

Battery Foil

Quality products of the highest standard

Sustainable Steel Production

Pioneering developments for the entire industry

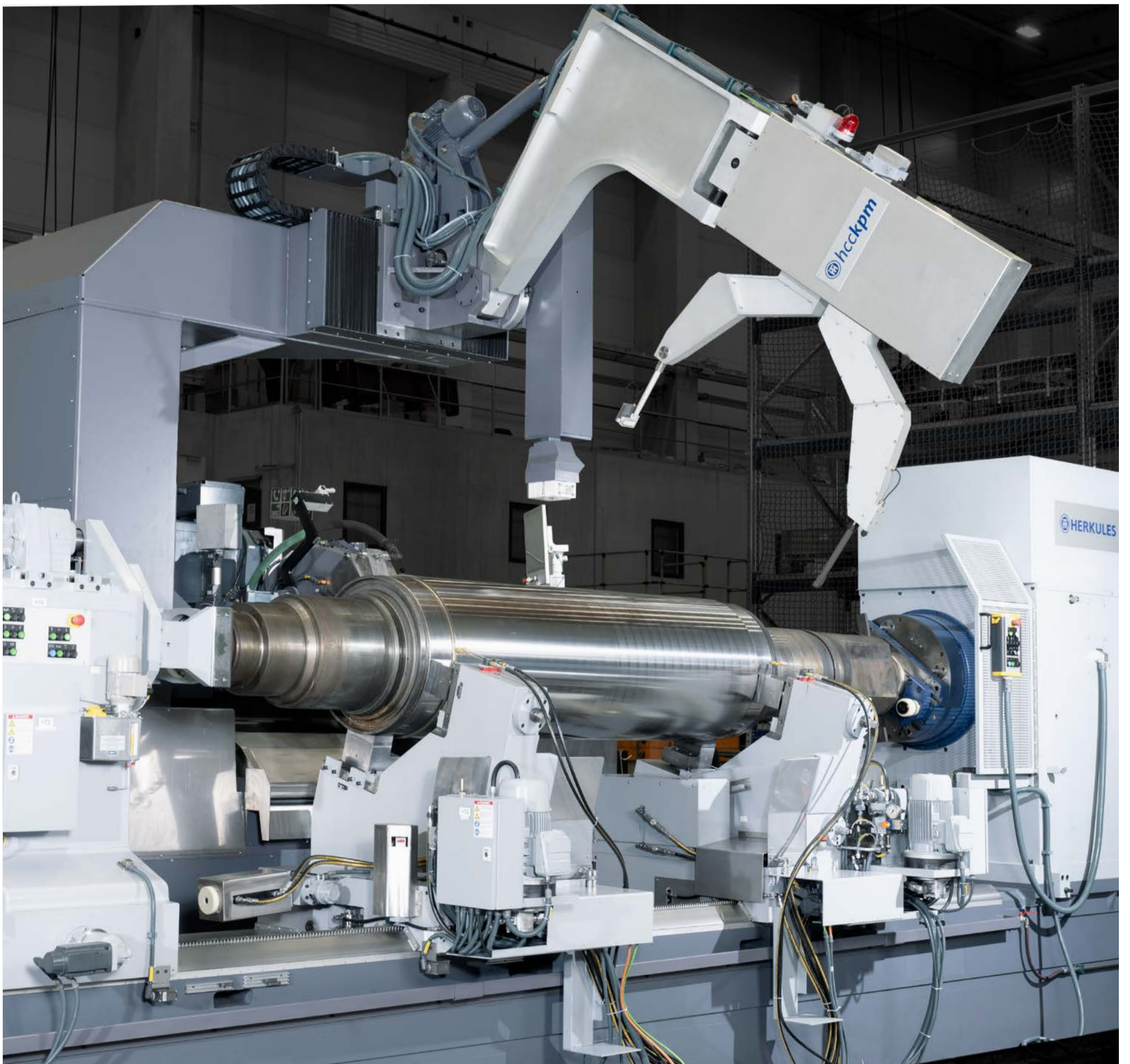
Interview in Meuselwitz

A journey back in time with Christian Dannenberg

New COO USA

Welcome, Michael Lütkenhaus!

Efficient, Sustainable and Ready for the Future



Flawless Surface Qualities for a Perfect End Product

With many countries increasingly investing in electromobility, batteries are quickly becoming a central component of future mobility resulting in a boom in the production of lithium-ion and other batteries.



Today batteries usually consist of two metal foils which are connected to each other by an electrolyte. The electrolyte is applied to the foil by calendaring as a slurry or directly as a powder in a dry coating process.

Efficient machines and flawless rolls are crucial for a faultless production process. In the production of coated carrier foils in particular, the surfaces must be highly accurate, free of defects, showing a homogenous roughness.

Flawless surfaces are crucial when rolling battery foil – because even the smallest scratches or damage to the carrier foil can lead to serious defects in the finished cell, which ultimately result in expensive rejects. Herkules machines score points here primarily with their measuring and inspection technology for immediate detection of defects on the roll surface as well as inside the roll, but also thanks to their stable and robust design. Ralf Klews, Senior Sales Manager at Herkules, who has been working in the industry for many years, explains how important a good machine is for a flawless end product.



The excellent damping properties of Herkules machines guarantee the best grinding results for customers with the highest demands. With the HerkulesGroup measuring and inspection systems, excellent quality of the rolls is ensured

What do our customers expect from the end product?

Klews: In the field of battery foil production, the roll surfaces have to meet a variety of requirements, depending on various factors, e.g. the type of battery foil, the coating process, and the desired properties of the foil. In order to guarantee a bond between the carrier foil and the electrode material without delamination, a very homogenous surface is required across the entire width of the foil. This applies to the topography, i.e. the roughness, the structure of the surface and the elasticity, as well as the temperature stability. In addition, the roll surface must also withstand different chemical influences, such as a certain corrosion resistance with respect to the coating processes that are used.

A flawless surface means a better product: What measuring and inspection technologies can be used to ensure the homogeneity of the surface?

Klews: Herkules' sensitive measuring and control technology keeps the current, i.e. the pressure of the grinding wheel against the roll, constant within an extremely small tolerance of +/-0.3% during the finishing process – this results in an extremely homogenous surface. The Roughness Scattered Light Detection System (RSLD) uses scattered light to check the roughness of the entire roll barrel. Our Roll Surface Inspection System (RSIS), which uses a reflected

laser beam to reliably detect possible surface defects and determines the surface quality of the roll using a threshold analysis, is also essential for perfect homogeneity. Defects are thus efficiently detected in advance and unnecessary roll changes are reduced to a minimum thus increasing the productivity of the rolling mill.

What are the challenges involved in coating battery foils?

Klews: The pre-coated foil should be as thin as possible in order to achieve higher capacities in the battery. At the same time, it must be ensured that the foils are sufficiently insulated from each other – otherwise voltage peaks will occur, which ultimately lead to the risk of fire. Once again, this underlines the importance of a homogenous surface roughness.

How do our machines achieve these required quality standards?

Klews: Thanks to our measuring and control technology, our machines are specifically designed to meet the high demands of battery foil production. For example, our Indian customer Hindalco Industries Limited, the metal flagship of the Aditya Birla Group, decided to purchase a WS 450 L x 4500 CNC Monolith™ for its production site in Mumbai because this machine is able to produce aluminum flat rolled products, foils, and aluminum packaging flawlessly.

Our machine enables our customer Hindalco to define and achieve the next level of ultra-fine and absolutely flawless battery foil production.

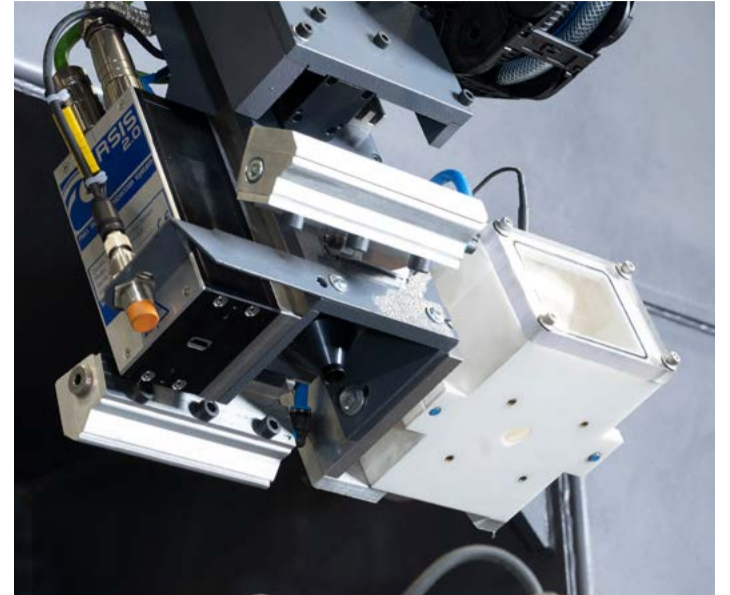
Herkules control and measuring technology is the first choice when producing battery foil. With hundreds of machines in aluminum foil and more than 30 machines in battery foil, Herkules is a top-notch choice for this demanding application. The result: Maximum efficiency and highly precise ground rolls with extremely user-friendly and intuitive operation via the touch panel.

Personal opinion: How will the industry develop and what challenges will arise in the future?

Klews: In my opinion, the course has been set for a battery-electric future. One example: The first battery-electric

container ship has just been launched in China – 42 standard containers are fitted with batteries – these are exchanged for freshly charged (battery) containers in the port. If this catches on, immense capacities will have to be created over the next few decades. At the other end of the value chain, namely the recycling of batteries, things are also happening. Primobius, a company belonging to SMS group, advertises that it extracts 96% of the valuable raw materials for reuse. In cooperation with Mercedes-Benz, a pilot plant is currently being built to set new global standards in this area.

So it remains exciting and I am grateful that Herkules – and I personally – can make our contribution to this transformation.



For the automatic detection of roll surface defects such as chatter and infeed marks, commas, clouds and similar defects, offers the laser measuring device Roll Surface Inspection System (RSIS). The Roughness Scattered Light Detection System (RSLD) displays the surface roughness on the entire roll barrel

**Ralf Klews (48 years old),
Senior Sales Manager of the
Maschinenfabrik Herkules**

Ralf Klews has been working for the companies within the HerkulesGroup for more than 22 years and is an absolute specialist when it comes to roll grinding machines for battery foil.

What fascinates him most about our technology?

“After 20 years at Herkules, it is always fascinating to see how we not only manage to meet the technological requirements of our customers with our machines, but are often one step ahead. The working environment is still family-oriented and the team spirit among colleagues is incomparable.”



Modern coating processes require extremely smooth film surfaces for optimum coating results. Herkules measuring and testing technology ensures smooth, homogeneous roughness across the entire roll

Cutting-Edge Technology for Sustainable Steel Production

Steel is an indispensable raw material for building and construction projects – whether in buildings, for rail infrastructure or mechanical engineering, or in heavy plate mills, cold or hot rolling mills. The demand for this valuable raw material has tripled in the last 50 years.

In order to be prepared for the challenges of the future, to remain competitive and to meet the increasing requirements and enormous demand for this valuable raw material, manufacturers of high-quality steel products in a wide range of industrial sectors have been relying on the quality and reliability of Herkules roll grinders for decades for the production of flawless end products.



Largest Order for Herkules in India

Steel Production to the Highest Standard – Herkules Delivers Roll Shop to AM/NS

AM/NS India is a joint venture between the world's leading steel companies ArcelorMittal and Nippon Steel and produces flat steel that is used in a wide range of industries. In order to optimally cover and process the extensive product range in both, the hot rolling mill and the cold rolling mill, AM/NS India has opted for the machine technology and know-how of our experts and is equipping one of the largest and most modern fully automated Roll Shops in India with the highly accurate and precise machine, measuring and testing technology from Herkules.

"This order is the largest we have ever been awarded in India," explains the responsible Senior Sales Manager Ralf Klews. "From the machines to the measuring and inspection technology to the tools, the control unit for the Roll Shop using our Roll Shop Management System, and the Roll Shop equipment, we are supplying everything from one single source."

Both Roll Shops will consist of several components: The cold rolling mill will include a total of three roll grinders, two machines of the type WS 450 × 5000 CNC Monolith™ and one WS 450 W × 5000 CNC Monolith™, for machining work, intermediate and back-up rolls. In the hot rolling mill, five fully equipped WS 600 CNC grinders will be put into operation.

"Our Indian facility Deutsche Maschinen India (DMI) in Kolkata will also produce a total of 3 + 2 dechokers for the rolls and one chock tilter each," explains Ralf Klews.

Both Roll Shops are also equipped with two automatic loaders for loading and unloading the roll grinders. In the cold rolling mill, space-saving storage is achieved with a high-bay warehouse from AMOVA.

The machines and equipment will be produced and maintained by DMI in Kolkata.



After a detailed analysis, the experts at Herkules develop a concept that is perfectly tailored to the requirements and processing capacities of our customers

State-of-the-Art Roll Shops for Ultra-Modern Safety Requirements

Nucor Corporation is one of America's largest manufacturers of steel and steel products with production sites in the United States, Canada and Mexico. For its future steel mill in Apple Grove, West Virginia, one of the most technologically advanced rolling mills in the USA, our customer attaches great importance to safety as well as quality and has therefore purchased two complete Roll Shops with state-of-the-art control and monitoring technology from Herkules for both the hot rolling mill and the cold rolling mill.

In order to meet these high requirements, the two WS 450 Monolith™ roll grinders, which in future will grind the work rolls in the cold rolling mill, as well as the WS 600 Monolith™ roll grinder for the work rolls of the hot rolling mill and the three WS 600 Monolith™ combination grinders will impress with their absolutely robust design, the specially developed grinding machine controls and the measuring technology. "Safety is guaranteed by the complete automation of the two Roll Shops," explains Tobias Wurm, sales representative at Herkules. "The automatic loaders and the Modular Roll Shop Management System with automation from reduce manual intervention by machine operators during the loading and grinding cycles to a minimum and thus significantly prevent incorrect settings on the machine and achieve highest safety standards."

With the Roll Shop Management System, all components in the Roll Shop are networked with each other for data acquisition and are connected to form a single information network. Based on the collected data, the Roll Shop Management System automatically creates an overview of all rolls and work processes.

Furthermore, the six grinding machines for both Roll Shops are equipped with our in-house developed, highly accurate and fully integrated measuring technology and grinding machine control. This combination guarantees first-class grinding results and homogenous roll surfaces "on the fly": "Our high-precision C-frame measuring device measures the roll geometry at 360 measuring points per roll rotation with two measuring probes in action, thus providing an exact picture of the current grinding condition, regardless of external geometric disturbances. The measurement data obtained is processed within a millisecond and minimizes both roll abrasion and grinding wheel wear during the machining process stock removal," Tobias Wurm explains.

All grinding machines are also available with a patented Monolith™ machine bed. The machine bed is torsionally rigid and thermostable. Its sandwich construction consists of an iron-cast, ribbed upper section, fiber-reinforced high-performance concrete and a steel floor panel with special damping elements. As there is no metal connection between the upper and lower section, vibrations are effectively damped. The integration of the workpiece bed and grinding bed into a joint machine bed guarantees permanently precise alignment even after many years of operation. "The machine bed can be installed without the need for a complex foundation, meaning that the machine can also be relocated quickly and easily at a later date," explains Tobias Wurm. "What is particularly noteworthy is that Nucor can grind the back-up rolls in chocks, which eliminates the need for frequent, time-consuming removal of the chocks. Consequently, we are talking about the largest foundation-free grinding machines in the world. The safety aspect also plays a role here, as the removal of the chocks constitutes a safety hazard."



During their four-day stay here in Siegen, our guests from Nucor West Virginia had the opportunity not only to explore our site, but also to gain an insight into the impressive production processes of our long-standing partner Gontermann-Peipers GmbH.

The cooperation between Gontermann-Peipers GmbH, Nucor and the HerkulesGroup offers all parties involved an ideal opportunity to be at the cutting edge of technology, drive innovation and increase quality within the industry. The aim of this cooperation is the constant exchange of valuable know-how and continuous development in the manufacturing industry.

Outstanding Performance and Extraordinary Design Convince Voestalpine

Voestalpine Stahl GmbH is one of the world's leading steel producers. With its high-quality products, the company supplies a wide range of industries, such as the automotive and household appliance industries as well as the aviation, oil, and gas industries. In order to reliably and precisely achieve the required quality of the end products, our customer has purchased another machine from the HerkulesGroup for the plant in Linz: A WS 450 × 4500 CNC Monolith™ roll grinder.

Equipped with high-precision HerkulesGroup measuring and control technology, the required roll surface accuracies are achieved with pinpoint precision. Thanks to the intuitive machine control with multi-touch panel in combination with the high-precision C-frame Caliper for roll measuring, corrections are made "on the fly" during the grinding process.

The design of the grinder impresses with its high mechanical rigidity and damping properties. The heavily ribbed design guarantees the rigidity of the machines. The combination of hydrodynamically and hydrostatically guided ways ensures maximum precision and a long service life. The symmetrical load distribution makes the machines absolutely thermostable. The Monolith™ design also guarantees absolute homogeneity of the roll surface thanks to excellent damping properties for virtually vibration-free operation.



Thanks to the outstanding damping properties and high rigidity of the machine as well as numerous technical highlights, such as the swiveling B-axis and our excellent control and measuring technology, the customer Voestalpine achieves the best grinding results



Grinding Carriage with Swiveling Grinding Axis – The Patented B-Axis

The machine is also equipped with a movable B-Axis for complex curve grinding. "The B-Axis of the grinding machine adjusts the position of the grinding wheel to the curve of the roll barrel at a swivel angle of 0.5 degrees," explains the responsible sales manager, Tobias Wurm. "This means that in the roll barrel area, the grinding wheel is always guided exactly perpendicular to the roll surface, which ensures continuous full-surface contact between the roll surface and the grinding wheel. Grinding with the edge and therefore undesirable feed marks are eliminated. In addition, the increased stock removal resulting from the full-surface contact between the wheel and roll significantly reduces the grinding time."

But it was not just the performance and special design of the machine that set Herkules apart from its market competitors: "The smooth implementation and good cooperation throughout the entire project phase, as well as the historically good relationships that we have built up with the customer here on site, were key factors in the decision," explains Tobias Wurm.

The assembly and initial start-up of the machine is already complete. The Monolith™ machine is grinding to the customer's utmost satisfaction and has been accepted for performance testing, so that final machine acceptance can be expected shortly.

Highest Machine Accuracies for Flawless Cold Strip!

With its newly purchased roll grinding machine type WS 450×4250 CNC Monolith™, a Japanese manufacturer of cold-rolled and coated steel sheets and spirals as well as electrogalvanized electrical steel sheets reliably achieves first-class surfaces and geometries when machining rolls in its cold rolling mill.

The highly automated, foundation-free machine is specially tailored to our customer's needs and is equipped with an extensive range of accessories.

The machine features an additional B-Axis to generate complex CVC-profiles and curve shapes of the work rolls while taking the narrowest production tolerances and highest surface accuracies into account. The advantages: Feed marks are avoided, the stock removal of the grinding wheel is optimized and grinding times are significantly reduced.



Reproducible roll geometries and flawless surfaces are essential in cold rolling mills for high-end products and a consistently high production quality



Reliable Measurement Data within Milliseconds

Thanks to the fully integrated, intuitive machine control system, in which the entire roll handling, machining and inspection processes are integrated, the highest machining quality is ensured at all times.

Our C-frame calipers are high-precision devices for measuring rolls. Thanks to the compact and robust design with swivel arms, the calipers can be used for both very small and very large roll diameters.

Whether the roller diameter is 30 mm or 2,300 mm – with the C-frame measuring technology, every roll type is measured with high precision and reliability.

Together with the machine controls, the C-frame Caliper allows corrections to be made “on the fly” during the grinding process. The result: Maximum efficiency and high-precision ground rolls.

Herkules offers the Roll Surface Inspection System (RSIS) for the automatic detection of surface defects on the roll. In the post-process, the RSIS captures the reflection of a laser beam on the roll surface and evaluates it. Machining defects such as chatter and feed marks, commas, clouds, and similar defects are thus reliably detected.

Acceptance of the machine took place at the beginning of December at the Siegen facility.



The Roll Surface Inspection System (RSIS) for the automatic detection of surface defects on the roll

Eddy Current measuring reliably locates open cracks and changes in the roll texture as well as manufacturing and fatigue defects inside the roll

Sustainability and Process Optimization for Greater Efficiency and Future Viability

Thanks to the exceptional design of our machines and the state-of-the-art technologies and digitization concepts that we provide, from the individual machine to the fully automated Roll Shop, process steps are carried out efficiently and our customers can conserve resources in their production processes.



Maximum Geometric Precision for Spanish Cold Rolling Mill

For a greenfield project with a Roll Shop in the new cold rolling mill near León (located directly on the famous Way of St. James), Coated Solutions, a Spanish producer of color-coated or pre-painted steel strip, decided to purchase a foundation-free WS 450 S × 4500 CNC Monolith™ roll grinder for machining back-up and work rolls with a grinding diameter of up to 1,200 mm.

To ensure the geometric precision of the roll, the machine is equipped with our reliable inspection technology for crack detection using Eddy Current and Ultrasonic measurement with Creeping Wave. The Eddy Current sensor detects cracks on the roll surface, while the Ultrasonic sensor also detects defects both close to the roll surface and deep inside the roll core.

In addition, the grinding machine is equipped with an integrated measuring device for measuring the roll geometry and alignment. The measuring probe thus provides an exact image of the current grinding condition on the workpiece. The resulting measurement data in real time can then be used for compensation grinding and can be subsequently processed by our Roll Shop Management System.

For the inspection, mounting, and removal of the roll chocks, two pullers and a chock tilter are also included in the Herkules scope of delivery, enabling the Roll Shop to be operated safely and efficiently.

The assembly is carried out, monitored and approved by our experts on site.

Maximum Geometric Accuracy and Surface Quality

Aperam Inox América do Sul S.A, Brazil, the only stainless-steel rolling mill in South America and market leader for stainless flat steels in Latin America, has decided to purchase a WS 600 × 6500 CNC Monolith™ combination machine with C-frame measuring device including sideshift, Eddy Current and Ultrasonic crack detection. This powerful machine from Herkules makes it possible to efficiently grind work rolls with chocks and back-up rolls for the new hot rolling mill for stainless steel production.

The WS 600 Monolith™ is renowned for its sophisticated measuring technology, which always ensures precise grinding results and the detection of defects in the μm range. The innovative Eddy Current and Ultrasonic sensors detect damage on the surface and deep inside the roll core, guaranteeing a flawless end product. The easy-to-use user interface and real-time data recording ensure effortless operation.

The acquisition of this highly advanced machine will ensure that the company achieves the highest levels of geometric accuracy and surface quality with ease. "It is another step in the company's ongoing efforts to remain competitive and meet the growing demands of the industry," explains Christoph Druffner, the Herkules sales representative in charge of the project. "This state-of-the-art machine will streamline the manufacturing process, enabling faster production rates. It will also give the company a competitive edge by enabling it to deliver first-class products to its customers and thus improve its reputation in the market. With this forward-looking investment, the company will be able to seize new opportunities and increase its market share, ultimately driving its growth and success," Druffner added.



Fast machining, maximum geometric accuracy and the best surface qualities – with the WS 600 from Herkules, our customer Aperam has gained a decisive competitive advantage

Resource-Saving Production in Europe's First Green Steel Mill

For the Roll Shop of the first climate-neutral steel mill in Europe, SMS group is relying on the expertise of Maschinenfabrik Herkules, the specialist when it comes to Roll Shop Turnkey projects, and is having the associated Roll Shops equipped with the market leader's technically highly sophisticated machines. The highlight: The new steel mill will be the world's first one based on renewable hydrogen.

At Herkules, sustainability begins with the selection and planning of the machines, which is the basic prerequisite for our customers worldwide not only to manufacture unparalleled quality products, but also to ensure an energy- and resource-optimized production process. In order to meet these requirements and enable our customers to achieve their sustainability goals without restriction, Herkules has been relying on the software solutions developed in-house specifically for this purpose plus the associated measuring systems.

A total of seven roll grinding machines will be produced and commissioned for this prestigious project. Herkules is supplying a total of three WS 450 KL x 5500 CNC Monolith™ work roll grinding machines, one WS 1100 x 7000 CNC Monolith™ combi grinding machine and three WS 600 x 6500 CNC Monolith™ work roll grinding machines for the production of a broad product portfolio including high-strength steels used in the automotive industry.

All machines are set up foundation-free as Monolith™ and are equipped with the latest control and measuring technology (KP10 + C-Frame measuring gauge). This combination guarantees first-class grinding results and homogeneous roll surfaces "on the fly", which leads to enormous savings in terms of grinding time, stock removal and overall handling in addition to the outstanding quality of the end product.

Apart from that, the automatic loading device and the modular Roll Shop Management System from Herkules guarantee the highest possible degree of automation. Machines and systems have an influence on the assessment of sustainability – from energy consumption and the associated environmental effects to the greatest possible minimization of production wear.

The constantly growing complexity of machines and processes demands increasing automation of production. Networking between people, IT, machines and systems is essential to ensure that all production processes run smoothly, safely and as efficiently as possible.

"To optimize a grinding process in the best possible way, the target values and customer requirements relating to this process must be precisely defined," explains Harald Kraft, Chief Operating Officer of the Herkules Division Electronics. "We attach particular importance to sustainable business models and the responsible use of resources at all levels in order to continuously drive forward the development of our technologies. This enables us to fulfill the sustainability principles of the Blue Competence Initiative, of which we have been a partner since 2021."



1. Precise measurement results thanks to high-quality contact points and corrections "on the fly" during the grinding process – no problem thanks to the C-Frame Caliper

2. The most powerful, versatile and user-friendly machine control system in the world, the KP 10, sets new standards

A Journey Back in Time

Machine knowledge from Eastern and Western Germany have been combined to create incomparable technological concepts for decades. The best proof: Even after the end of the GDR and the merger of the companies VEB Maschinenfabrik John Schehr from Meuselwitz and Maschinenfabrik Herkules from Siegen, the technical achievements still form the basis for our long-lasting and unique mechanical engineering expertise even today.

More than 45 years ago, Mr. Dannenberg built and put into operation a machine in the former GDR that is still at the heart of Ilseburg Grobblech GmbH's operations today. It is used to grind back-up and work rolls, which are used to manufacture sheet metal and are indispensable for production.

Together with sales employee Denis Albayrak from Siegen, they are now working on a modernization project that will be managed and implemented across the two locations.



For more than 50 years, Christian Dannenberg worked as a design engineer in the mechanical engineering office at Maschinenfabrik Herkules in Meuselwitz and was responsible for the SAXW 2200 x 8000

Mr. Dannenberg, we are talking about the SAXW 2200 x 8000, which is currently being upgraded at Ilseburg Grobblech GmbH, which is now part of the Salzgitter Group. Where is it used and what is so special about it?

Dannenberg: Let's start with the name, which dates back to the GDR era. At that time, machine designations were still regulated by the so-called TGL (Technical Quality and Delivery Conditions), similar to DIN. In the case of the SAXW, the S stands for grinding, A for external, X for special machine and W for rolls. It is therefore a grinding machine for the external grinding of rolls. This is followed by the nominal diameter, 2,200 mm and finally the width between centers, i.e. 8,000 mm.

The Ilseburger Grobblech GmbH plant was constructed as a new building at that time, in order to stabilize the strategic production of large heavy plates for the GDR and the entire Eastern Bloc. Due to its size, the machine was completely new territory for our company at the time! High demands and innovations were required to achieve the goal. For example, we had to be able to pick up large back-up rolls with a weight of up to 130 tons from the roll stand. Many special measures were necessary for such an undertaking alone. The machine therefore had to be suitable for a wide range of applications with different diameters and roll masses.

Mr. Albayrak, what were the particular challenges you faced with this project?

Albayrak: A number of years ago, Ilseburger Grobblech GmbH requested a quotation in which the electrical conversion was specified quite vaguely. There is quite a big difference between the rough planning of the electrical conversion and the final planning in detail. I was and still am very happy that Stefan Schmidt, head of the mechanical engineering office (TBM) in Meuselwitz, as well as Christian Dannenberg and Stefan Philipp, head of the electronics engineering office in Meuselwitz (TBE), were on hand to help and advise me, as they really know the project very well in detail.

How important is close cooperation between locations and what are the advantages of working together across locations?

Albayrak: Every colleague in our group of companies, no matter where they are in the world, has an enormous amount of specialist knowledge. In sales in particular, it is a great advantage to incorporate this knowledge into our work. And this is only successful if you work closely with colleagues across locations and constantly exchange ideas. The level of vertical integration in the Herkules Group is higher than I have ever seen before. This is also confirmed by the feedback from our customers. In my opinion, the merger of Maschinenfabrik Herkules and VEB Maschinenfabrik John Schehr results in an absolute epicenter of expertise.

Mr. Dannenberg, which machine parts did you design back then?

Dannenberg: As a young engineer, one year after graduating, I was involved in the development and construction of the new hydrostatic guideways, the drive for the grinding carriage and various additional sub-assemblies.

My job was also to supervise assembly, which made me the link between the assembly team and the design department.

Which projects were undertaken after the merger of Herkules Meuselwitz and Herkules in Siegen?

Dannenberg: The newly created synergies have only helped us to progress. The Ilseburg machine had hydrostatic guideways both on the bed and on the cross guides – which was an absolute first for the entire European region. With this direct infeed, we were able – in conjunction with the corresponding backlash-free drive elements – to achieve individual infeed values of a tenth of a µm, which is an essential prerequisite for ensuring that the required geometries can be precisely grounded on the roll. The ideas we have introduced in conjunction with Western engineering technology have opened up numerous new possibilities.

And this remains an important aspect of our products, both then and now.

“Such machines are like old gold coins: they live forever.”

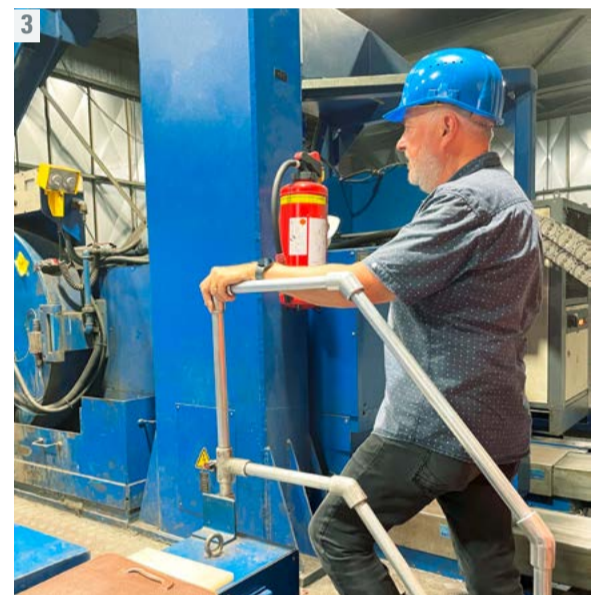
Christian Dannenberg



1. The SAXW 2200 × 8000 at the Ilsenburger Grobblech GmbH has been grinding back-up and work rolls reliably and to the highest quality for over 40 years

2. A historical newspaper photograph of Christian Dannenberg at the SAXW in the customer plant from 1981

3. After the successful modernization, Christian Dannenberg climbs onto the Ilsenburger Grobblech GmbH machine one last time – only this time in 2023



Do you know how many of the large SAXW machines are still in operation?

Dannenberg: There is another machine in China and a third one that was delivered to Sweden – these three large machines are still in operation. In general, some machines have been appearing on the machine market for years and are being used by new customers. Our colleagues in the USA at the Herkules facility in Ford City also regularly receive requests for spare parts and modernizations for those machines.



The SAXW 2200 × 8000 at Ilsenburg Grobblech GmbH

This speaks for the longevity and quality of the machines produced by Herkules, if they only need to be upgraded every now and then over such a long period of time, but their basic concept and basic design simply work.

Dannenberg: That’s right. In principle, the machine embodies the Herkules philosophy that together we pursue the goal of creating extremely durable products.

Our customers in Ilsenburg also attach great importance to ensuring that the machine is always kept in very good condition and always meets the latest technical requirements. That is why we are on site every year with a group of technicians and start-up engineers to retrofit the machine and bring it up to date.

Mr. Albayrak, what is the advantage of implementing modernization measures instead of buying new machines?

Albayrak: Our customers value extremely robust mechanical machines, and the SAXW 2200 is no exception. If you now have the opportunity to refurbish the machine to the current state-of-the-art with a manageable investment, this is an absolute advantage for our customers. Unlike with a new machine, the customer has no additional costs for the foundation and the conversion is also less time consuming than the delivery time for a new machine.

Have there been any new orders as a result of such modernizations?

Dannenberg: Yes, that has actually happened. There are many examples of this, including at a large roll foundry in Saxony. Originally there were about four or five large roll lathes and grinders from VEB Maschinenfabrik John Schehr, which later became Herkules Meuselwitz, and five additional Herkules lathes have since been added.

Herkules quality speaks for itself!

Mr. Albayrak, how does the SAXW differ from today’s Herkules machines?

Albayrak: Of course, today we are on a completely different level when it comes to energy efficiency, motor performance, sensor technology, control units and software and are definitely no longer comparable with a SAXW from 1980. Thanks to advanced calculation programs, a lot has also changed in terms of mechanical design and machines can now be built in a much “leaner” way.

Mr. Albayrak, one last question: What did you appreciate most about working with Mr. Dannenberg?

Albayrak: I am very grateful that I was able to get to know Christian and I really enjoyed working with him. It was definitely an enrichment for me both personally and professionally. A good friend once told me: “If you enjoy what you do, you never worked one day in your life”. The statement could probably have come from Christian as well.

Thank you for the interview!



Welcome, Michael Lütkenhaus!

We are pleased to announce, that Michael Lütkenhaus will take over the position as COO & President of the Herkules USA Corp. and + LLC. The 41-year-old father of two daughters grew up in Bergheim, Germany, has lived in Hamilton, Ontario, Canada, for the past five years, and has been managing our Herkules location in Ford City since December 01, 2023.

Mr. Lütkenhaus, please tell us about yourself and your career to date.

Lütkenhaus: I grew up in a village in the Cologne area. There, my grandfather's agricultural business awakened my enthusiasm for technology and large machines such as tractors.

After graduating from high school, I studied production engineering at RWTH Aachen University. After graduating, I took part in the ThyssenKrupp Steel Europe (TKSE) trainee program. There I was able to gain valuable experience and had the opportunity to work in various positions. Following my time in operations, I moved to TKSE's in-house Consulting department, where I took on the role of Executive Assistant and performed a variety of strategic tasks. My path then led me to the steel works Hüttenwerke Krupp Mannesmann.

My most recent professional stop was then in North America, where I was COO at Max Aicher North America in Hamilton, Ontario, in Canada. This position allowed me to work in an international environment and develop my leadership skills.

What made you move to North America?

Lütkenhaus: The move to North America was motivated on the one hand by family reasons and on the other hand I wanted to take on a new professional challenge. My wife was born and raised in Chicago, so half of our family has roots in the US.

Professionally, I was offered the opportunity to play a decisive role in the turnaround of a production company. Over the past five years, I was able to get the business, which had previously been struggling with multi-million losses, back on track and develop it into a profitable entity. A fascinating challenge that I have approached with great commitment and passion.

What is your motivation to take over the management of Herkules USA Corp.?

Lütkenhaus: In addition to the exciting products, I am especially impressed by the extraordinary dynamics and the positive atmosphere in the company. I am particularly attracted by the prospect of actively contributing to the future of a successful, family-run company.

The opportunity to ensure that Herkules remains successful and perhaps even becomes a little more successful appealed to me personally. It is a great responsibility that I take on with great motivation and dedication.

What are you looking forward to most in your new position?

Lütkenhaus: I am most looking forward to the new processes and ways of working. I'm also looking forward to getting to know my colleagues, employees and customers. Last but not least, the change of location plays a big role. Living in Ford City not only brings a new professional challenge, but also a new personal environment.

And what can the employees look forward to with you as the new COO?

Lütkenhaus: As the new COO at Herkules USA Corp., I want to offer employees a number of positive changes, such as a structured working environment where everyone knows what is expected of them, but also how the company's objectives can be achieved. Transparency and honesty are as essential to me as a positive attitude. I am also someone who actively tackles things instead of just talking. I will stand by my employees and am ready to face new challenges together with them.



**Michael Lütkenhaus (41 years old),
new COO & President of Herkules USA Corp.
and HCC/KPM LLC.**

What is your favorite leisure activity?

My favorite thing to do is spend time with my family. Otherwise, you can find me on the golf course or the running track. In addition, I am a passionate cook, but also very happy to dine out.

What do you miss most about Germany?

Friends and family

What do you appreciate most about your new home?

The positive attitude of North Americans and their great willingness to help.