HERKULESNews

2025

Form Follows Function

Perfect Machine Design with Precision-fit Construction for Maximum User Friendliness

Elevating Engineering Excellence

Interview with Dr. Birk Brockmann, the new CIO

Industry Reports

Customized Solutions for the Steel, Foil and Logistics Industries

Form Follows Function – Perfect Machine Design

Precision-fit Construction for Maximum User Friendliness

A perfectly balanced combination of form and function achieves its true strength when aesthetics and usability influence each other equally, thus achieving optimal results for the user.

The new HerkulesGroup machine design combines precisely these aspects: Outstanding functionality, performance, and work safety of the machines paired with a new, functional design that is striking in both form and aesthetics.

1 The control panel on the outside of the machine can be swiveled inwards (approx. 180°) and is height-adjustable (ergonomic design)

Below the panel: Cabinet for additional storage space

2 Manual and automatic opening of sliding doors

3 Optionally equipped with tinted windows in both doors

4 Optional: Illuminated Herkules logo

5 Light in the upper area of the sliding door indicates the machining status of the workpiece inside the machine

Special solution: status light can also be installed in a different location

6 For EDT machines – EMC protection in the complete housing

The clarity of the product architecture reflects the precision and high quality of the roll grinders, EDT machines and heavy-duty machine tools – fully in line with the newly created corporate identity „Elevating Engineering Excellence “.

In this interview, Dr. Thorsten Mehlhorn, group-wide President & CSO, and Selina Eggers, Team Leader of the Mechanical Engineering Department at Maschinenfabrik Herkules, explain what makes the design exceptional and what the most important aspects are.

Dr. Mehlhorn, how important is machine design anyway? Isn‘t functionality what matters most?

An expressive design is measured by the fact that it creates recognition value and at the same time shapes the customer‘s perception. It conveys a message by being well thought out and precise down to the last detail and thus also paves the way for an optimized product. The design and our company-specific visual elements set us apart from the competition and thereby attracts the attention of existing and potential future customers.

What exactly were the project-specific challenges?

We live in a world in which we receive tons of information every day through a wide variety of channels. The industry-specific approach must therefore be to stand out and distinguish ourselves from the rest of the

> We define ourselves by our aim to combine tradition and innovation. We identify ourselves with our design and have no doubt that the customer sees it the same way.
>
> Dr. Thorsten Mehlhorn
> Group-wide President & CSO of the HerkulesGroup

crowd, from the competition. A significant design is noticed immediately. Establishing a strong brand and building customer loyalty relies heavily on visual components. Consistency is the core topic and indispensable in today‘s fast-paced world, because the customer must be able to recognize and relate our product portfolio unequivocally. Sophisticated design not only attracts attention but also influences the “product experience” of those who perceive it. And this is where it is up to us to leave as little room for speculation as possible and to convey a crystal-clear message.

Selina Eggers never lost sight of the technical benefits for the customer during the development process. “First of all, the new design is based on a modular principle, which enables both standardized and special solutions tailored precisely to our customers‘ requirements,“ she explains.

“The advantage of standardization is that different designs can be realized quickly and at the same time offering maximum flexibility in the implementation of special demands.“

In addition to the visual re-design of some elements and changes such as the ergonomically swivel-mounted control panel or the tinted windows on both sides of the automatic sliding doors, there are also numerous highlights that are not immediately apparent. “This includes the cooling air supply in the partition walls. We are talking about internal and external ventilation slots that effectively cool the hydraulic units integrated in the side wall of the housing, the sliding shaft cooling system and the terminal boxes,“ Selina Eggers further explains. “In addition, air can be fed into the interior of the housing.“

> Our new design enables us to offer our customers both standardized and special solutions that are perfectly tailored to their requirements.
>
> Selina Eggers
> Team Leader of the Mechanical Engineering Department at Maschinenfabrik Herkules

The grinding dust is filtered and exhausted from the interior via an extraction system. Besides, up to five lighting sources, depending on the size of the housing, can be installed in the interior to ensure precise and safe machining of the workpieces.
As part of the implementation of an initial housing for a German customer, collecting trays were embedded in the housing floor panels. “This ensures the complete collection of all dripping water and overspray that occurs during the grinding process despite all precautions such as the grinding water channel and the channels at the bed.”

For Unrivaled End Product Quality

Herkules Grinding Machines for Steel and Battery Foil Production

An excellent roll grinding machine is characterized by the corresponding efficiency and quality of the rolling process. Herkules machines secure a perfect condition of the roll, which not only reduces production costs, but also ensures the consistently high quality of the manufactured steel and foil products.

Maschinenfabrik Herkules is your ideal partner for first-class roll surfaces in the metal industry. For more than 120 years, we have been supplying innovative solutions for the highest standards for the manufacturing of battery foil, aluminum, steel and copper – because we set standards in quality and precision.

Foil Manufacturers in Asia Deliberately Opt for Herkules

Herkules roll grinders ensure the required perfection in geometry and surface quality of the roll that is needed to produce a first-class, high-quality end product. In addition to the design of the machines, the unique control and measuring technology for the tightest tolerances with precisely defined, homogeneously ground surface roughnesses is also key here.

Sunho New Materials Technology Co. Ltd. in China has therefore decided to purchase a WS 450 L x 4500 CNC Monolith™ for grinding rolls with a maximum diameter of 430 mm, which is used for the production of battery foil. The machine is essential in the production process, as it must ensure an ultra-homogeneous, smooth and uniform surface roughness to minimize defects and improve the adhesion of the conductive slurry. This improves structural integrity – A requirement that, with our machine, does not pose a challenge right from the start. This makes it a key machine in the production of high-performance lithium-ion batteries.

“Shenlong Baoding New Material Co. Ltd. already purchased two Monolith™-machines from Herkules in 2018. However, as the grinder has a direct influence on the end product, they decided to invest in Herkules technology again,” explains the responsible Senior Sales Manager Ralf Klews. Another customer, Shyam Metalics and Energy Limited (SMEL), a leading metal and steel producer and manufacturer of ultra-thin aluminum foil based in Kolkata, has purchased a WS 450 KL x 5000 Monolith™ roll grinder for the same reason.

Quality and Consistency Undoubtedly Pay Off

Follow-up Order for Herkules in Kazakhstan

One of our long-standing customers has once again decided to place its trust in the reliability and expertise of Herkules when modernizing its machinery: Within the scope of the project, a total of eight machines – four for the cold rolling mill and four for the hot rolling mill – are completely replaced by state-of-the-art Herkules roll grinders equipped with cutting-edge roll inspection and measuring systems.

“We are delighted about this follow-up order, which came about after the purchase of a Herkules texturing machine type PTM 500 in 2022. Our customer now wants to work with us to modernize its roll grinding shop,” explains Andreas Bongardt, Sales Director for Eastern Europe and the CIS.

The combination of Eddy Current and Ultrasonic enables reliable localization of open cracks on the roll surface and changes in the roll structure. “Thanks to our in-house developed measuring systems, corrections can be made on the fly, which drastically reduces grinding times. Accuracies are significantly increased and at the same time wear on grinding wheels and roll material is significantly minimized. This increases the service life of the rolls in operation and significantly reduces operating costs,” Andreas Bongardt continues.

Another advantage of the upgrade at our customer’s facility: The modification of the grinding process of all work rolls and back-up rolls in chocks is now possible. Thanks to this upgrade, bearing damage can be prevented and rolls can be returned to operation more quickly. “Bearing damage is mainly caused by the removal and reattachment of chocks. The smallest inaccuracies during de-chocking lead to damage of the rolls or bearing surfaces and even to premature rejects. This will no longer be an issue for our customer in future,” concludes Andreas Bongardt.

Technology Upgrade in a Class of its Own

One of our Canadian customers, who is already using our machines to grind back-up and work rolls for their hot rolling mill, has decided to modernize their machines up to the latest technological standard and has ordered an upgrade of the machine control unit as well as further electronic upgrades. “This upgrade involves a WS 600 x 6000 CNC Monolith™ combination machine and a WS 600 x 5000 CNC Monolith™ work roll grinding machine, which are part of the same roll shop,” explains Bob Klingensmith, one of our sales team employees from Herkules North America Corp. “To ensure that all machining steps within the roll shop run smoothly, our Modular Roll Shop System, MRS for short, is being retrofitted and the Eddy Current and Ultrasonic measuring systems are being added.”

High-performance roll grinding machines are essential for grinding the back-up rolls in the hot rolling mill to ensure a precise and high-quality end result. “The customer is still convinced of the extremely high performance and reliability of our machines, which is why modernizing the machines instead of purchasing new ones is an obvious choice,” Bob Klingensmith continues. “Our technology solutions in particular, such as the KP 10 machine control system, are characterized by a high level of user-friendliness, which can be learned quickly and easily without extensive training. This is extremely important for our customers, as both new and existing employees need to be trained quickly.”

The MRS also includes a number of advantages that enable our customer to work faster and more efficiently. “Many tools, programs and different data sources are often used in a roll shop, which frequently generate massive sources of error. Many people have to sort through different workflows and data volumes so that the work processes and their documentation run smoothly,” continues Bob Klingensmith. “We developed the MRS to combine and output these time-consuming and diverse tasks in one tool. From the lowest level of automation to the complete automation of the entire roll shop – with the Herkules MRS, all processes in the roll shop can be controlled and recorded within one system.”

Following the modernization of the machines and the technological update, a remote service will be available, with Herkules specialists on hand at all times to answer questions and deal with any occurring problems. “In addition to our powerful, durable and reliable machines, it is above all our service that the customer has continued to appreciate for many years,” concludes Bob Klingensmith. “One of our many strengths that our customers around the world rely on.“

Smart Machines for Challenging Requirements

Herkules Technology Impresses Japanese Customer

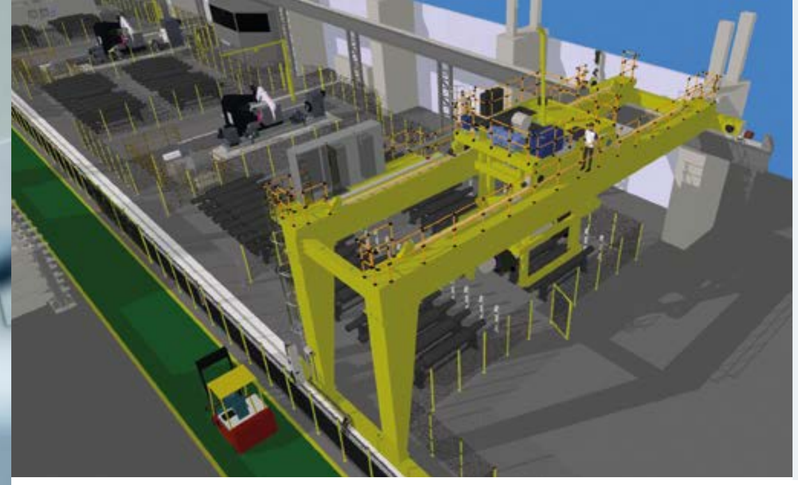
As a supplier of industrial machinery for customers in Japan, Daiichi Jitsugyo Co. Ltd., has purchased two Herkules machines for machining thin Sendzimir work and intermediate rolls (IMR rolls) for a Japanese end customer, JFE Steel Corporation West Japan Works in Kurashiki, for its new electric steel rolling mill.
The WS 450L x 2,000 CNC Monolith™-machines are perfectly equipped for machining extremely thin rolls. “With Sendzimir rolls, there is always a risk that the pressure of the grinding wheel will cause deflection and deviations during the grinding process,” explains Denis Albayrak, the responsible Senior Sales Engineer. “Thanks to the automatic single-point steady rest, roll deflection is effectively prevented.“

The high-precision C-frame measuring device including C-probe enables a measuring accuracy of up to 2 µm and, thanks to its compact and stable design with swivel arm, precise measurement of both very small and very large roll diameters.
“In addition to the fast processing and evaluation of the measured values by our in-house grinding machine control system KP 10, the patented Monolith™ design is of course an absolute competitive advantage for JFE,” continues Denis Albayrak.

“The customer saves the costs for the foundation, which would have to be very elaborately designed due to the earthquake risk and would thus also be very expensive.

Our experience with Monolith™ grinders in earthquake zones, such as Japan or Turkey, has shown that the machines were ready for use again in a very short time without any damage.“

Another challenge was the roll machining time. “The requirements that JFE set for the grinding time were only possible in conjunction with our machine configurations. This was the only way for our customer to achieve exactly the result they needed in the shortest possible time,” explains Denis Albayrak. “A pair of work rolls and a pair of intermediate rolls were sent to Germany to extensively test the requirements in our in-house grinding shop. The results absolutely convinced the customer and definitely achieved the highly set standards.“
But it is not just the technology that impresses. The impressive value chain within the group – from the planning of the machines to the delivery of the finished product to the customer – and the effective, professional, and cross-location collaboration left a lasting impression on our customer. “In this enormously challenging project in particular, all departments involved work hand in hand across all locations and I can only thank all my colleagues,” concludes Denis Albayrak. “Without this great cooperation, a project like this could not be implemented.“



Largest Order for the HerkulesGroup in Turkey

Along with Erdemir, the Habaş Group has been one of the largest steel producers in the country since 1987. The customer opted for a WaldrichSiegen ProfiGrind roll grinder for its hot rolling mill back in 2018. For the new cold rolling mill in Ismir, the customer is equipping its roll shop with a total of three Herkules roll grinders and a ProfiTex 60 S EDT machine from WaldrichSiegen. A full range of roll shop equipment completes the order from one single source.

The Herkules Roll Shop Management System, MRS for short, manages the roll grinders within the roll shop. It provides detailed analyses and handles central workflows in relation to the structured planning, control and monitoring of work processes, such as de-chocking and the subsequent work steps, as well as the decision about which machine should be used for grinding and with which program.

In future, the entire roll shop and the two semi-gantry cranes will be controlled fully automatically via the MRS.
For minimal stock removal with equally high-precision surface accuracy, the grinders are also equipped with the high-precision C-frame measuring device, so that the required tolerances of 0.002 µm/m are achieved with ease.

But it is not just the software that impresses across the board: the WS 600 combination roll grinder and the two WS 450 KL work roll grinders feature hydrostatic lubrication and the patented Monolith™ machine bed technology.

“The innovative sandwich design guarantees homogeneous roll surfaces. It dampens vibrations, is thermally stable and does not require a foundation. This is an absolute advantage for our customers, especially in regions of the world at high risk of earthquakes, as the machines are quickly ready to be put back into operation,” explains Andreas Bongardt, Sales Director for Eastern Europe and the CIS.

The EDT machine type ProfiTex 60 S from WaldrichSiegen, which is also integrated into the roll shop, is another key machine in the customer's cold rolling mill. “A large proportion of the flat material produced is manufactured with textured rolls and is supplied to various industries,” says Andreas Bongardt. “The quality requirements, for example in the automotive industry, are extremely high, which is why a flawless roll surface is essential. With the EDT machine from WaldrichSiegen, our customer Habaş definitely gains a competitive advantage.“

HerkulesGroup Roll Grinding and Texturing Technology

JSW Steel Vijayanagar placed the order with WaldrichSiegen for the fully automatic roll shop for the new hot rolling mill with three machines type ProfiGrind 2000 and two machines type ProfiGrind 7500

A Japanese customer has ordered a fully automatic roll shop with a total of six ProfiGrind roll grinders for the expansion of its steel mill, thus awarding WaldrichSiegen one of the largest and most important steel mill projects in Japan in recent years

AM/NS India is equipping one of India's largest and most modern fully automated roll shops with a total of three roll grinders type WS 450

The Nucor Corporation is equipping two complete roll shops with state-of-the-art control and monitoring technology and a total of six roll grinders from Herkules

Maschinenfabrik Herkules is supplying the SMS group with seven state-of-the-art roll grinding machines for the roll shop of Europe's first carbon-neutral steel mill

Once again, Angang Steel Co. Ltd., one of the largest steel producers in China, has decided to purchase a WaldrichSiegen machine – the customer is once again expanding its machine park with a ProfiTex 60 and can now call the 17th machine its own

Tosyali has been trusting on the quality and reliability of WaldrichSiegen since 2015 and operates an automatic roll shop, including an EDT machine

Modernization as an Investment in the Future

Long-Standing Customer Modernizes and Expands Production Sites in the US

America's largest steel manufacturer and recycler is expanding with numerous steelworks throughout the USA and relies on machining quality from Herkules.
For its hot and cold rolling mill, the customer therefore decided to invest in its WS 600 x 5500 and completely modernizes the machine. "Our specialists at the Herkules production site in Ford City are not only working on a complete mechanical overhaul, but also on equipping the existing machine with the latest measuring and testing technology as well as our in-house KP 10 machine control system," explains Sales Representative Tim Hiller.

"The enormous forces and temperatures which affect the roll during cold and hot rolling can cause considerable damage. It is therefore essential that the quality of the roll is checked and thus guaranteed at all times," says Tim Hiller. "The machine will therefore be upgraded with our Eddy Current and Ultrasonic inspection systems and a new C-Frame measuring system to quickly localize all defects on and directly under the roll surface as well as inside the roll."
In addition, long training periods for the new control system are no longer necessary, as the machine operators are already familiar with our technology. "The intuitive user interface of our KP 10 control system is easy to understand, touch-based and user-friendly structured, so no time-consuming training is necessary," Tim Hiller explains. Thanks to the latest Herkules technology, the machine will reliably grind work rolls and back-up rolls with or without chocks.

"With this investment in the modernization of the machine, our customer will be able to further increase its competitiveness and achieve a significant performance advantage in terms of roll output and machining precision," Tim Hiller continues.

South Carolina Prioritizes Modernization and Expansion Through New Monolith™ Machine

In South Carolina, our customer is not only modernizing, but also expanding its production capacities with Herkules machines. A Herkules WS 600 x 6500 CNC Monolith™ roll grinding machine is being utilized in another hot rolling mill specifically to produce steel sheets. "The machine will extremely increase the capacities in the roll shop," explains Senior Sales Vice President Michael Chociej. "The key advantage here lies in the patented Monolith™ design, which not only dampens vibrations thus ensuring homogeneous surfaces, but above all eliminates the need for time-consuming and cost-intensive foundation work. This means that the machine can be optimally integrated into the existing machine park to machine work rolls with and without chocks as well as back-up rolls without chocks."

The machine is also equipped with the latest HerkulesGroup control and measuring technology ensuring the perfect surface quality of the rolls. "The C-Frame measures the roll surface during the grinding process," explains Tobias Wurm, Senior Sales and Project Manager responsible for the project on the German side. "This means that measurement results can be evaluated "on the fly" during the grinding process allowing immediate corrective actions. Thanks to the intuitive user interface, the KP 10 enables error-free handling and provides an entirely transparent workflow for optimum machine performance."

In addition to adding the new WS 600 to the roll shop, the customer is also having two other Herkules roll grinding machines type WS 600 x 6000 modernized at its plant in Huger. "These two existing machines have proven themselves over many years without having to be mechanically retrofitted until 2026," explains Michael Chociej.

"The fact that they are now undergoing upgrades after 20 plus years of continuous use clearly reflects the high quality and longevity of the Herkules machines and the in-house manufactured machine components, which hardly any competitor on the market can offer."

Efficient Roll Profiling

NNF Notch Milling Machine

Technical Data

Roll Diameter	max. 500 mm
Groove Size	5.5 mm bis 80 mm
Roll Length	max. 2,500 mm
Roll Weight	up to 2,000 kg

Notch Milling with Maximum Precision

- Excellent damping properties and outstanding rigidity
- Powerful milling spindle for guaranteed strong performance and short machining times
- High efficiency thanks to reduced set-up times
- Optional equipment: Logo milling unit

A Double Success in the Egyptian Market

Herkules Completes Two Orders in Just One Week

Suez Steel Company, an Egyptian high-strength steel manufacturing company, is committed to the highest quality and is purchasing a high-performance Herkules notch milling machine, type NNF. "Due to the outstanding reputation that we already enjoy in the Egyptian market, the customer did not hesitate for long and placed the order with us," says a delighted Senior Sales and Project Manager Tobias Wurm. "The machine performance played a decisive role for our customer – in the end, Herkules was able to convince across the board!"

The NNF machines are characterized by excellent damping properties and rigidity – features that guarantee almost vibration-free machining.

"The outstanding quality of the numerous machine components manufactured in-house significantly increases the service life of the machine," says Tobias Wurm.

The notch milling machine is being built at our site in Meuselwitz and will be equipped, among other features, with the highest quality measuring technology and an additional logo milling unit, which will ensure that Suez Steel's quality products are recognizable at first glance in the future.

Modernization Order at Ezz Steel

Almost at the same time, we were able to secure a modernization order from our long-standing customer Ezz Steel, a well-known manufacturer of long and flat steel products.

"It is an absolute success story to now retrofit the existing machines, which have been performing at the highest level and to the complete satisfaction of our customer for many years, with a new KP 10 grinding machine control and also to completely overhaul the electrical and mechanical components," explains Tobias Wurm. "After the modernization, the machines will be state of the art and will continue to impress for many years to come with extremely short machining times and low service costs."

However, our customers are not only impressed by the extraordinary quality of our machines, which do not lose any of their performance and reliability even after many years of use, but also by the excellent and trusting business relationship that our experts maintain at all times. "We advise and support our customers in all matters," emphasizes Tobias Wurm. "The experience gained by Herkules over decades in the design and manufacture of machine tools also comes into its own in the modernization process. Time and again, customers find that it is the best decision to have their existing machines updated to the latest state of the art by us," explains Tobias Wurm. "Thanks to our modernization specialist from Austria, SBA mechatronics, we are not only the ideal partner in the new machine market, but also when it comes to the electrical and mechanical overhaul of our own and third-party machines."

Expert Interview with the Chief Innovation Officer about the Future of Mechanical Engineering

Elevating Engineering Excellence

The combination of innovation and tradition has characterized our business activities for more than 120 years. At the end of 2024, the HerkulesGroup confirmed this with the launch of a fresh, extraordinary website that, on the one hand, highlights the high demands placed on the group's innovation efforts while still clearly showing what the corporate culture has always been about.

With Dr. Birk Brockmann, we have gained a new Chief Innovation Officer (CIO) for our own ranks, who – together with a strong team – will develop ideas and visions, processes and technologies for the entire group of companies, thereby demanding and promoting creative and strategic solutions.

Profile

Dr. Birk Brockmann, 40 years old

Marital status Married,
Father of two children

Hobbies Horse breeding, golf

- Mechanical engineering studies and doctorate at RWTH Aachen University (machine tool laboratory)
- Joined Herkules as head of the mechanical engineering offices for Maschinenfabrik Herkules in Siegen and Meuselwitz (until 2020)
- Head of Engineering at Profilator for mechanics, electrics, software, technical documentation
- Chief Technology Officer at a manufacturing company for bolting technology for the areas of mechanics, electronics, software, documentation, product management, system engineering and quality

Dr. Brockmann, what exactly is the concept behind the term "Chief Innovation Officer" and what responsibilities have you taken on with it?

The CIO bundles all engineering capacities of the HerkulesGroup and thus creates the framework for a modern innovation culture based on cross-location collaboration, the use of synergies and system consistency. A central task of the CIO is therefore to form a team from the existing technical experts, which brings together the unique expertise of the group, combines the shared knowledge and thereby develops market-relevant concepts in order to be able to develop new products more sustainably. At the same time, the problems of our customers must always be the focus of the engineering teams. What challenges do they face and for what exactly do they need solutions? The question that summarizes all of this and that we must always ask ourselves is: How can we support our customers in the long term with our products and enrich their business processes? Once we have understood the status quo and our customers' objectives, we can deploy our resources efficiently and sustainably. Close cooperation between our specialist departments and our customers is therefore essential.

As such, you are basically faced with three tasks: You bring together the teams from the various companies, bundle and channel the resulting expert knowledge and think ahead – with regard to customer problems and the associated solutions – so that we are always one step ahead of the market trend with our approaches?

Exactly. A key part of my role is the constant review and optimization of our innovation strategy: What does innovation mean for us in the current and future market environment and how do we systematically drive it forward? One answer can be found in our new guiding principle "Elevating Engineering Excellence", which perfectly describes our chosen approach. For us as a group of companies, team spirit is the key to success. Every day, we work hand in hand to deliver top technical performance and to maintain and expand our position as market leader. We are solution finders for our customers and – in line with their requirements – we implement innovative ideas, anticipate and optimize the latest technologies as part of long-term, successful business relationships.

What motivated you to accept the position at the HerkulesGroup?

Looking at my CV and my career, there is a clear common thread: I am a machine tool engineer from the ground up. The HerkulesGroup product portfolio is unique, we are literally talking about the supreme discipline of machine tool engineering – there is no comparable competitor that combines precision and quality on this scale as successfully as we do. Positioning myself in such an exciting key role and being able to help shape the development of these incredible products is "like winning the jackpot in the lottery" for me.

In addition, I already know most of my colleagues and superiors and have always appreciated working in this very dynamic, open and future-oriented team.

Talking about the key role in the group: Where will your priorities lie?

As already mentioned, it all starts with a team of key players who pool existing expert knowledge in a "competence center" and thus systematically address issues in a transparent, cross-disciplinary, and cross-location manner.
At the same time, the OEM-specific innovation processes must be scrutinized and evaluated once again. Following the "best practice principle", we then develop a formulated path for the entire group of companies, which combines standardized project phases and milestones with agile project management and thus enabling a transparent evaluation of the qualitative output in the innovation process. This process always begins with the benefit for the customer and only ends with the successful start-up of a product.

With regard to your new position, what specific challenges do you see in the area of technological development in the short term and how do you plan to tackle them?

One of the biggest challenges is the rapid development of artificial intelligence. A recent study by the VDMA and the Fraunhofer Institute shows how inexorably this trend will influence and change German mechanical engineering in the long term. This not only affects products, but also the way companies work. Recurring office tasks will be automated step by step and there will be an opportunity for companies to focus more on their actual core competences. The extent to which this opportunity is used remains to be seen, but there is no getting around this increasingly important topic.
As a tangible example, I take the topic of "Technical Documentation of a Machine Tool". Among other things, this documentation provides the user with answers to all questions relating to the operation and maintenance of a machine tool. Today, extensive manuals are often still supplied to the customer, sometimes in paper form. In the event of an error message on the machine, for example, these books have to be "pored over" in order to understand and rectify the fault. I am convinced that very soon we will no longer have to do this and will be able to "consult" the virtual assistant, or even the machine itself will be able to solve the problem. This will free up time for the customer to concentrate on their added value.

How will you ensure that the technological solutions optimally meet the needs and requirements of our customers?

Of course, we need to be in close contact with our customers. The sales department is the key point here when it comes to identifying needs, problems, uncertainties and wishes, but can usually only approach the customer with our existing product range. A necessary step would be to involve the technical department in customer contact and in finding solutions at an early stage. If we are already aware of our customers' future requirements, we can work together on customized solutions – because innovation is always a team effort.

You already know the HerkulesGroup from your previous time in the company. In your opinion, what has changed since then?

Since 2020, the relocation of WaldrichSiegen to Kaan-Marienborn has been a milestone that has expanded production capacities and greatly facilitated and accelerated the exchange of knowledge thanks to the close proximity. It is up to us to recognize interfaces and to learn from each other across different disciplines. Be it design, application, software development or even the use of AI: We need to see ourselves as a group with an incredible diversity of skills and expertise, capitalize on this and move forward together. This is a logical and necessary step in line with our common goal and mission "Elevating Engineering Excellence" – As a group of companies, we manufacture large machine tools in a class of their own.

For Complex Production Processes

High-Performance Turning Lathes for Rail Manufacturing

The production of rail profiles is a complex process that requires both precise manufacturing and consideration of material properties in order to produce rails that are economical, safe and durable.

In order to achieve the desired dimensions and surface finishes of the rail profiles, lathes that have been developed for such heavy-duty turning requirements are indispensable.

Quality as a Decisive Competitive Factor

voestalpine Rail Technology GmbH is a well-known manufacturer of railroad tracks worldwide. To ensure an optimum end result, our customer decided to purchase a Herkules P 800 Power x 7000 CNC heavy-duty lathe for highly demanding turning operations, which has been specially developed for heavy-duty rough machining with extremely high cutting forces.

With this key machine, rolls with lengths of 7,000 mm in centers, diameters of 1,600 mm and a total weight of 40 t can be machined. Accuracies of 6 µm concentricity are maintained at the faceplate. “Consistently high precision combined with high cutting forces are the main requirements of the machine,” explains Andreas Bongardt, Sales Director for Eastern Europe and the CIS. “Turning the rail profile is a geometrically complex challenge due to the depth of the caliber and the steep side walls – no problem for us, of course.“
Another advantage of the Power-series is that it is wear-free. “The customer has been working with our heavy-duty lathes for many years.

The high-quality design of all parts and the outstanding technical features of the machine have ensured that our customer has been using our machines in multi-shift operation for 60 years.

One-piece cast models for headstock, support rest, tailstock, and table as well as a wide bed with four inductively hardened guideways are the prerequisites for meeting these requirements.“
The machine also scores points for its high process and operational reliability. “It impresses with its high functional reliability and error-free service, ensuring smooth operation at all times while always achieving the required high-precision results and requirements,” explains Andreas Bongardt. “The Power-series is therefore the ideal choice for profile rolling mills and manufacturers who have to meet high demands efficiently, productively and wear-free, whether they are producing rolls or re-profiling large rolls.“

Two High-Performance Power Lathes for Suez Steel

It is therefore no wonder that the heavy-duty Power-series has brought in two more orders for Suez Steel in Egypt this year. “Thanks to Herkules‘ regular and trustful contact with the customer and the excellent experience that Suez Steel has already had with our newly installed notch milling machine, the customer remains loyal to our quality and has opted once more for two Herkules P 800 Power x 7000 CNC lathes,” explains Tobias Wurm, Sales and Project Manager responsible for our customer in Egypt.

At both Suez Steel and voestalpine, Maschinen-fabrik Herkules came out on top in a direct comparison with other manufacturers. “The machines from other suppliers were unable to meet the customer‘s technical requirements and expectations and were therefore replaced by our machines,” says Tobias Wurm. “Thanks to our technological lead in the field of roll turning and the continuous further development of our machines in this heavy-duty segment of roll machining, we guarantee the market leadership with our machines in terms of overall performance, economy, efficiency, and service life.“

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Imprint **HERKULES**News 2025
Publisher: Maschinenfabrik Herkules GmbH & Co. KG · Eisenhüttenstr. 21 · 57074 Siegen · Germany · T: +49 271 6906-0 · info@herkules-machinetools.com
Editor: Maximilian Thoma (responsible according to the German press law) · Picture credits: S.4 © Anoo