ESSENTIALS

The customer magazine of EschmannStahl GmbH & Co. KG

2/2014

cold work tool steel, wear protection, hotrunner technology, rapid prototyping, surface technology, materials, pressure die-casting, mould construction, hardening plant, vacuum heat treatment, growth, EschmannStahlgrades, hot work tool steel, quality management, laser welding, climate protection, industry 4.0, perspectives, plastic mould steel, mouldflow analysis, water injection technology, saw mill, surface hardening process, in-mould labelling, individual specifications, mould frame, variety, machine range, hardening process, steel quality, sprue area, vacuum hardening furnace, efficiency, reproducibility, material testing, tempered steel, induction hardening, material testing, process security, communication, market leadership, core expertise, steel stock, competency, hardness, delivery reliability, sawing, dimensional stability, thermal conductivity

experience, hardening furnace, service, vacuum heat treatment prototype design, rapid prototyping, precision, pressure die-casting tools, special plates, CNC control, DIN grade, injection moulds, two component injection moulding, growth, service, vacuum tempering furnace, automation planning security, special steel grades, belt saw, stock, guide bars, cold injection moulds, rity, manufacturing, hardening expertise, crack resistance, work tool steel, alloying element

thread rolling, shear blades, outgoing inspection, corrosion resistance, cutting edges, sealing edges, separating edges, tool steel, flame hardening, vacuum chamber furnace, satisfaction, hardening test, expertise, experience, performance, quality, DIN grade quality, speed

Dear reader,

The tenth issue of ESSENTIALS marks a mini milestone for our magazine: five years' worth of concentrated information about what happening in the tool steel sector. The renowned strengths have been retained and innovations have been added.

You can find an outline of all previously published issues, topics and related core messages starting on page 10. We are relocating in December 2014. After Manufacturing was concentrated at our Reichshof-Wehnrath facility in back 2012, it's now the turn of Administration to follow suit. You can read about what benefits this key strategic decision will bring to customers and staff from page 12 onwards. We made an important contribution to communicating materials knowledge and processing options by staging the "Cold Work Tool Steel" workshop (starting on page 14).

We look forward to receiving any feedback and hope you enjoy reading the current issue!

Your Markus Krepschik (Managing Director)

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The Future of Mobility

Electric vehicles, hybrids, car-sharing – these are just some manifestations of the new age of mobility. Statutory regulations, rising mobility costs and a growing sense of environmental awareness amongst road users are driving the development of alternative drivetrains and concepts forward. Lightweight construction in particular can help to increase their efficiency and marketability.

"Faster, larger, more luxurious" has been transformed into "more efficient, practical, environmentally compatible" – ever since the EU introduced and continues to lower limits on vehicle CO_2 emissions as a result of economic, infrastructural and environmental developments, automotive R&D has focused on adapting new vehicles to these new realities.

According to the Federal Office of Statistics, whilst more and more people are opting for public transport and car-sharing, the car is still the number one means of transport, given its flexibility, greater storage space needs or a lack of short-distance transportation alternatives. Private transport, as previous years' statistics show, will keep growing. To ensure that environmental pollution caused by CO_2 emissions does not keep pace with this growth in private transport usage, vehicle manufacturers have had to keep the emissions of their models below increasingly stringent current limits and document this aw well, ever since the EU Directive came into force.

Because this whole process involves statutory provisions to the benefit of the environment, manufacturers have no latitude at all. Environmental zones have been established throughout Europe, and only vehicles with license stickers/badges may enter these zones. Exhaust emission standards have also been introduced in the USA and Japan. The Euro 6 standard has applied within the EU since the start of 2014. As a consequence, technologies that either directly avoid emissions or reduce them through

smart use of state-of-the-art materials are increasingly gaining acceptance. Since most directives and standards impact on vehicles with combustion engines, hybrid vehicles and quiet, zero-emission electric vehicles are featuring more and more on the roads.

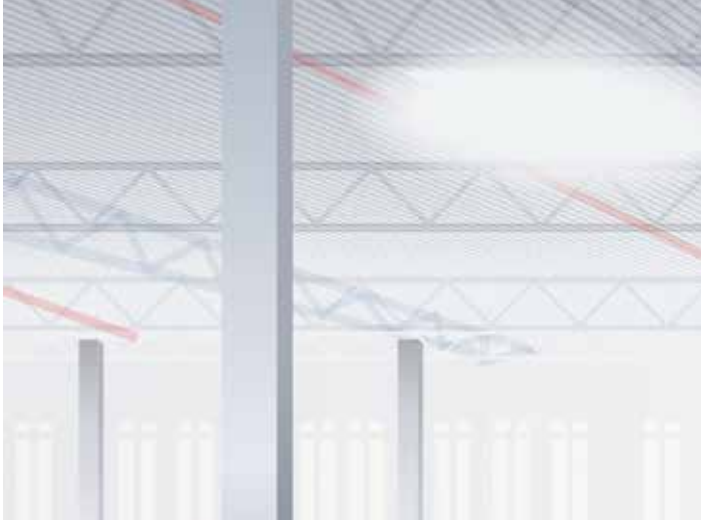
Lightweight construction as a solution

Combustion engines nevertheless remain the dominant type of vehicle drivetrain. To comply with statutory regulations and reduce emissions, whilst at the same time continuing to meet drivers' size, performance and extra spec needs, manufacturers have to make various modifications – the objective is to develop more efficient engines and at the same time reduce overall vehicle weight. The latter is achieved by using modern materials and manufacturing methods. As far as lightweight construction is concerned, there is still potential to reduce manufacturing costs via material substitution and to increase energy efficiency. The fact that vehicle body shells are no longer made of steel, but rather of aluminium, carbon fibre, high-tech composites or plastic is not new.

To date plastic has been mainly used just for interior trim and other details or for a diverse range of small components and attachment hardware. But it is now gaining importance in other areas too. Glass-fibre-reinforced plastics and polyamides in particular are gaining a foothold in the previously metal-dominated components segment. There are currently prototypes of plastic-made wheel rims and gearwheels in circulation. Leaf springs made of glass-fibre-reinforced plastic (GRP) for use in goods vehicles have been on the market for years and are set to be incorporated more and more into passenger vehicles and heavy goods vehicles. The application of such components and modern lightweight construction as a whole can reduce the weight of a car by several hundred kilogrammes. This considerably increases operating range, especially of electric vehicles, and enables them to compete better with conventional or hybrid drivetrains.

Mastering new challenges

The increasing proportion of lightweight components made of high-tensile steels and reinforced plastics is posing new challenges to the mould- and die-making sector. Quality begins with the moulds that are used. Playing a proactive role in partnering with the plastics processing and die-casting industries, EschmannStahl has for decades provided the right tool steels for future applications. EschmannStahl's **ES**PRIMUS SL grade, for example, features optimum properties that make it the right material for heavy-duty injection moulds and die-casting tools. If mobility has to be more efficient, then enhanced tool steels need to come into play at the beginning of the process chain, therefore facilitating compliance with increasingly stringent specifications. Yet a well-structured and sustainable mobility future can only be achieved by applying new technologies (e.g. electric drivetrains), logistics concepts (e.g. car sharing) and innovative design engineering methods (e.g. lightweight construction). ■



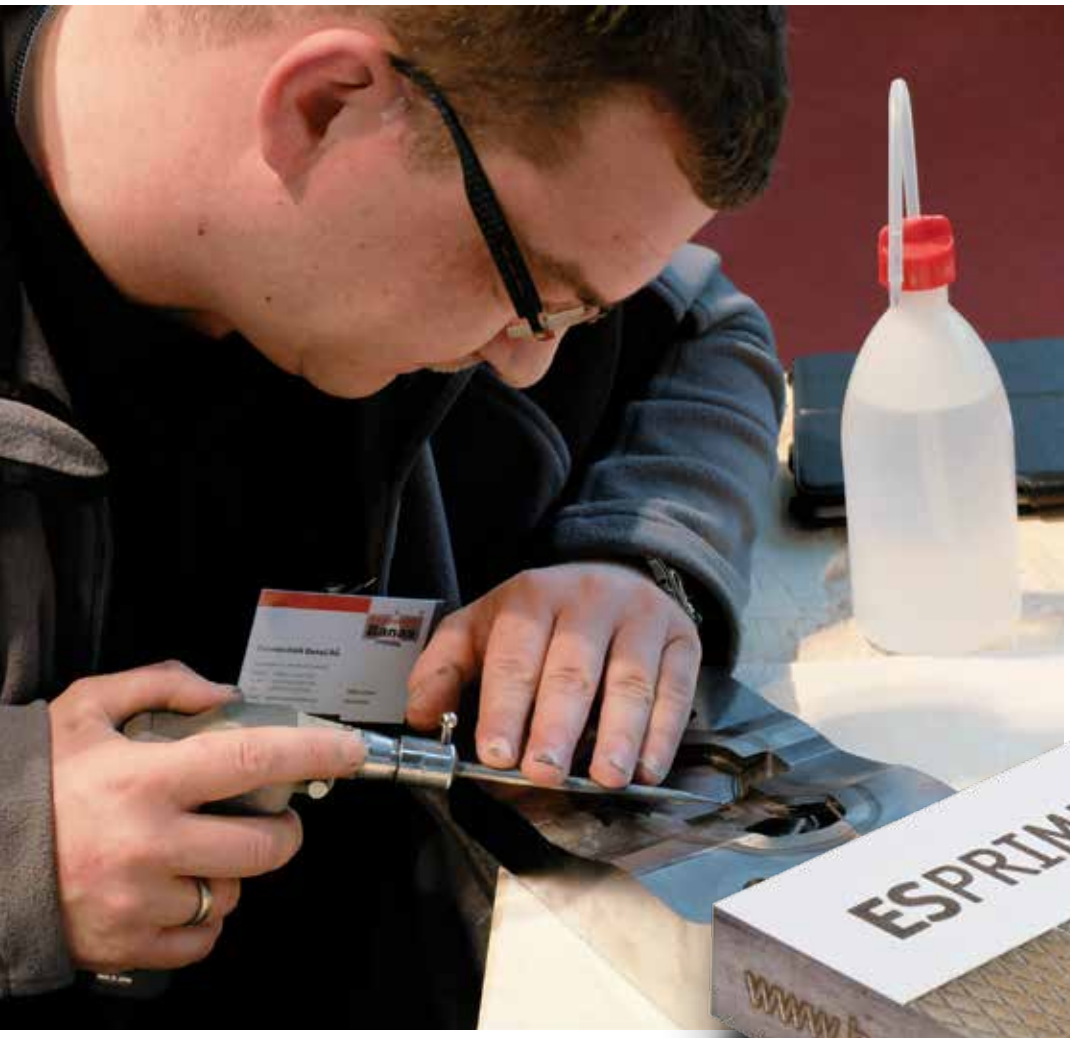
Magnificent Impressions

Fakuma 2014 was an exceptional trade fair for all those involved. EschmannStahl showcased an entirely new concept.

The feedback received about the content showcased at the trade fair was exceedingly positive, according to the trade fair team. A key feature of the booth was the live mirror-finishing demonstration – live mirror-finishing up close.

This made the reproducibility of material properties and materials treatment tangible and come alive: using EschmannStahl's **ES**PRIMUS SL grade as an example, the company demonstrated how its reliable high-gloss finishing meets the highest standards. Visitors could see for themselves on the booth how uniquely smooth this surface can be.
➔ (continued on page 8)

At Fakuma trade fair the different steps along the tool steel process chain were in focus.



Live high gloss finish at trade fair booth

Sample piece representing the various processing steps

When laser hardened, this material delivers a significant increase in tool performance, particular in plastics processing.

A further live example of these high standards and the capabilities of Eschmann Stahl's **ES**PRIMUS SL grade was provided by exhibits from affiliate, Eschmann Textures. This company produces high-end textures for plastics – these can be found in vehicle dashboards, as an exceptional texture on daily-use objects or as a haptic enhancement of high-tech devices. The choice of the right material plays a key role in the finish quality of the future product. That's why Eschmann Textures relies on **ES**PRIMUS SL. Its high degree of grainability ensures that the desired results are reproducible. Gerd Ehrmann, Head of Sales at EschmannStahl, emphasises: "Tangible, visible proof is still the best sales argument. At Fakuma the company was able to illustrate this particular stage of the process chain really well. The quality of our EschmannStahl grades is representative of our entire product range. Providing the right solutions for a wide range of different industries and requirements continues to drive our day-to-day readiness to perform better – indeed beyond the requirements of any standard." Overall Fakuma 2014 attracted the record number of 1.772 exhibitors and 45.689 trade visitors from 117 countries aiming to initiate future business deals and to find out more about the latest plastics processing trends. ■

Infos on other trade fairs

Longer Service Lives to Rely on

Tough, wear-resistant and grainable – EschmannStahl's ESPRIMUS SL is suitable for a wide range of injection-moulding and pressure die-casting applications.

One of the materials that kept cropping up during discussions with customers at this year's Fakuma was EschmannStahl's **ES**PRIMUS SL. The company developed this grade to meet modern plastics technology requirements. **ES**PRIMUS SL is an enhancement of the proven 1.2343 ESU material, which provides a number of technical benefits when the two are compared directly.

- High degree of toughness
- Enhanced thermal conductivity
- Mirror polishability
- Improved wear resistance generated by increase in hardness
- Good machinability
- Isotropic texture facilitated by special hardening process

Given its characteristics, it is the right material for use in injection moulds for non-chloride thermoplastics.

Producing premium surface textures

Eschmann Textures' surface finishing specialists rely on **ES**PRIMUS SL's particular graining properties to deliver creative solutions to their clients' modern surface texturing requirements. The non-crack, non-spall quality of this extremely precision-etched surface meets the highest end-product premium-look standards.

Die-casting benefits

Other industries in addition to the plastics industry benefit from this material's properties. It is ideally suited for heavy-duty pressure die-casting and forging tools. **ES**PRIMUS SL is tougher than comparable steels, which massively reduces the risk of cracks and fractures when subjected to high mechanical loads. A special hardening method facilitates an isotropic texture for even greater production reliability under extreme conditions. It is compatible with the heavy-duty conditions prevalent inside presses and forging machinery. Furthermore its non-sensitivity to thermal shock, high degree of wear resistance and low degree of thermal expansion make it the ideal tool steel for extruder systems.

The resulting smooth surface of the hot work tool steel is particularly suitable for pressure die-casting foundries, where residues and uneven surfaces can be eliminated by surface-treating and finishing the steel. Given its high degree of thermal conductivity, this material also cuts cycle times.

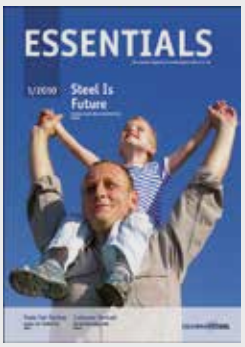
Solutions for all applications are jointly developed.

ESPRIMUS SL *is optimally suited for highly-stressed tools in pressure die-casting and forging tools.*

Gerd Ehrmann, Head of Sales at EschmannStahl, emphasises: "**ES**PRIMUS SL combines functionality with cost-effectiveness. It is eminently suitable for complex geometries and highly stressed components in a range of different industries." ■

1/2010

- Steel is Future
- No Compromise
- Ideally Interlinked



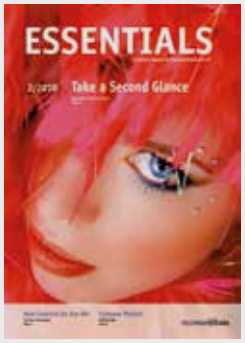
We are Celebrating Number 10

Why this figure is of such interest and why it's worth writing an article about it – a message on behalf of the ESSENTIALS editorial team:

"Besides the fact that we are proud of previous issues of ESSENTIALS and positive feedback from our customers is a great incentive to keep on publishing, the figure ten has another significance. So we don't want to keep this a secret any longer. Whilst researching into topics relating to our anniversary, we came across the etymological explanation of the number ten, which states that ten relates to the number of human fingers: the Latin word 'decem' that stands for the cardinal number 10 is presumably derived from the words for 'two hands'.

In addition to this en-passant information, the tenth issue of ESSENTIALS, like its predecessors, enables the company to maintain dialogue with its customers and communicate well-researched information about EschmannStahl's range of products and services. The objective remains to communicate our professionalism combined with a high degree of up-to-dateness in various topic areas: materials, methods, processing, heat treatment or service.

On this page you can find an outline of previously published issues including headline topics and content focus. Should you be interested in obtaining a particular issue, we will be delighted to send you a copy." ■



2/2010

- Take a Second Glance
- Expertise Along the Entire Process Chain
- Room for Talks

1/2011

- Resources
- The Furture of Environmentally-Inspired Economic Activity
- **ES**ANTIKOR SL

2/2011

- Signaling the Way Ahead
- Looking at Materials in a New Way
- Beauty, Functionality, and Design
- Good Prospects at Lake Constance

1/2012

- Dynamic & Energy
- EuroMold 2011
- Pressure Die Casting in Focus
- In Good Shape
- More Room for Efficiency

2/2012

- Surprise
- Losander
- All-Rounder Carbon?
- Extended Workbench
- Focusing on the Process

1/2013

- Journey Through Time
- From Shorthand to Email
- Contemporary History
- Buying Steel is Matter of Trust
- Common Perspective – New Building and Relocation

2/2013

- Perspectives
- Urgently Needed Expansion
- It Fits Character-Wise and Professionally
- The Ideal Entry Point

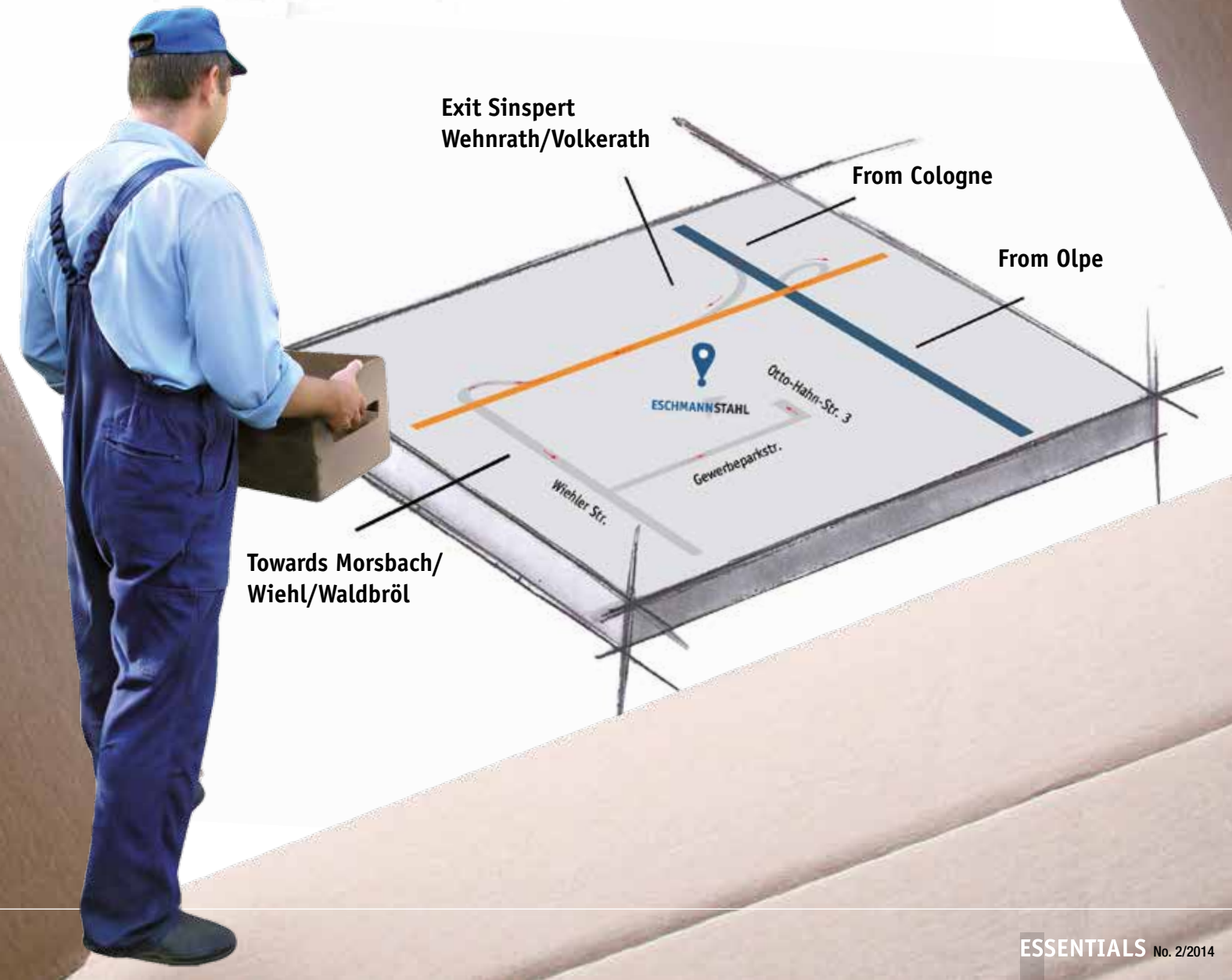
1/2014

- New Opportunities
- Intelligent Machines?
- The Exact Hardness
- These New Dimensions Are Exceptional

Facility Concentration

Cases, crates and containers are packed – the move will be completed by the end of 2014.

Following a one-year construction period, EschmannStahl will complete the relocation of its administrative departments from Dieringhausen to Wehnrath by the end of this year. The concentration of facilities at one location is part of a strategic enhancement programme to optimise performance and increase customer service. The Wehnrath location will therefore incorporate the administrative departments, extensive warehousing facilities, the saw mill, the machining centre (milling and grinding) as well as the laboratory. Staff will benefit from improved communication. The proximity between administrative functions and production departments is intended to improve the working relationships between these departments even more. Markus Krepschik, CEO of EschmannStahl, emphasises: "This sense of 'closing ranks' will in the truest sense of the term have a positive impact on our performance capability and on the company's future development." ■


Exit Sinspert
Wehnrath/Volkerath
From Cologne
From Olpe
ESCHMANNSTAHL
Otto-Hahn-Str. 3
Gewerbeparkstr.
Wiehler Str.
Towards Morsbach/
Wiehl/Waldbröl

“We are Delighted to Take Responsibility”

Many Purchasing or Design Engineering staff usually do not have the time during their day-to-day routines to devote to reading up on steel-related background information. EschmannStahl therefore invited them to a special presentation event.

Michael Meisberger, EschmannStahl Area Sales Manager, welcomed around 30 visitors from 10 different companies in the foyer of Hofgut Imsbach Hotel in the Saarland. All of them came from companies involved in some way with cold forming tools. They work in Purchasing, Design Engineering and Deve lopment or Production Planning departments. Therefore the presentations focused on the topic of cold work tool steel, particularly on 1.2379.

“In day-to-day dealings with my customers I have detected a need for clarification and information. Many customers deal with these materials every day but don’t get round to taking a closer look at technical specifications, manufacturing and metallurgy issues”, Michael Meisberger, who organised the event, explains. That’s why the series of presentations kicked off right at the start of the process chain, i.e. with melting steel.

Uwe Feldhoff, Head of R&D at EschmannStahl, provided background information about raw iron production in furnaces, casting, curing and plenty of interesting facts about various processing stages. “Many were surprised that it takes around six months from the start of

The presenting experts: Uwe Feldhoff, Hans Burger und Michael Meisberger (from left to right).

steel production to delivery at the customer's facility", Uwe Feldhoff noted and added with a twinkle in his eye: "If you are once again made to realise just how long the process chain is, steel is actually far too inexpensive. Processing know-how opens up new perspectives for both toolmakers and tool users." Whilst the standard material, 1.2379, of course does not harbour much potential for innovation, certain nuances can at best still determine optimum quality: what kind of 1.2379 does the customer need? What purpose is it intended to serve and how high is the material's degree of purity?

In reference to tool steel, which only accounts for about 2% of the global steel market, Uwe Feldhoff explained the process of remelting, segregation properties and the importance of carbon content. He also described what impact the alloying elements, vanadium, tungsten and sulphur, have. As regards heat treatment, he emphasised: "We are delighted to take full responsibility. We when we deliver material and heat treatment we achieve best possible quality."

Application-specific finishing

Hans Burger, Head of Sales at Eifeler Werkzeuge GmbH, talked about surface finishing options in respect of cutting tools, injection moulding and die-casting as well as recasting in his presentation.

Here he illustrated the major potential inherent in and limitations of laser hardening and laser cladding as well as of CVD, PVD and PACVD coating. The key questions that he answered were: what objective do I want to achieve? What in general can be coated and what not? Application examples documented by quantifying how processing/finishing efficiency can be increased by applying a specific surface treatment method. "The coating and the substrate have to dovetail fully, otherwise the best materials and the best finishing methods are of no use. Where such delicate harmonization is involved, it helps that Eifeler and EschmannStahl work closely together and we can benefit from the short communication channels between us", Hans Burger maintained. The presentation highlighted the importance of the right combination of substrate quality, condition and coating. Based on contract treatment skills acquired over the course of many years, Eifeler operates systems that it has developed itself.

To conclude the series of presentations, Michael Meisberger gave a detailed talk about EschmannStahl's 6-sided machining (SP brand) service, which some of those customers present already use – as an alternative to in-house machining, e.g. in the event of capacity bottlenecks.

On a related note Michael Meisberger provided a preview of the online shop for SP services. In future customers can place orders in a custom-configured login section if required. Michael Meisberger demonstrated the new tool live on-screen to the participants. "In particular the option of having prices and weights displayed by clicking the mouse will be of interest to many – serving as the basis for their own preliminary costings. That can be a make-or-break detail for placing an order, especially if last-minute enquiries are involved. The shop provides you with the most important details in just a few seconds", Michael Meisberger summarised.

For more extensive orders the new tool features the shopping cart function familiar from conventional online shops. Following the concluding discussion forum and a light snack, many participants took the opportunity to wind down in the hotel. ■

Kuhn & Möhrlein

Large-Scale Tool Specialist

Kuhn & Möhrlein GmbH & Co. KG supplies particularly large-scale tools for zero-cut sheet metal working.

Around 130 design engineers, toolmakers and cutting experts are specialised in developing and manufacturing precision tools at facilities in Illingen-Uchtelfangen. Kuhn & Möhrlein GmbH & Co. KG, located in the Saarbrücken metropolitan area, has been in business since 1981 serving customers from the automotive industry – especially premium OEMs and their subcontractors.

The company's range of products includes draw, cutting, embossing, restriking and follow-on tools. Furthermore the company plans, designs, and engineers special welding equipment for the silencer industry. "Our skills and capacities enable us to manufacture and test particularly large-scale tools. As far as chipless sheet metal working is concerned, we can manufacture tool sizes of up to five metres", Christof Simmet, CEO of Kuhn & Möhrlein, emphasises.

The largest press is 5 metres by 2.5 metres and features a pressing force of more than 1.600 tonnes. "That is exceptional performance within our company size", Christof Simmet adds. The company will shortly acquire a further large-scale press. They have also systematically expanded the design engineering and development department during the last few years and accommodated it in a new dedicated building.

Two decades of partnership

Kuhn & Möhrlein has been purchasing cold work tool steel from EschmannStahl for nearly twenty years now. Christof Simmet explains why: "The high quality and short delivery lead times of our tools are also the result of reliable performance by suppliers like EschmannStahl. It's good to know you have partners like that on board." ■

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Brabant & Lehnert

Retaining the Positive, Developing Extra Strengths

A project born of turbulent times

In January 2011 Vincent Brabant and Bernhard Lehnert took over the business operations and employees of the former Fritz Friess GmbH – as a result of the predecessor company going bankrupt. "Know-how has been built up over the course of many years and can't simply be reproduced. That's why we regarded it as particularly important to embrace the employees and all their experience within the new company", Bernhard Lehnert, co-CEO of Brabant & Lehnert, emphasises. The company blueprints, design engineers and manufactures complex tools and equipment for automotive and new energies sector customers. Now less than four years after starting up, the company operates from recently opened, state-of-the-art buildings. Production and the now 12-strong design engineering department have been continuously expanded since the company was established – at a steady pace. "And that's how it should remain. We want to exploit our potential by taking advantage of these new opportunities and head into the future gradually. Continuous development is our objective and our strong design engineering department is an important foundation on which to build", emphasises Bernhard Lehnert, who augments the know-how that has evolved with talented young human resources: Brabant & Lehnert offers integrated degree courses in cooperation with the local college of vocational education. "In addition to the segments in which we have operated to date, we also try to keep an eye on where new demand for solutions is being generated in the markets", Bernhard Lehnert explains.

Practical 6-sided machining

Head of Design Engineering Sascha Rink has worked with EschmannStahl for many years, including when he was employed by the predecessor company: "We get the dimensions we order with 6-sided machining already having been performed if we request it. That is a fast, hitch-free service that takes the pressure off our processes if we occasionally don't have any spare capacity in-house. Such reliable partnerships are very valuable. They allows us to plan with certainty and help to ensure the delivery reliability of our products." ■

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Practical Relevance Actioned

Berthold Kunrath GmbH is synonymous with consistency: from design engineering via machining technology, tool assembly and trialling through to the manufacturing of initial small batches.

Tholey-based Berthold Kunrath GmbH has been involved in toolmaking for exhaust gas treatment systems since the beginning of the 1980s. Established in a garage, the family business grew continuously, keeping pace with its customers and their requirements. "Nobody, who calls themselves a toolmaker and who has not been previously confronted by a particular challenge, would be in a position to manufacture complex, ready-to-market components from scratch. That is a development process", Thomas Schumacher, CEO of Berthold Kunrath GmbH explains. "Every tool is one of a kind. But over the course of the years you become acquainted with certain requirements and solution patterns. That's why experience is so important", Thomas Schumacher explains.

Performance that goes beyond toolmaking

It is frequently too expensive for a customer to manufacture small batches at their own facilities. "We manufacture tools especially for use at customer premises but also for use in our own facilities, i.e. at BK Stanz- und Umformtechnik GmbH. Customers are afforded the opportunity of having pilot runs manufactured by us, especially at the initial stages of an order where quantities are still very low, without them having to retool their expensive serial production machinery for this purpose", Thomas Schumacher emphasises. The company can blank, deep-draw, trim, upright or seam components at its own manufacturing and 3D-laser machining facilities and thus take the pressure off tool users as well as gain a better understanding of the user's processes.

Advice from materials through to design engineering

The company's full-service offering includes comprehensive advice as well as toolmaking and manufacturing. Here is an unusual anecdote that demonstrates the company's ingenuity: on the basis of a simple manufacturing enquiry, the company was able to optimise an oven manufacturer's processes and today it makes around 3.000 oven-door panels annually. Since Kunrath has already partnered with EschmannStahl for more than 20 years, both companies are often involved from the off in an advisory capacity on end-customer projects. "To some extent the customers themselves have not even been awarded the contracts. We regard this as a service and as an investment in the partnership's future. It's always a tremendous help being backed up by EschmannStahl's high standards of performance. We can always rely on that", Thomas Schumacher explains. Together with EschmannStahl the company provides advice on special grades, material availability and tool optimisation. ■

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Breier

Automatically More Efficient

Beyond-tools thinking: if requested, J. Breier GmbH also develops and supplies the associated automation.

Stefan Böffel is proud of his new factory building. "Our old facility was bursting at the seams. Here on this green-field site we were able to action our layout ideas. By this he means the extensive stock of machinery as well as the comprehensively equipped inspection room", J. Breier GmbH's CEO explains. Established in 1969, the July 2014 relocation was a logical step in the toolmaker and mechanical engineering company's development. Previously large-scale tools had to some extent to be stripped down first in order to be able to load them onto trucks outside and then reassemble them. Stefan Böffel has worked for Breier since 2005 and has been CEO since 2007. "It was great to see us all acting in concert and working hard to stick to the timetable. During this phase we were able to rely on the cooperation of suppliers such as EschmannStahl at all times", he relates. "Now we have more space to allow us to exploit our full potential."

Automated tool-handling systems

One of the company's particular skills is developing and manufacturing stand-alone handling systems. Breier conceptually designs equipment fitted with different types of drives to meet specific requirements. Safety systems are installed whilst internal specialists programme the control systems. Only once the systems have been thoroughly tested, are they permitted to leave the factory to facilitate efficient production at customers in the vehicle manufacturing, home appliance and electronics industries.

Stock-holding for short delivery lead times

When Stefan Böffel was appointed CEO in 2007, he initiated the partnership with EschmannStahl. "Based on good experience in the past", as he emphasises. He has always particularly rated the benefits of substantial storage capacity: "We can call EschmannStahl and the next day the material we ordered is already standing in our factory yard. This enables us to confirm deadlines to our customers with a clear conscience." During heavy workload periods Breier has recently begun availing itself of EschmannStahl's 6-sided machining service. Stefan Böffel says: "Although we have our own processing options, sometimes it makes more sense to outsource preliminary services to helps us to concentrate on our core skills." ■

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DYNAMIC & ENERGY SERIES

For the Love of Books

Marc Bedow, Management Accounting Team Leader at EschmannStahl, is a passionate collector of old, aesthetically appealing books. His goal is to establish his own personal library – at any rate a small one ...

"The desire to own my own library at some stage burgeoned shortly after I graduated", is how Marc Bedow explains the start of his passion for collecting books. "If you take a closer look at the subject of libraries and books, you soon realise how multi-faceted this topic is." Starting with humankind's earliest works of literature, such as the Bible, via old Chinese lores through to the Middle Ages, via the Baroque and Classicism through to Modernism, he has devoted himself to a range of very different epochs.

Of course whilst at school he read works by the classic authors - Goethe, Schiller and Lessing. Nowadays he again comes into contact with these authors, although from a different perspective. He has been interested in reading since he was a child, these days "aesthetically appealing" books in particular are close to his heart. "Not only can the content of a book be attractive, but so too can its cover. A combination of the two is particularly appealing", Marc Bedow explains, who in career terms is clearly a numbers person. Yet his hobby has absolutely nothing to do with terms like returns on investment, liquidity or budgets. He is especially interested in books dating from the second half of the 19th century to the middle of the 20th century. His passion for aesthetically appealing books started about 15 years ago. Only certain books qualify for his collection, which if everything goes to plan will someday become a small library. Usually these are limited editions of between twenty and a hundred printed copies. The first books in his library were given to him as presents by his parents. One of them is a semi-leather-bound edition of the Brockhaus encyclopaedia dating from the 1930s and an edition of Goethe's works in a red semi-leather-bound cover. Both the external appearance and the content are what interest him: the design of the cover, the typography, the paper and fine workmanship details play an important role. If these criteria match, things could start to get interesting for Mr. Bedow. "I regard these books as genuine works of art", Marc adds enthusiastically.

The indexes of various works of publishers' secondary literature contain information about the copies that a publisher has published. The head of department keeps coming across editions of interest, which he then attempts to search for. Of the various methods of acquiring these works, antiquarian booksellers are the most frequently used method. You usually only find books in poor condition at book auctions and on the Internet. Once when Mr. Bedow was interested in acquiring a book by Hugo von Hoffmannsthal, he came across an antiquarian bookseller in Xanten on the Lower Rhine. He is particularly proud of his latest acquisition, having patiently waited over ten years for it. It is a special

170 years of book evolution, from 1760 to 1930.

Hermann Hesse edition, a one of a kind. The handmade cover makes the book especially deluxe. "Simple but very elegant", says Marc Bedow concisely. Our collector is particularly taken by the Gothic-based Art Nouveau style of Westphalian artist Melchior Lechter (1886-1934). The artist took 15 years to design a ten-volume edition of the works of Shakespeare. Melchior Lechter created a dedicated design for each individual volume. The pigskin cover and perfect execution of the design to match the content makes this book a work of art in collectors' eyes. Marc Bedow owns a really well-preserved copy, in almost mint condition, of which he is especially proud.

Marc now travels regularly to Xanten to talk to people, who share his hobby. The antiquarian bookseller has particularly attractive and valuable books dating from the 16th to the 20th century for sale – which is right up his street. "Most people are no longer able to recognise the beauty of a book, since hardly anyone buys these editions anymore. Paperbacks are definitely not my cup of tea", says Marc. However he is not apprehensive about what the future holds. What's modern is not automatically bad – he regards e-books, for example, as a good thing. They enable people to peruse the content of a book before deciding whether it's worth buying a deluxe edition. An e-book does not take up any space and does not have to be disposed of." However he still does not have an e-book-reader, but wants to get hold of one as quickly as possible. Marc Bedow describes himself as bibliophile, in Greek that means "a love of books". In general the term denotes collectors, who privately own rare, historic or simply aesthetically appealing, valuable books.

During the past few years Marc has resold more books than he has actually bought. "I now tend to focus on what I particularly like", he explains. Less than 100 books in his collection are really close to his heart. His library at home contains both his classic gems and valuable comics, plus everyday literature about science fiction or really normal topics. "The most important thing about reading is and remains your own specific topic preferences. I only read what appeals to me", Marc Bedow stresses. ■

Melchior Lechter's Shakespeare in pigskin binding with blind emboss

Melchior Lechter's Shakespeare: interior design and page trim

Craftmanship: hand stung capital ribbons

“When it's About Numbers …”

As Management Accounting Team Leader at EschmannStahl, Marc Bedow deals with planning, steering, and controlling processes. The team has coordination responsibilities for a portion of the corporate management function.

ESSENTIALS: Mr. Bedow, you are the Management Accounting Team Leader at EschmannStahl. What responsibilities do you and your team have?
The Management Accounting Team is involved in all the company’s business processes. Where figures are involved we are the central point of contact for Sales, Field Sales, Production, Purchasing, the QA department and IT. We not only look after EschmannStahl, but also the Eschmann Textures and voestalpine Edelstahl Wärmebehandlungs GmbH. Our main task is to support Management.

We organise planning processes, assist with interdepartmental coordination and with the auditing of business results by providing regular reports. We assist with the production of monthly reports and quarterly reports to group headquarters. Put in simple terms, we sort the daily flood of figures from all the departments in such a way as to provide each head of department with meaningful sets of figures.

Furthermore I also provide advice to EschmannStahl’s affiliates, e.g. the Eifeler Group. The production of special analyses for the holding company, for the executive directors and for various heads of department is also our responsibility.

ESSENTIALS: If money is due to be invested in, say, a large item of machinery, how are you as the Management Accounting team involved in the process?
If the purchase of a machine is pending, the Management Accounting team is tasked with producing an investment appraisal, based on group guidelines.

The most important information about this machine and the product(s) manufactured on it is collated in collaboration with Sales and Production and assessed, backed up by figures. The investment appraisal is designed to answer the question of whether it makes sense for EschmannStahl to acquire the machine or not. It is not always easy to answer this question just on the basis of figures.

Markus Krepschik, our Managing Director, applies to the business owner to get approval for more major investments. An extensive and detailed presentation is required to get such approval. Here too the Management Accounting team plays a proactive role.

Once the investment has been approved, Axel Maerevoet, our Head of Production, can procure the machine in consultation with Purchasing. Following delivery and trialling the machine is incorporated into

the Production loop. At this point the actual work starts in the various departments. Sales are responsible for obtaining customer orders, whilst Production is responsible for manufacturing the product. The assumptions (figures) included in the investment appraisal, as agreed in preliminary discussions with Sales and Production, now need to be reviewed. The IT systems need to be updated to enable the figures assumed in the investment appraisal to be recalculated, ideally without too much extra input. After a certain period, the same investment appraisal is not produced on the basis of assumptions but based on actual as-is numbers. It is only at this point that you can determine whether acquiring the machine really made sense or not. Results are then discussed with the various departments.

ESSENTIALS: In your opinion what attributes does a person need to have in order to work in Management Accounting?

A range of attributes are required. First of all you need a basic knowledge of mathematics. You have to like dealing with figures. Commitment and analytical skills are also required. Usually a business management qualification is a prerequisite. Ideally you need to have focused on a range of different subjects as an undergraduate. Back then I took courses in production and plant management, internal and external logistics and business management. At any rate you need to have cross-discipline know-how.

ESSENTIALS: You have been with EschmannStahl for ten years, to what extent do you get involved with the company's product portfolio and the associated technology?

Unfortunately we don't get to see EschmannStahl's products in actual use. We catch a final glimpse at Textures, when a particular finish is applied to the moulds. We usually see the blanks and components that leave our 6-sided machining facility.

As far as machinery is concerned we get a better insight. When we travel to Wehnrath, to talk with the Head of Production on-site about an investment appraisal, we of course get to see the machinery. The experts then explain all the technical details and what functions the machines have. That is always very interesting.

ESSENTIALS: Mr. Bedow, thank you very much for the interview! ■

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