

ERNE NEWS

02



New Heat Treatment Center in Schlins

160 days of construction, nearly 54,000 square feet of space, and an investment of €5.1 million: Those are the key figures behind our new production facility on Josef-Erne-Straße, which was completed in early 2018.

To process customer orders more effectively and continue to increase the efficiency of our production processes, we decided in the spring of 2017 to expand our production facility in Schlins by another 54,000 square feet. Now the new buildings have been completed and production is running at full

speed. The new heat treatment center has space for up to four annealing furnaces. Currently, two furnaces are in operation with a capacity of up to five metric tons. The third furnace will be installed in early 2019. It is larger than the two currently in place, and allows for a maximum weight of eight metric tons. With this furnace in place, we will be able to heat-treat R=3D pipe elbows up to 48" in diameter and with a wall thickness of 32 mm. The infrastructure for quenching and cooling products after hot forming has also been updated. The new quench tank for large pipe elbows holds over 32,000 gallons

of water and can be cooled to 57°F through the use of groundwater. In addition, a new stacking crane has been installed with a load capacity of eight metric tons and a processing speed that is three times faster.

With the addition of these new buildings, we're now able to bring our two production facilities together in one place. The short distances that come with a compact production layout will allow us to reduce the time from pipe to completed elbow. Our goal is to move all of our activities in Schlins to the new facility over the next few years.



Dear customers,
business partners
and employees.

I've been a member of the Executive Committee for about six months now. For someone with a technical background, working for a technologically advanced company like Erne Fittings is a very rewarding experience. As a newcomer, I've automatically had the chance to question production processes and workflows with no pre-existing assumptions.

A number of different ideas have already emerged that should help us to improve our market position through increased productivity. Coming up with ideas is just one small part of the process. The bigger part is implementing them, and that only works if everyone on the team is pulling in the same direction. This will be a big challenge, but a fascinating and exciting one.

My area of responsibility also includes the other company sites. The expansion of the product range manufactured by our subsidiary, Erne Fittings Middle East (EFME) – from a current maximum of 12" outside diameter to 24" – will be keeping us busy in the coming year.

My understanding of my role, which I share with my colleagues on the Executive Committee, is to create customer value and thus to ensure our long-term success as a company. In addition to product quality, quick responsiveness is also important. Because it is financially impossible for us to store large quantities of every product in the warehouse, new planning standards need to be established. Close contact with our customers is essential, as is an optimized supply chain that makes the most of the capital we invest.

Happy reading!

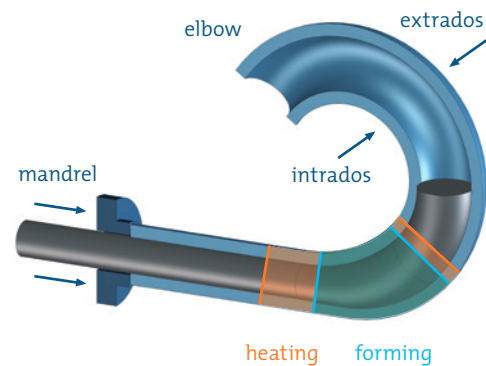
Dr. Gernot Heigl
Chief Operating Officer (COO)

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Hot Forming with the Hamburg Bending Process

To turn a pipe into an elbow, a number of different hot- and cold-forming production processes are available. The difference between hot and cold forming has to do with whether the deformation takes place above or below the material's recrystallization temperature. In hot forming, the pipe is shaped to the desired geometry at a temperature that is higher than the recrystallization temperature. For hot forming, Erne Fittings works, among other things, with the Hamburg bending process.



In the Hamburg bending process, the pipe is pressed over a mandrel with the required geometry. This mandrel has a smaller diameter at the start of the bend than at the end of the bend. The pipe is heated before reaching the widening portion of the man-

drel. By continuously pushing the pipe over the curved end of the mandrel, the pipe diameter is expanded, while simultaneously producing the desired bend, resulting in the final elbow geometry. Meanwhile, the second half of the mandrel end controls the ovality and supports the elbow during the forming process.

The Hamburg bending process is used in Schlins to produce pipe elbows with diameters ranging from 1/2" to 42". This process is especially well-suited for ferritic materials.

The Hamburg process's main advantage over the conventional induction process is the resulting low ovality. This makes the elbow segmentable and piggable.

In addition, these elbows have a well-defined and very precise inside diameter, as well as a more even distribution of wall thickness. There is also a cost advantage in comparison to the induction process, due to reduced wall thickness. On the other hand, the Hamburg bending process requires a separate mandrel for each bend radius, which can have a negative impact on costs. Erne Fittings has a decisive advantage here in that its decades of experience have allowed it to assemble the world's largest collection of mandrels.



10D Elbow for the "Ferngasleitung" Project in the German State of S

Erne Fittings is meeting the ever-growing need for EN gas pipeline construction. Together with our partner of many years, Piping-Service Steuer Handelsgesellschaft mbH, we are supporting the transmission system operator ONTRAS in their restoration of the gas pipeline known as FGL-32. For this project, approximately 300 high-precision and technically sophisticated BA10 (R=5D) elbows with a nominal diameter of DN500 (20") were delivered.

ONTRAS Gastransport GmbH operates the second-longest transmission network in Germany, with about 450 network connection points and 4350 miles of pipeline. The transmission system operator is responsible for safe and efficient operation of pipeline networks in the states that were historically part of East Germany. Among other responsibilities, this includes the restoration of the FGL-32 pipeline in the states of Saxony and Thuringia, for which nearly 45 miles of pipeline were completely replaced and investments were made in pigging stations.

Segmentable elbows of the type used in the FGL-32 pipeline are usually manufactured with an induction bending process. Howev-

er, the Hamburg mandrel bending process used by Erne Fittings offers significant advantages in terms of the dimensional accuracy of these components. Placing the bending tool inside the pipe allows us to provide consistent precision in wall thickness, ovality, and inside diameter over the entire body of the fitting. The tools designed by Erne Fittings are constantly being improved to ensure that its components show minimal deviation in terms of inside diameter and ovality.

This ensures minimal edge misalignment between the elbow and the pipe it connects to, resulting in optimal piggability, the ability to segment the elbow right at the job site, and easy and efficient weldability. That means a significant reduction in welding time, which in turn contributes to reduced costs. Our high-precision elbow manufacturing process minimizes the need for additional calibrations later on. The components are not subjected to any further mechanical stresses, which has a positive effect on segmentability and piggability.

ONTRAS visited our factory to get an up-close look at the advantages of the mandrel



FGL-32 pipeline route

Introducing ...



Alexander Heimbeck

Senior Sales Manager
With Erne Fittings since June 2017

Alexander Heimbeck moved from Düsseldorf to Vorarlberg to work for Erne Fittings. We sat down with him to talk about how his first year with us has gone.

What kind of work did you do before joining Erne Fittings?

I worked for various project sales companies in Germany, and specifically in technical project sales for pipes, fittings and flanges. My responsibilities were in business development, national and international sales (Europe, United States, Canada, South America, etc.) and supplier diversification.

What are your responsibilities at Erne Fittings?

I'm in charge of the Russia, China, Korea and Japan markets and the worldwide nuclear market, and I'm responsible for project procurement. I also provide support for the acquisition of new customers in Europe for special applications, and for the identification and approval of new suppliers.

Fittings have always been my favorite product.

Why do you work for Erne Fittings? What do you think is special about this company?

Fittings have always been my favorite product, and my dream of someday working for a manufacturer has come true.

Erne has big goals for the next few years, and I'm happy to be a part of that. I enjoy taking on the challenges

that come with working for one of the biggest players in the industry. I also like the friendly way we interact with each other. Everyone's there for everyone else.

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What do you like about the Vorarlberg region? How is it different from your home back in Germany?

Vorarlberg is really great! Everybody made me feel welcome right away, both at Erne and in general, so I felt at home right from my first day here. The people in Vorarlberg are very friendly and helpful. The area itself is just amazing, so after work I can go out on my patio and enjoy the quiet and the beautiful mountain view. It's almost like being on vacation.

It's definitely a big change from Düsseldorf, where I used to live, but I've got everything I need to live and be happy here.

What do you do in your free time?

I enjoy the calm of the mountains, and I like to go hiking as well.

Thank you for talking with us.



ing 32" Gas Pipeline axony

bending process. At the end of their visit, technicians from ONTRAS, Piping and Erne Fittings engaged in a lively discussion about the increasing demands of gas pipeline construction that explicitly confirmed once

again that the mandrel bending process used by Erne Fittings is an ideal way to achieve the strict tolerances in gas pipeline construction.



Erne Fittings Certification Portal

Certificates, attestations and proof of authenticity – they're all indispensable for both us and our customers. In offshore, energy and chemical plants, and on other projects as well, it's important to be sure that the fittings in use are of the finest quality. Unfortunately, counterfeit products turn up on the market all too frequently. So it's important for our customers to be able to trust in original products.

That's why Erne Fittings has decided to set up a certification portal. Once it's fully operational, complete documentation like certificates, source material certificates and test reports will be made available to our customers through the new certification portal.

In order to provide the best possible customer service and fast, user-friendly access,

the certification portal can be individually configured. Customers can access the documentation they need at any time, and download documents individually or in complete packages. A comprehensive search function is also available to help customers find the certificates they need quickly and easily. To make the certificates more difficult to counterfeit, the new documents always include a QR code as well. By scanning the QR code, the customer is sent directly to the website to verify the certificate.

Certain customers have been running the certification portal in a test phase since mid-June, and in July we introduced the certification portal in the United States. Worldwide deployment is planned for the end of the year.



YOUR POINT OF CONTACT:
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Certificates

Approvals confirm compliance – and Erne Fittings has the most safety-related approvals of any manufacturer worldwide.

Our fittings are used in complex applications like gas, nuclear, offshore and energy projects. These applications require the highest level of safety and professionalism – and with us, that's exactly what you get. Erne Fittings has the most safety-related approvals of any manufacturer. This past summer, Erne Fittings passed the ISO 9001:2015

group audit for its locations in Austria and Saudi Arabia. Erne Fittings also earned the GOST-R certificate. The GOST certificate is the official confirmation that our products meet Russia's national quality and safety requirements.

“Alongside quality and top-notch service it's important to us that our customers feel confident in their choice of fittings.”

Gerold Freudenthaler, CEO

Did you know?



We'll be appearing at next year's **Stainless trade show in Brno**. From **May 15–16, 2019**, our sales managers will be available to meet with you in Brno. Come by and see us!



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