Press Release

Euroguss 2020: Grenzebach shines with broad portfolio

Grenzebach
Maschinenbau GmbH

Albanusstraße 1-3
86663 Asbach-Bäumenheim

Contact:
Lisa Reitschuster
Phone: +49 906 982-2068
lisa.reitschuster@grenzebach.com

The international trade show in Nuremberg focuses on optimized processing of high-pressure die-cast parts with the Friction Stir Welding technology.

Higher quality and efficiency in post-processing of high-pressure die-casting components, Friction Stir Welding for aluminum components for electro mobility combined with a high automation competency: at the Euroguss from January 14th till 16th, 2020 in Nuremberg, Grenzebach presents a wide product spectrum of solutions to the visitors (hall 8, booth 331).

Friction Stir Welding for E-mobility

During the Auto Summit in Berlin early November, politicians, association representatives and industry members once more emphasized their commitment to electro mobility. New mobility concepts, such as traveling with “green” electric power, have a direct impact on the development of casting components. “We observe an increased demand for welding of die-cast components in the automotive industry, such as the manufacturing of battery trays or heat exchangers for electric vehicles. This is where our Friction Stir Welding solution can make a difference”, says Sahin Sünger, Product Manager for Friction Stir Welding at Grenzebach. Commonly, this involves work with cavity-prone die-cast parts with uneven surfaces, which is extremely difficult to do with conventional welding technologies. This is where Friction Stir Welding makes the difference. A rotating tool generates the required process heat at the seam with friction and pressure. The material becomes plastically deformable with the heat applied and is stirred along the joint with the rotation of the tool.

Scalable solutions focused on efficiency

The FSW technology enables the production of durable and media-tight weldings. Since Friction Stir Welding is a solid state joining technology no pores or hot cracks are generated. Exactly these effects are very common to conventional fusion welding. Grenzebach stands for scalable FSW solutions for serial production. The double spindle FSW gantry units of the D-DSM series provide two independently working welding heads. “With this innovation, our customers can reduce their effective cycle time. Besides the dynamics and the welding speed, the quick loading and unloading of the machine are critical for cycle time and economic efficiency. Our customers can benefit from our expertise of numerous successful projects”, says Sahin Sünger.

Aluminum still on the rise

The FSW technology more and more complements the foundry technology, also due to the fact that aluminum substitutes steel! The automotive and aviation sector count on lightweight components; in mechanical engineering, aluminum ideally withstands mechanical stresses. “The quantity of processed aluminum in vehicle bodies increases every year. Especially in the automotive industry changes are under way. That is why support our customers with the use of FSW technology and the development of new products offering consulting services and sample weldings”, says Sünger.

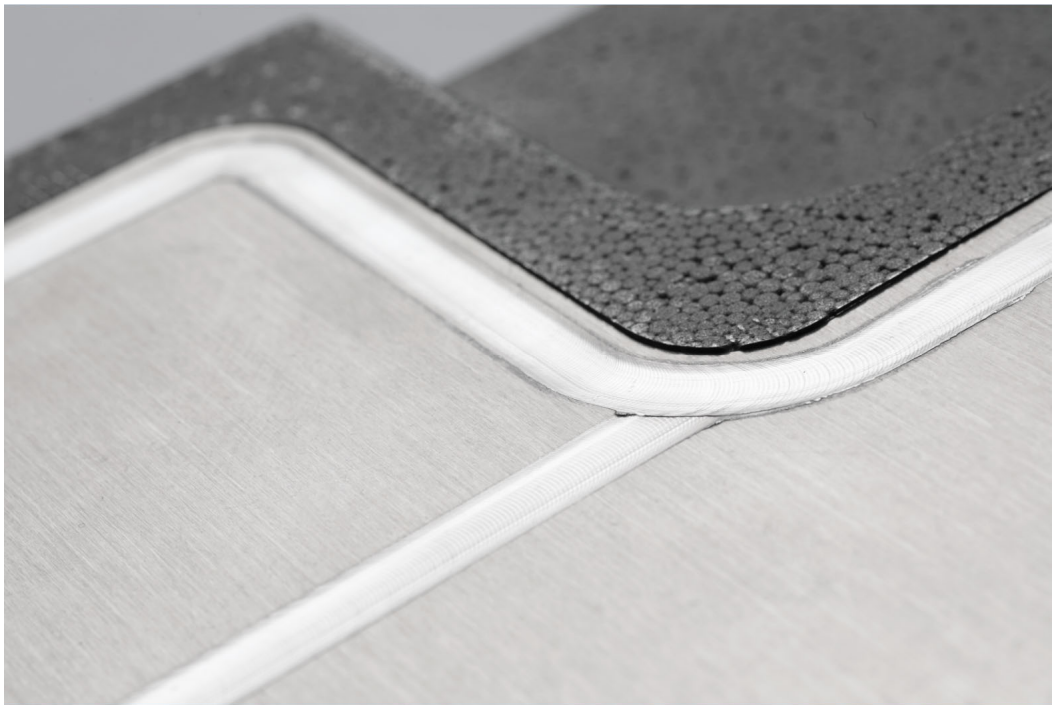
Press Release

Complete added value of casting parts

Grenzebach is also a partner for the efficient manufacturing of classics, high-quality pressure die casting parts. The company collaborates with various foundries and has a supply chain of different molding procedure products. Milling, lathe turning, drilling: Grenzebach handles all processing steps for casting parts. In the machining center at the Grenzebach location in Jiashan, China, a full CNC and multiple-axes machine park is available. Grenzebach uses all painting procedures for casting parts available for the surface treatment. The automated Grenzebach paint-shop stands for high-quality results. Grenzebach processes more than 10.000 tons of die-cast parts per year. The casting parts are used in special machinery of automation industry, such as industrial robots or machine tools. “For high-quality industrial die-cast parts our experts developed a particular passion. We work individually on mould and model construction and together with the customer develop casting parts – always focused on the optimized serial production. Grenzebach stands for short lead times and additional added value”, says Thomas Liu, Head of Casting at Grenzebach.

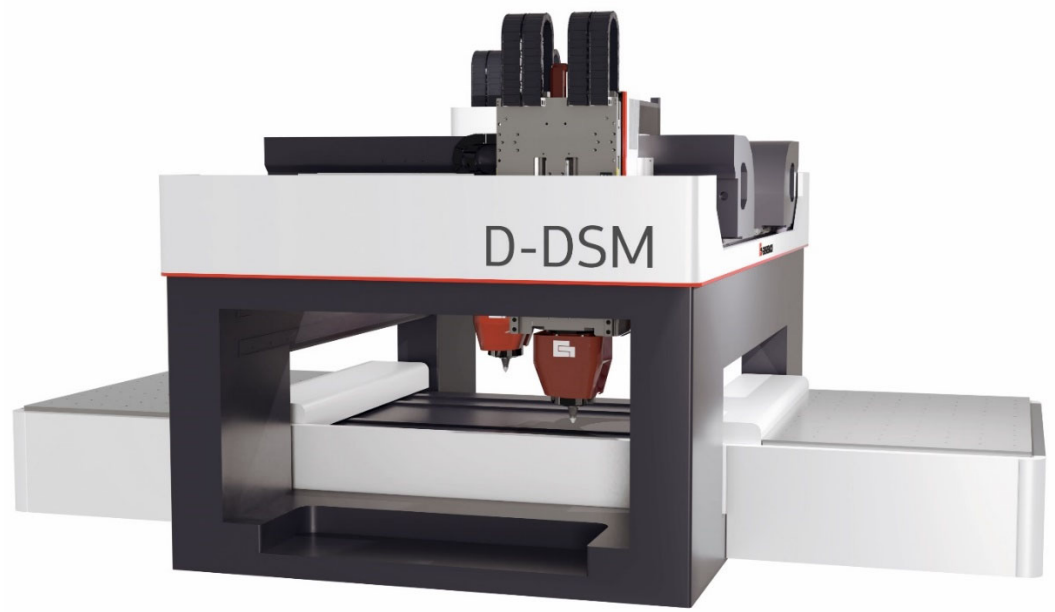
More Information about FSW technology:

- Grenzebach, as an experienced system integrator and supplier of Friction Stir Welding equipment, delivers turnkey FSW process solutions for industrial serial production.
- The highest quality is provided by the DynaSTIR tooling technology from Grenzebach, which reduces the process forces up to 50 percent compared to conventional FSW tools and thus enables gentle component processing. Furthermore, the heat input is lower. Therefore, less distortion arises and the components remain dimensionally stable.
- The Grenzebach FSW experts are pleased to assist you with technical discussions of your specific joining concepts. Even during the design phase of the components, Grenzebach supports with a FSW specific design of assemblies.



Optimum joints: Lost foam cast with uneven surface can be processed with the friction stir welding technology optimally.

Copyright: Grenzebach



Whether for welding of battery trays, for e-mobility or other applications: With the double spindle FSW gantry units of the D-DSM series, Grenzebach enables even faster and more efficient production. D-DSM stands for Double Spindle Dynamic Stirring Machine. With the extension of the DSM for second gantry bridge, the user has two independently working welding heads.

Copyright: Grenzebach

During Friction Stir Welding, a rotating tool generates the required process heat via friction and pressure at the process zone. The heated material turns malleable and is stirred along the seam by the rotation of the tool.

Copyright: Grenzebach

From cast iron to steel casting to aluminum cast and forged parts: Grenzebach manufactures high-quality industrial casting parts for technical equipment. The casting parts are used in special machinery within the automation industry, such as industrial robots or machine tools. The parts are given the finishing touches at the Grenzebach machining center.

Copyright: Grenzebach

Grenzebach is a world-wide leading specialist in the automation of industrial production lines. By providing services encompassing the entire life cycle of a project, Grenzebach's customized automation solutions have globally a positive impact in glass and building material manufacturing as well as intralogistics. Many years of experience, continuous development, and sustainable support services are what makes Grenzebach one of the most preferred partners world-wide. 3000 installed lines in 55 countries prove that Grenzebach stands for quality and reliability. Amazingly, 90 percent of Grenzebach's products are for export which reflects that the medium sized family-owned company from Hamlar is a global player in the industrial automation.