

Detecting flaws before defects occur

## Better quality, more innovation

“By using the Roll Surface Inspection System RSIS, one of our long-term customers, a steel producer based in the Brazilian city of Ipatinga, reduced the rate of defective ground rolls from more than 50% to less than 2%”. This was the answer the Herkules experts gave at the Herkules grinding machine and roll shop seminar when asked about the references Herkules can show for the RSIS. During the presentation the participants had shown great interest in the Roll Surface Inspection System that was presented in China for the first time. The example the customer mentioned above showed in detail how a customer profits from using RSIS: Immediately after grinding the system detects and reports surface patterns and textures. President Jörg Naumann explains the advantages of RSIS: “With this component, the customer can improve the quality of the roll and the rolled product dramatically, and keep it up continuously”.

RSIS was one of the products presented to the participants of the Herkules grinding machine seminar in Lijiang/P.R China in July 2012. Eighty participants

seminar testified to the tremendous interest in the featured products.

The Herkules experts – the sales team as well as technical staff – introduced the following further developments: The new EtherCAT technology in the HCC/KPM 10 control allows significantly faster, simultaneous processing of signals and measured values. The Eddy Current system was optimized for the roll-specific parameterization of the measurement device. The durability of the sensor was greatly improved. A newly developed ultrasonic unit reliably detects defects in the whole roll (see page 2). All that shows: Herkules constantly further develops its products in order to meet the industries’ demands even better.

“Our main goal at the seminar was to present our innovative technology. But of course, we also wanted to deepen the relationship with our customers and get to know which further expectations they have regarding our grinding machines”, reports Christoph Thoma. A concept that will be repeated. The Cold Rolling Day that took place in Cologne and Moscow

## Topics:

### Reliable localization

Detecting flaws near the surface – preventing downtimes

### Golf outing 2012

A top-class event

### New technology for old machinery

Efficiency with tailor-made packages

### The best of Herkules

Roll grinder for Krasnokamsker Papierfabrik Goznak



New on the Chinese market: The Roll Surface Inspection System detects flaws on the roll surface before it comes to defects.

caught up on the further, technological developments of the heavy machine tool manufacturer.

“The participation in the seminar surpassed our expectations. We noticed that we aroused great interest in Herkules and in our technology”, says CEO Christoph Thoma. Countless questions during the

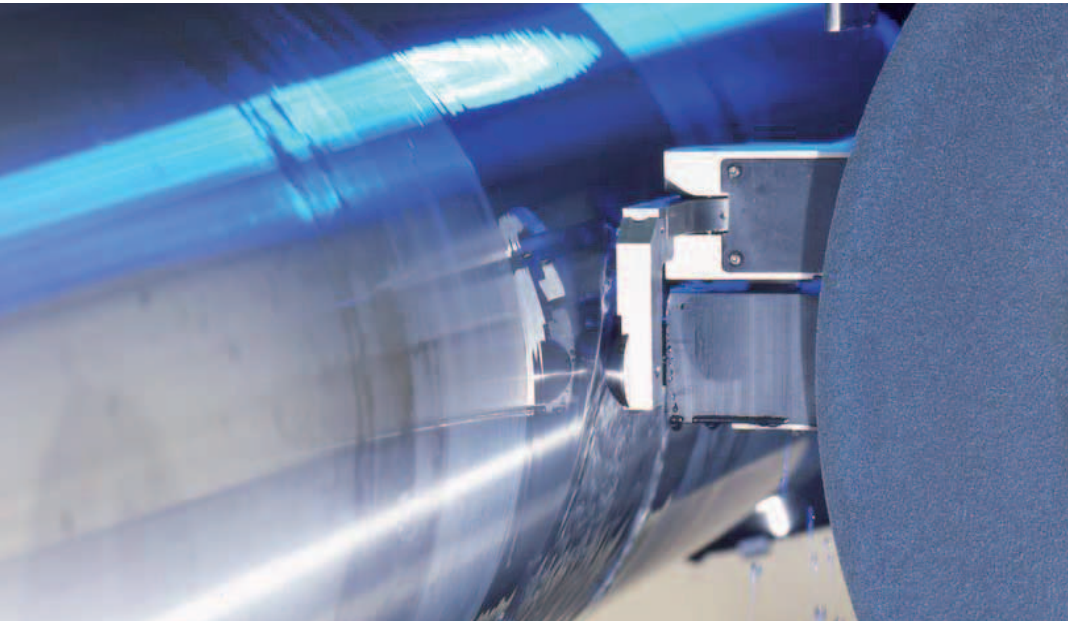
in recent years will be held in Düsseldorf and later on in Asia. A seminar in Siegen focusing on CBN grinding and a user report is also planned for 2013. Jörg Naumann: “Just like at the seminar in China, we will show the participants that Herkules simply offers more than their competitors”.

## Reliable localization of defects near the surface

In the worst case, cracks near the surface of the roll result in dangerous defects during the production and in long machine downtimes. Detecting these defects is thus an important demand of the industry. A

demand Herkules meets with the newly developed ultrasonic system US 0-XX. With five heads and angles of 0,70 and 90 degrees it sounds in the surface of the work piece. Thus, the unit enables the complete measurement of the work piece and

reliably detects cracks in the roll. Together with a customer, Herkules developed the ultrasonic system within three months and thoroughly tested it at the customer's site. Here, the manifold advantages of the unit were demonstrated in practice. Unlike other manufacturers, Herkules does without a special head with integrated sensors but uses single standard sensors instead. The advantages for the customer: They are flexibly and easily adaptable depending on operation and frequency and can be easily exchanged without high costs if service is required. By capturing each sensor individually with a multiplexer board with eight channels, their data can be evaluated separately. If limits are exceeded it will be shown by the intuitive-to-use display technology of the HCC/KPM 10 controls. Another unique characteristic at the market: The excellent coupling performance and the own water supply. The ultrasonic system provides very clean water that can be re-used as grinding water.



Reliable detection of cracks in the roll before defects occur: the Herkules ultrasonic system.

Reliable measuring results, flexible use, gapless intrusion of sound – with the US 0-XX Herkules proves once again that we develop technology that sets standards.

*Harald Kraft*

### HERKULES USA

## An event in a class of its own

In 1998, CEO Christoph Thoma, HUSA President Sam Kube and KPM President Albert Plekker had a vision: bring a group of North American customers together at a special event, allow for collaborative discussions of future opportunities, and of customers' current concerns, directly with top company management.

With the Open House in August 2012, this innovative vision to strengthen customer relationship came true for the 14th time. 90 customers from 30 companies – a new high – came to Ford City, Pennsylvania, to compete at the golf course and to catch up on the latest technological developments.

In small groups the customers looked behind the scenes at HUSA and rotated throughout the plant from station to station, to view various presentations. During the shop tour they were impressed with the precise machining of work pieces with Herkules, Waldrich-



High concentration on the green: chairman and CEO of the companies in the HerkulesGroup, Christoph Thoma, at the golf course.

Siegen and UnionChemnitz machines. A successful golf event at the HerkulesGroup's own golf course at Lenape Heights also provided opportunities for technical discussions.

Sports competitions, innovative technology, tech-

nical discussions: the Open House 2012 was the successful event the three initiators had imagined. It will be continued on August 9th, 2013.

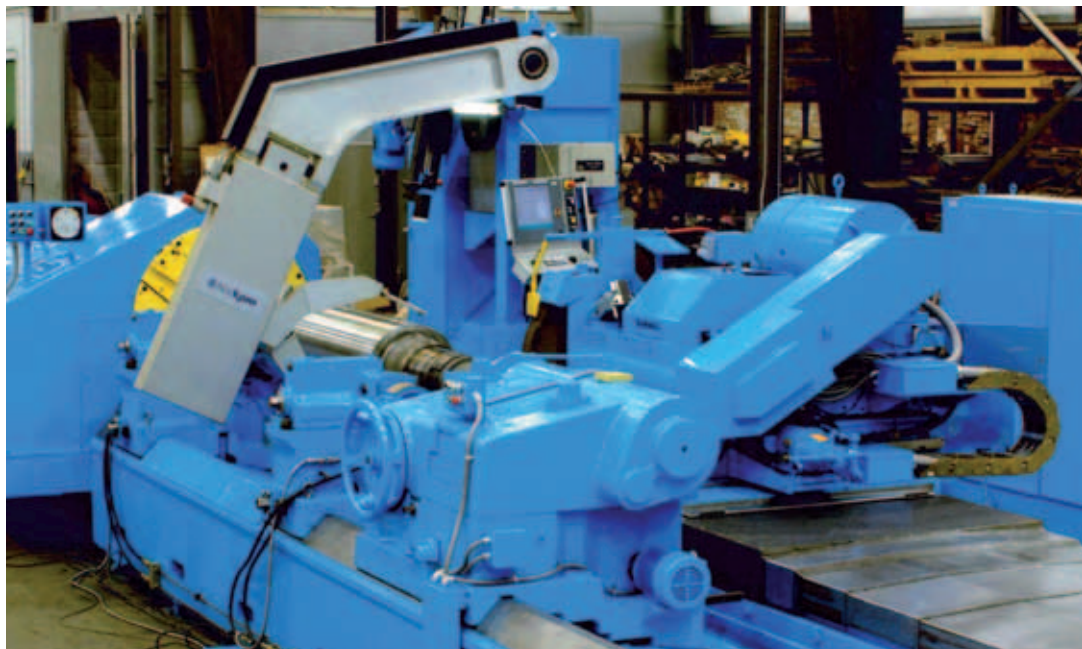
*Michael ChocieJr.*

## New technology for old machinery

Heavy machine tools that have been used in industrial companies around the clock for many years are subject to natural wear. They do not fulfil the productive demands on precision and reliability. Before these machines are replaced by new ones our experienced technicians and sales engineers check if a modernization by Herkules USA is an economic alternative.

Old machines with solid aggregates are revamped mechanically by our competitors and brought to the state it had when it was new. Herkules offers a convincing alternative. Along with a mechanical modernization the machine is equipped with new electric and electronical equipment. Thus, they are state-of-the-art machinery after the modernization.

From routine preventative maintenance to full machine rebuilds HUSA offers a tailor-made modernization package that includes re-machining of the mechanics, state-of-the-art HCC/KPM controls, measuring and inspection systems, and complete new electrical and drive systems. New components, such as



From old machinery to state-of-the-art technology – successful modernization of a Farrell roll grinder.

steady rests, tailstocks and carriage drives can also be designed, manufactured and integrated into existing machines. There are complete engineering, service/spare Parts, CNC machining, fabrication and assembly facilities in Ford City, Pennsylvania. Modernizations have been completed for all different makes of roll shop equipment, of course

including Herkules. This year, HUSA received numerous orders from well-known manufacturers such as Alcoa Inc. (Indiana and Iowa), NLMK Indiana, Altos Hornos de Mexico S.A.B. de C.V. (Mexico), Nucor Steel Decatur, LLC (Alabama) and Steel Dynamics Inc. (Indiana).

*Robert Curler*

## The best of Herkules for Goznak quality paper

Since 1993, Krasnokamsk Paper Factory of Goznak has been achieving supreme surface qualities of its rolls with a Herkules roll grinder. This quality is the absolute prerequisite for producing top-quality paper. For 20 years, the Russian company has been convinced of the reliability of Herkules.

When Goznak decided to invest in a new roll grinder they thus opted again for a Herkules machine. Within twelve months Herkules constructed, produced and assembled the paper roll grinder P30 WSB 400 x 6000 CNC Monolith™ at the customer's site. A self-manufactured banner at the official commissioning illustrated how much Goznak values the Herkules quality they have known for two decades. "The best of Herkules for Goznak quality paper" was written in large letters on the banner in the floor shop.

With the machine, Goznak will significantly increase the quality of the produced valuable

documents. The bed in Monolith™-design ensures unique stability and dampening characteristics by absorbing vibrations from the outside and inside. Rolls with a diameter of 1.450 mm and a length of

6.000 mm are ground precisely. The measurement device included in the scope of delivery also guarantees accurate grinding results combined with minimal machining time.

*Artur Frick*



Festive commissioning with a self-made banner: "The best of Herkules for Goznak quality paper".

## Merger: RSGetriebe belongs to the HerkulesGroup

For many years they have been closely connected with Herkules and WaldrichSiegen. Now they are part of the HerkulesGroup: the gear box manufacturer RSGetriebe, formerly known as RS Antriebs-technik. With passion and great know-how, the approximately 80 employees at RSGetriebe design and manufacture high-quality gear boxes for the heavy machine tools of the companies in the Herkules-Group. Thus, the gear box specialists strongly contributes to realising the objective of increasing the vertical range of manufacture and producing all important components within the group. With the take-over in April 2012, the companies increase the flexibility in the production and become more independent of external suppliers.

## One step ahead with Herkules

voestalpine Stahl AG, located in Linz/Austria, once again shows that their slogan „one step ahead“ is more than just words. They are the first steel manufacturer worldwide to machine the work and back-up rolls of the new plate mill plant in chocks. For this project, voestalpine found a reliable partner in Herkules. Herkules developed the specifically designed WS 1100 x 10000 CNC that precisely and productively grinds work pieces with a weight of up to 230 t and a diameter of 2,100 mm. Both the recent successful test of CBN grinding and this project show that Herkules and voestalpine break new ground and are “one step ahead”.

*Lars Billig*

## A new generation of success

Less than five years have passed since Mirko Hebig took over the Herkules Asia Pacific Office in Singapore from his father Harald Hebig. In this period he has been able to continue the previous successes. Just within the last six months, Herkules received orders from the Indonesian company P.T. Surabaya Steel Investama for a cold mill combination roll grinder, type WS 450 x 4500 CNC, as well as a fully equipped hot mill combination roll grinder type WS 600 x 6000 CNC from Southern HRC Sdn Bhd/ Malaysia. The company is well known for their long products and now relies on state-of-the-art technology when entering the flat product market.

*Jens Böhmer*

## Across all boundaries

The companies of the HerkulesGroup closely cooperate and support each other. That means each company, regardless of the location, offers the same excellent quality. One reason for that: the employees work together across all boundaries and share their great know-how. In spring 2012, six assemblers from Siegen/Germany joined the team at Herkules USA in Ford City, Pennsylvania. Three months later, four other assemblers from Herkules in Siegen worked there. During their time in Ford City, they shared their knowledge with their US American colleagues and helped to improve production timelines. A great experience, that both sides profited from.

*Jakob Scheiffarth*

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