



MARKET SEGMENT INDUSTRY

YOUR PARTNER FOR
PRECISE SOLUTIONS

Individual tube products
Competent advice
First-class service



“We forge trusting partnerships through seamless cooperation that sticks together.”

FINDING THE IDEAL SOLUTION WITH THE RIGHT PARTNER

Each of our customers have their very own needs and requirements. Thus, we focus on individual tube solutions. We engage in **intensive dialogue** with you to develop perfectly customized tube products. As one of three legally independent divisions of the BENTELER-Group, globally active with around 30,000 employees at 161 locations in 40 countries, BENTELER Steel/Tube is your solutions-oriented, strategic development partner. We offer competent advice, cater to your wishes and make a contribution to your success. Through our own steel production and along our integrated value chain, we support you with solid and top-quality tube solutions, **tailored** to your requirements.

INDIVIDUAL SOLUTIONS FROM ONE SOURCE

Thanks to the targeted use of our vertical range of manufacture, we ensure outstanding properties in seamless and welded quality steel tubes: **precise geometries and straightness**. This lays the ideal foundation for optimum further processing. From our many years of experience, we know how important and decisive a trusting cooperation is for a successful project – for us, excellence can only be achieved through customer proximity and **solutions expertise**.

CONSTRUCTION

YOUR PROCESSES ARE WHAT MATTERS

We deliver
the right
tube solutions

“Our formula for your success: precision and individuality.”



CONSISTENT, PRECISE, INNOVATIVE
 Whether for mechanical engineering and construction, the production of turned parts or in wind turbines – our steel tube solutions in the field of engineering are deployed in **various industries**. Thanks to a perfect combination of geometry, machinability and strength, our tube products are distinguished by high performance and optimum functionality. We supply seamless and welded steel tubes in all common standards and steel grades with a particularly good weldability as well as a broad range of geometries.

With our tube solutions, we want to support you in producing even better products at lower costs. To this end, we focus on high reproducibility, low warpage and ideal material properties.



ENGINEERING

EXCELLENT AND EFFICIENT

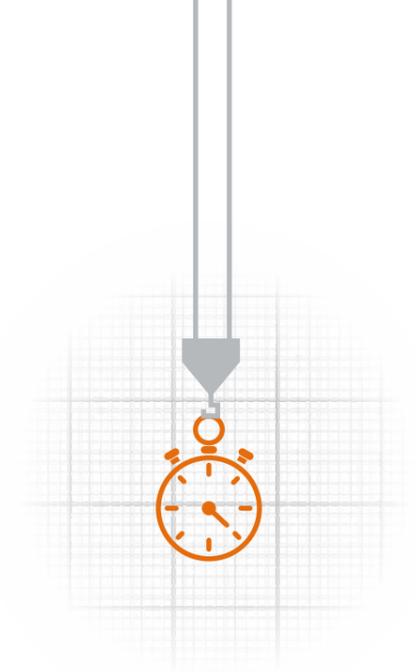
Higher efficiency: In keeping with this motto, we offer steel grades with a particularly good weldability and produce green pipes from steels with excellent machinability according to international standards. We continuously monitor all important **process parameters and material properties**. In this way, we coordinate heat treatment, perfectly adapt the lengths and determine the near-net-shape stocks as well as the use of materials. This enables us to produce steel tubes with the most favorable overall costs.

“Our logistics are precisely aligned with our customers.”

CONSTRUCTION

REDUCING COSTS TOGETHER

Tubes which are used in the construction industry – for instance for crane production or injection anchors – have to meet high demands in terms of **safety, stability and weight reduction**. This often requires very specific technical solutions. To comply with this requirement, we work closely together with our customers during the development phase. In addition to special grades, we constantly develop our tube products further by increasingly reducing their weight and thus cutting down on overall production costs.



DELIVERY: JUST-IN-TIME

At the right place at the right time: Our customers also value the **Market Segment Industry** of BENTELER Steel/Tube for quick and punctual delivery. We offer individual logistics concepts as well as just-in-time delivery to the deployment site. Thus, our customers always get everything they need – any place, any time.



HYDRAULICS

ZISTAPLEX[®]-TUBES FOR

DIESEL LOCOMOTIVES

Germany:
Serial application
in rail traffic

*“Our steel tubes
give your project
a precise profile.”*



OUR TUBE PRODUCTS REPLACE STAINLESS STEEL TUBES

Whether in mobile hydraulics for agricultural and construction machinery or in the commercial vehicle and caravan industry – our Zistaplex[®] tubes have been deployed in various industries for many years. This is due to the high performance of the surface and considerable cost benefits.

The serial application in **rail technology will be a world's first**. Starting in 2016 and over a period of eight years, more than 200 diesel locomotives will be equipped with BENTELER Steel/Tube Zistaplex[®] tubes. The first train using these will be a regional train to the German island of Sylt.

The Zistaplex[®] tubes will replace stainless-steel tubes in the feed line of the engine radiator drive which used to be mandatory due to the corrosive operating conditions such as sea air and washing processes.

ON THE ROAD TO SUCCESS WITH A LARGE VARIETY OF PRODUCTS

Consistent solutions
for numerous
applications

Our seamless and welded steel tubes withstand high pressure loads, resist high mechanical strain and stand out through their precise geometry. This is achieved by targeted selection and treatment of the material deployed.

In addition, we use state-of-the-art technologies for tempering the tube product. We supply tube solutions in all common grades, standards and dimensions. Moreover, we offer a convincing portfolio with numerous processing capabilities and alternative grades.



CYLINDER PRODUCTION: INNER EXCELLENCE

For the production of cylinder applications, we manufacture tube solutions which are distinguished by excellent low-temperature toughness and consistent quality. What is more, our steel tubes prove through outstanding inner surface properties: They demonstrate exceptionally low

inner roughness and boast particularly narrow inner diameter tolerances. Customer-specific machining allowances on the inner diameter are also part of our service. As a customer, you also benefit from our long-standing process expertise in the production of skived and roller-burnished tubes. These can also be supplied as tempered version.



“We accompany your requirements with excellent solutions.”

PISTON TUBES: OPTIMUM PRECISION

Our piston tubes, which are developed with a great deal of know-how, are ideally suited for the most demanding applications: They are characterized by very narrow dimensional tolerances and low ovality. Moreover, they offer high straightness and low roughness which is achieved through process-regulating interventions during production. They also meet all requirements when it comes to their surface, which stands out with particularly high corrosive resistance.

LINE TUBES: NO CHANCE FOR CORROSION

Our line tubes are the first choice for applications where a high level of forming and perfect corrosion protection is required. With the innovative ZISTA solutions, BENTELER Steel/Tube has developed an excellent surface protection for line tube. While ZISTA CRF® was developed as an environmentally friendly coating for precision steel tubes, ZISTA® SEAL ensures even better corrosion protection after forming thanks to an additional sealing. For the most demanding property profiles, we offer Zistaplex® tubes with highest corrosion protection due to additional organic coating.

Our products benefit from outstanding bending and forming properties and stand out through good adhesion and high ductility. What is more, they satisfy the requirements of standard screw joint systems in an optimum manner. As a partner, we always cater to individual customer requirements: our line tubes are also available with an organic protection layer and in special grades.

BENTELER STEEL/TUBE GMBH

Residenzstrasse 1
33104 Paderborn
Germany

Phone: +49 5254 81-0
Fax: +49 5254 13666
sales.steeltube@benteler.com

www.benteler.com

ABOUT BENTELER

With about 30,000 employees and 161 locations in 40 countries, BENTELER stands for a high degree of excellent material, production and technology in the areas of Automotive, Steel/Tube and Distribution. Continuing progress by means of new materials, technologies, and products as well as long-term, profitable growth are the supporting pillars of the almost 140-year success story of the BENTELER-Group, which is now in its fourth generation of family ownership.