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New rolling concept in the homestretch: A widening portfolio

With the trial operation of the new high-width 4-high reversing mill, the BILSTEIN GROUP is setting itself up for a successful future: The Hagen-Hohenlimburg location will become home to the one of the most cutting-edge pieces of machinery in the world's cold rolling industry. Investments in new plants along the entire process chain enabled the BILSTEIN GROUP to achieved a huge technological leap. The high level of automation will allow even tighter integration of value-added chains, not only for BILSTEIN, but for customers, too.

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Working together internationally: Exchange of knowledge across the Atlantic

Being well positioned internationally in the technological high-end market for cold-rolled strip. Attractive for our customers worldwide. This is what we work on together – without borders.

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B2Run 2019: "Keep on Running"

With over 200,000 participants annually from more than 9,500 companies, the B2Run is one of the largest company runs in Germany. The BILSTEIN GROUP also participated again.

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New rolling concept in the homestretch:

A widening portfolio

"A first in the European cold-rolled strip industry": that is how Marc T. Oehler describes BILSTEIN's new rolling concept. With the trial operation of the new 4-high reversing mill in September, the Hagen-Hohenlimburg location will become home to the one of the most cutting-edge pieces of machinery in the world. And it makes BILSTEIN's portfolio "wide" in more ways than one.

Right now, the BILSTEIN GROUP is in the homestretch to completing one of the most critical projects in its history at its Hagen-Hohenlimburg site: "With our new rolling concept, from September we will be operating the most modern reversing mill in the entire cold-rolled strip industry – the most modern mill stand, period," exclaims Marc T. Oehler. With its investment in the 4-high reversing mill, the BILSTEIN GROUP is setting itself up for a successful future. The stand will enable the production of coils with a width of up to 1,350 mm across the entire process chain, with no need to cut the primary material (wide strip). As a result, fewer individual coils will need annealing, rolling, temper rolling, re-annealing and transporting to shearing. "This represents a huge technological leap for the entire process chain," says Marc T. Oehler. "I like to call it a plant within a plant."

Connecting supply chains

For BILSTEIN, the new concept involves an extremely high level of automation, opening up great opportunities for digitalization. In the future, a huge variety of data will be available across the entire process chain. "That was one reason we said we didn't just want to simply modernize the old facilities. We want to take a big step forward from a strategic perspective and invest





in new equipment along the entire process chain. And that is definitely a first among medium-sized cold-rolled strip players," Marc T. Oehler explains excitedly. This will allow even tighter integration of supply chains in the future – for customers, too. The new concept will make the entire group more efficient and fit for the future.

Going to plan: the goal is in sight

The gradual expansion of fully automated batch annealing in 2012, 2015 and 2018 and the successful commissioning of the organic rankine cycle (ORC) system last year are two important pillars of the new concept (see page 4 of the 1/2019 edition of COIL).

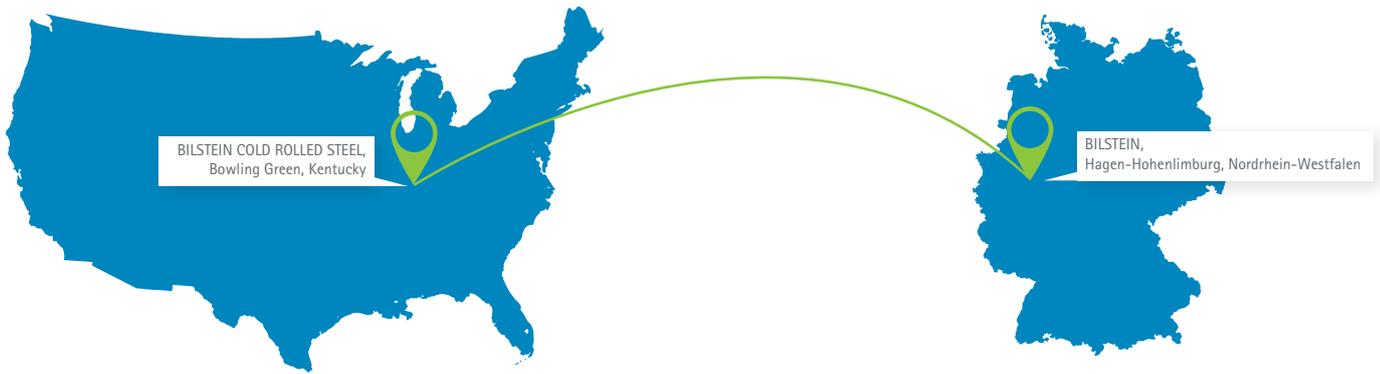
The BILSTEIN GROUP is also on schedule with other construction works. The reversing mill is currently being fully assembled according to planning and is set to start operation in a few weeks. To save valuable time in assembly and commissioning, the entire automated system was built and put through its paces in a test environment in advance. This meant that the new plant for rolling and finishing cold-rolled strip first had to be duplicated digitally. The 3D real-time plant simulation was then connected to the automation system. In this virtual production facility, workers were able to familiarize themselves with the functions and control of the new system. Machine operators were also able to practice and train using the original control consoles. All operation modes and processes were visualized to create the impression that they were already using the new system.

Due to the width of the strip, which ranges from 600 to 1,350 mm, the BILSTEIN GROUP has also invested in a new slitting line for processing high-strength steel of between 300 and 1,370 mm wide and with tensile strengths of up to 1,400 N/mm². The new line also has an extremely high level of automation: rotary shear replacement and blade attachment happen fully automatically, via robots; the same goes for coil feeding and tire removal. These and other features reduce time spent on auxiliary processes and boost the productivity of the entire system. At the moment, the individual units are being assembled; the complete line is set to be finished at the end of the summer.

Across the Atlantic: creating synergy

The fact that everything in Hagen-Hohenlimburg is running according to plan can also be attributed to the intense exchange of knowledge and experiences with BILSTEIN COLD ROLLED STEEL in the US, which has already installed a similar plant. "Thanks to close cooperation between our engineers as part of our training, we are both benefiting from each other's expertise and the resulting synergy this creates," says CTO Michael Ullrich, who is responsible for the rolling concept and is a frequent visitor to the plant in Bowling Green, Kentucky. ■





Working together internationally:

Exchange of knowledge across the Atlantic

An exchange of knowledge that covers 7,136 km and provides real added value for everyone involved: BILSTEIN in Germany and BILSTEIN COLD ROLLED STEEL in Bowling Green, Kentucky, USA, know how to exploit the synergies that working in an international group of companies brings about. Customers benefit from this exchange of know-how across borders.

The new wide rolling stand of the BILSTEIN GROUP at the Hagen-Hohenlimburg site will roll coils to a width of 1,350 mm in Germany from autumn onwards. At BILSTEIN COLD ROLLED STEEL in the US, a similar rolling mill was erected as early as 2017. The experiences made on the other side of the Atlantic also provide valuable insights on this side of the pond. During the period from March to June 2019, four groups of colleagues from rolling and shearing in Germany spent four weeks each at BILSTEIN COLD ROLLED STEEL in the US. The aim was for the German employees to learn about the wide rolling mills introduced in the US in 2017 and then take that knowledge back to Hagen. Early feedback suggests that the transition will not be too daunting a challenge. "The training sessions in Bowling Green are very helpful. In practice, we are learning lots about handling and processing wide coils," the colleagues reported on their return. This is how the BILSTEIN GROUP ensures that production in Hagen-Hohenlimburg can start directly and successfully this autumn.

Sharing good ideas

And it is not only the German team that benefited from the experience. BILSTEIN COLD ROLLED STEEL is always happy to receive ideas and suggestions, which colleagues from Hagen brought with them in abundance. Each training week comprised practical, hands-on work in the plant as well as joint meetings where staff discussed processes and exchanged ideas. For instance, the American colleagues were able to draw on the expertise available in Germany on slitting and rolling with reversing mills. And that is of course invaluable for our general performance.

New perspectives

The teams also learned from one another when it came to quality optimization. German colleagues shared their knowledge of surface imperfections with BILSTEIN COLD ROLLED STEEL employees, and the first team from Hagen even worked with their American counterparts to take concrete action to boost quality. Because when you're focused on your own processes and your own projects, it is always helpful to have input from someone on the outside with a different perspective – especially if that person is well trained and is familiar with our products and customers. And so the teams were learning from one another every day. This, of course, equally applies to the plant in Hagen-Hohenlimburg, where customers also benefit from the international know-how of the BILSTEIN GROUP. ■



Michael Ullrich,
CTO BILSTEIN GROUP

"I am delighted that our international exchange program is going so well and that our colleagues in Hagen are learning so much about manufacturing and handling wide coils. This will be very helpful to them during the commissioning and ramp-up phase of the new mill in Germany. The teams from BILSTEIN COLD ROLLED

STEEL and BILSTEIN also had some very productive discussions and helped each other optimize their processes and production. Altogether a successful exchange from which both plants will profit for a long time to come."



HUGO VOGELSANG at LIGNA:

A name synonymous with quality

At the international trade show LIGNA 2019 in Hanover, Germany in late May, HUGO VOGELSANG showcased its high-performance cold-rolled strip solutions for use in high-quality industrial saws and machinery, as well as its new solution for printing strip steel.

It is one of the most important dates on the industry's calendar: LIGNA, held in Hanover, is the world's leading trade show for plant, machinery and tools for woodworking and wood processing. Around 100,000 visitors attended this year from May 27 to 31 to be wowed by the latest technologies and innovations. HUGO VOGELSANG has been in attendance since 2015 and this year showcased its high-quality strip steel as one of the leading suppliers of materials for circular, band and chainsaws. LIGNA 2019 is one of the most important global forums for the wood processing industry and an important platform for HUGO VOGELSANG to present its high-performance cold-rolled strip solutions. With its new solution for printing directly on primary materials, the company now has the opportunity to serve an important market trend.

A visible commitment to quality

Tailor-made, first-rate cold-rolled strip solutions as a primary material for saws: this is what the HUGO VOGELSANG brand has stood for since 1908, around the world. The name has come to be synonymous with quality across the globe. And it is important for many industrial saw manufacturers to emphasize this by labeling their products accordingly: if something has been made by HUGO VOGELSANG, then it should bear the HUGO VOGELSANG name – or the name of the customer's own quality brand. This is why HUGO VOGELSANG will now offer

customers the opportunity to print strips with a product label or brand name, as per their wishes. With this new solution, the company is not only offering its customers top-quality products and service, but is supporting their individual sales strategies in what is an internationally competitive market. And there is a huge amount of interest in printed strip steel among quality industrial saw providers, because they want to be able to clearly differentiate themselves from the competition.

Applying brand names to strip steel

The monochrome printing on the strips is performed using an industrial printer: a high-resolution HP Thermal Inkjet prints directly on unlubricated steel and supports all types of commercial text and logos: TrueType fonts, Unicode standard, alphanumeric text, barcodes, 2D codes, Data Matrix codes and logos. Even variable data such as the date, time, batch numbers, shift codes and database information can be printed on the steel. There is a maximum printing width of 12.7 mm per print head, with a resolution of up to 600 dpi. Up to four print heads can be cascaded, enabling text with a font size of up to 50.8 mm. The current standard color is black, although HUGO VOGELSANG can offer alternative colors based on customer request. The ink is permanent and oil-resistant to ensure that the brand name or quality seal remains clearly visible in the long term. ■



B2Run 2019: "Keep on Running"

That was the name of the official B2Run song that once again rang throughout Dortmund in spring this year. The B2Run German Company Run Championship is a company run series that is held at 17 locations throughout Germany. Maybe you've already been running yourself on one of these events?

On May 28, the 172 acres of Westfalenpark were again transformed into an enormous running track on which a total of 12,500 participants from around 550 companies cavorted. Among them were 59 sports-mad employees from the BILSTEIN GROUP – more than twice as many as last year. The entire company management was pleased about this great sporting commitment of our employees. We would like to take this opportunity to thank all runners for representing the company so enthusiastically on this day! ■



B2Run

The B2Run races take place annually in 17 cities in Germany. On average, all the routes have a length of about 3.7 miles and are therefore easily manageable for the employees. With over 200,000 participants annually from more than 9,500 companies, the B2Run is one of the largest company runs in Germany.

Employers pay the registration costs and t-shirts for the employees.

Maybe a B2Run will take place near you? Look for more information at www.b2run.de.



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