rely on this data will inevitably lead to problems – no matter whether data is transmitted using the latest SAP release or on hand-written post-it notes. If the master data is flawed, everything will grind to a halt.



The process landscape enables an integral view of all the company processes and interfaces. Also aligned in keeping with this structure are the SAP processes, which are now mapped in the system in the implementation phase on the basis of the technical concepts.

Applied process thinking

– by **Thomas Dressler (Head of Business Process Management)**

Efficient, customer-focused business processes help add more value. This is why it is important for any company to take the time to analyse, design and improve their work flows. At Ensinger, coordination of these activities is the task of the Central Business Process Management, or BPM for short.

Processes frequently spill across departments, divisions or even corporate boundaries. This is why the end-to-end overarching coordination and optimization of processes lies at the very heart of process-oriented thinking – for instance from the receipt of a customer enquiry through to submission of a quotation. Business Process Management plays a major role within the framework of an ERP project. To create the underlying basis of the SAP technical concept, the requirements imposed on the process were mapped out in cooperation with specialists from the divisions to create a standardized process catalogue which

was documented in the BPM portal.

This catalogue is currently being extended in order to log all corporate processes using a process structure which is standardized across the whole of the company. This will create a vital condition for the harmonization of work flows and the realization of synergies, which will have benefits for the whole of the Ensinger Group in the long term.

Another key prerequisite for sustainable success, is the need to firmly anchor the concept of process-oriented thinking in the consciousness of all those involved. Transparency, understanding and orientation to the overall process will help prevent target conflicts and coordination problems at the interfaces. Responsibility for controlling and optimizing processes lies with the process owners. They are the key driving force behind a process-oriented organization and in this role they lead the concept of process-oriented thinking by example.

Autumn excursion into the Jagst valley

Retired Ensinger staff on a voyage of discovery – by **Ilona Brodt and Martin Hess**



A pleasurable reunion: The Ensinger veterans in front of Langenburg Castle.

Under the heading “A look back to the past” we – nearly 40 retired Ensinger staff and our partners – took a bus ride towards Hohenlohe to the Schloss Langenburg. We reached our destination high above the Jagst valley in bright sunshine. The

origins of the castle go back to the twelfth century. Once the first impressions had worked their magic on us, we went to the café in the castle, where we were greeted by a three-layered Black Forest gateau specially made for us. Duly fortified, we left

the present behind us and took a guided tour through the renaissance courtyards back through the centuries. Right to this day, the castle is the seat of the Hohenlohe-Langenburg family, and it offers a fascinating glimpse into the cultural life of an old aristocratic residence.

In comparison, the German Automobile Museum, which you can visit in the castle grounds, is a mere stripling. Old rarities of chrome and metal, more than 50 years old, tell the story of the development of motoring and associated engineering achievements – and certainly awoke memories of our own younger years. Our eventful day came to an end with an evening in the Kerzenstübli restaurant in Gärtringen. There we talked about old and new stories about “our” company, Ensinger, and its future development. It was especially fitting that we were able to welcome the Managing Director Klaus Ensinger to the group.

Second aid campaign for refugees in the Ukraine

Success! The momentum of the first campaign run by the Wilfried-Ensinger Foundation in aid of refugees in the Ukraine, was continued as a second consignment of donated items comprising dozens of pallets. Employees from across all the German locations donated clothing, blankets, toys and household goods. Ivana Dumancic, Theresa Koch, Martha Ensinger, Edith Holzberger, Kaljopa Stafidova and Eva Ensinger (left to right) helped sort and pack the items in Nufringen. The donations were transported by truck to Eastern Ukraine and distributed by aid agencies in the town of Oleksandrivka in October.



Job done. The volunteers dispatch the donations from Nufringen.

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Brain workers

For two years now, polyamide casting at the Cham site in Bavaria has been extensively automated, something which has completely changed the employees' working day. They no longer heave several kilograms of material through the plant but instead monitor the facility's processes.

■ The metal casting mould is the size of a small car and opens up like a dragon's mouth. A sheet of polyamide appears; it is slightly larger than a front door and is at temperature of about 150 degrees. Django immediately moves towards it and lifts the sheet out using its suction pads. Django is a robot arm on rails measuring nearly eight metres in height. The employees have made him a huge name plate from sheet metal and screwed it onto the base. Now, Django pulls the edges of the sheet through milling apparatus, which in a matter of a few seconds removes any protruding burrs. This is followed by automatic coding, after which the robot shows the sheet to an employee for a visual check and places it in a tempering box that has been automatically placed ready. There, the stock shape cools down in a controlled manner, whilst the robot waits until the next mould opens up.

Relieving the muscles

Three years ago, things looked quite different in the Cham casting hall. Employees stood over the moulds and poured in the reaction liquid, heaved the sheets weighing up to 350 kilograms into the tempering equipment with the aid of manipulators, and cut them to size with circular saws. "That was no longer in keeping with the times: physical labour, too heavily dependent on manual tasks – this is something

companies in newly industrialising countries are able to do just as well, but more cheaply", says Dr. Edmund Zenker. Under his direction, Ensinger together with a machine builder developed two new facilities. In 2011 the system for round rods went into operation, then in 2014 the one for the sheets. "If we produce a relatively simple product such as cast polyamide here in Europe, this only works if we continuously improve the production processes. And here the route is leading towards greater efficiency combined with top quality. The basis for this is automation", stresses Zenker.

From caster to process controller

Klaus Ederer's desk stands in the centre of the plant by the sheet facility. From his chair he sees the moulds and the robot in the background. Mostly, his gaze is fixed on the three monitors all around him. Ederer is responsible for the facility running flawlessly – the mixing and casting unit, moulds, robots, tempering boxes. From his workstation, he monitors the reaction temperatures, the pressure in the tempering units and other important process parameters. If a fault arises, he can respond straight away. Richard Brandner, Head of Casting Production, specifies to the machine every day what types it should produce. The moulds are infinitely variable. There is form number two, for example, for sheet thicknesses of 8 to 130 millimetres. "This means that

Andreas Heigl inspects a robot in the Cham casting hall. The new production facilities and handling equipment have made the workflows in stock shape production more efficient and safer.

In the past, changing the set-up for another thickness took one to two hours, today we can do it in two clicks of the mouse.

the Production department can respond much faster to customer requests. In the past, changing the set-up for another thickness took one to two hours. Now, we can do it with two clicks of the mouse – a massive time-saving”, says Brandner, pleased. Django is holding a new sheet ready at eye level for a visual check. Klaus Ederer presses a button, a safety guard moves upwards. Despite the heat of the sheet – which is still at 120 degrees Celsius – hitting him in the face, Ederer goes right up close and runs his eyes over it. “I am looking for inclusions, for example small pigments, to ensure that the customer only gets clean sheets from us”, he explains, and takes a last look at the sheet: “Flawless”. A press of the OK button, and Django places the sheet on a mobile table, which removes it to the tempering box. Before the changes, Klaus Ederer was one of the people who still dealt with the casting torches, and one of the people who dragged the extremely heavy sheets into the tempering boxes and dragged them out again later. “That was tough physical work. In that respect, what we have now eases the load significantly – I can feel that in my lower back. Now, it’s primarily my head that needs to be with it, and I have more responsibility”, says Ederer and glances at the panel for manual robot control, “It excited me to learn all of this. Dealing with technology is something I enjoy.”

Out of the time warp

Thomas Haiek covers a pile of polyamide sheets with stretch wrap. “Three years ago, I was still spending a lot of time on the circu-

lar saw. Two of us would cut the sheet edges (off) all the way round”, Haiek tells us. “This process resulted in a huge amount of waste. Nowadays we have practically no waste.” In the room for post-processing, he uses an ultrasound scanner to spot check the sheets for internal bubbles. The device looks like an oversize flatbed scanner. “In the past, we did this by hand.” Haiek shows us the old testing device. “We moved this probe over the entire sheet centimetre by centimetre, simultaneously tracking on a monitor whether there were any peaks. That was tiring and at the same time monotonous work which I sometimes even had dreams about. I am glad that the device now does it automatically.” Through the automation of the entire process, the quality of the sheets has significantly increased. “We can now do lots more spot checks by ultrasound, because this test is no longer so time consuming.”

“I take my hat off to the team”

Head of Production Richard Brandner is also satisfied with the result of the investments and changes from the last few years: “Our aims were as follows: we wanted modern facilities which provided us with variable, fast production and increased quality. We have achieved it all!” Brandner adds: “Some of our employees have worked in a completely different way from today for 20 years. But demonstrating an admirable flexibility and thirst for knowledge, they have grasped everything to do with control technology and learned independently. There, I take my hat off to the team.”

On good form: cast polyamide stock shapes

The polyamide casting procedure is particularly suitable for producing stock shapes in the form of large-volume plastic sheets or round rods. For this purpose, caprolactam, a liquid reactive monomer, is poured into a mould together with an activator and a catalyst. Immediately, the chemical reaction of polymerisation begins – the mixture heats up and solidifies. Ensinger markets the polyamide sheets and round rods under the product name TECAST (PA 6 C). Because these cast stock shapes barely have any internal stresses, they can be machined easily. By using additives (fillers, dyes, lubricants etc.), a wide variety of modifications are possible. The end customers use the sheets and round rods predominantly to manufacture components for machines such as gearwheels or rollers. Ensinger offers its customers one of the largest stock programmes on the market. Thanks to the commissioning of the new facilities in Cham, the selection of dimensions has increased once more.

You can find details of the cast stock shapes in a four-page brochure which is available on the website for download: <http://www.ensinger-online.com/de/service/kunststoffe-downloads/>



“The modern facilities enable us to have variable, fast production and top quality. In the past, changing the set-up for another thickness took one to two hours, today we can do it in two clicks of the mouse.”

Richard Brandner



“It excited me to learn all of this. Dealing with technology is something I enjoy.”

Klaus Ederer



“In the old days we used to cut off the sheet edges all the way around using a circular saw. This process resulted in a huge amount of waste. Nowadays we have practically no waste.”

Thomas Haiek

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