

Media release

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Market development

Feintool and SITEC strengthen cooperation in Europe

After a successful cooperation start in Asia, both technology companies have signed a Memorandum of Understanding to intensify cooperation in the production of metallic bipolar plates for fuel cells and electrolysers in Europe.

The market for fuel cell and electrolyser applications in Europe is developing very dynamically and offers high potential. In order to produce metallic bipolar plates – the core of a fuel cell – economically and on an industrial scale, the forming and further process needs to meet highest requirements in terms of tightness, precision and repeatability. With the FEINforming forming process developed by Feintool and SITEC's efficient laser welding process FLEX Welding, the companies also want to take off in Europe. Together, high-precision individual plates are joined to form bipolar plates on appropriate systems and with the support of an integrated process consisting of FEINforming, FLEX Welding and FLEX Inspection.

Thanks to the partnership, both companies are able to supply customers with the highest quality and most competitive high-volume bipolar plates. The cooperation ranges from engineering to marketing and sales to procurement, prototyping and quality management. In the course of the cooperation, the two companies will also continuously develop the manufacturing processes and add further complementary processes, such as coating.

Dr. Winfried Blümel, Head of Feintool System Parts Europe Fineblanking & Forming, sees important advantages in the cooperation: "Two strong partners are combining their specialist skills and want to produce high volumes of metallic bipolar plates in Europe. Every vehicle powered by fuel cells requires up to 400 bipolar plates, or 800 individual plates. The high demand offers great potential that we want to develop."

Dr. Jörg Lässig, Managing Director of SITEC Industrietechnologie GmbH, adds: "We bring our many years of experience as a manufacturer of precision parts in large series and global system supplier of high-performance laser processing systems as well as automation solutions to this cooperation. With our joint expertise, we are able to provide our customers with even more comprehensive support in realizing their hydrogen projects."

FEINforming: Advantage through precision

Feintool's FEINforming technology is key to the future viability of fuel cells (generation of electrical energy from hydrogen) and electrolyzers (generation of hydrogen from electrical energy). The precise processing of the thinnest material leads to a reduction in weight and volume and thus to a more compact arrangement of the fuel cells in the stack. A higher power density in the cell stack clears the way for powerful and compact vehicle drives or hydrogen generation systems. Thanks to its experience in plant construction for highly complex products and the high speed with which they are manufactured, Feintool offers an optimized process for the production of bipolar plates in the form of a customized complete solution from a single source: presses specialized in bipolar plate production, FEM-optimized tool design, comprehensive engineering services as well as prototype, pre-series and series production.

FLEX Welding: Laser welding of the highest efficiency, process reliability and quality

The efficient operation of the laser in industrial production and the technological development of process-safe solutions are part of SITEC's core competencies. The laser works extremely fast, produces excellent weld seams and virtually distortion-free components. SITEC integrates lasers, welding optics and intelligent monitoring systems into automated production systems. For the production of metallic bipolar plates, the company relies on the specially developed FlexCell production system for needs-optimized production.

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About SITEC

SITEC is an internationally valued partner and system supplier for automated high-tech production systems and the series production of precision parts and assemblies.

Based on the highest quality and environmental standards, SITEC offers efficient manufacturing technologies as well as complete key solutions.

For its global customers in the automotive industry, medical technology, and alternative energy technology, SITEC develops production-ready solutions for automated assembly, laser material processing and electrochemical metalworking. The company achieves this with around 300 highly qualified employees and optimum teamwork.

SITEC grows with the challenges of its customers and the market, such as the development of new products in the field of e-mobility or autonomous storage technologies based on fuel cells. Fully automated laser processing systems for laser welding, in particular of copper, for components in e-drives, battery systems and power electronics are now part of the portfolio.

In addition, the company has been producing laser-welded bipolar plates of various designs to customer order within series production since 2012.

Founded in 1991 and headquartered in Germany, the company serves Asian markets directly on site via SITEC Laser Technology (Shanghai) and operates a showroom in the USA (Pittsburgh).

About Feintool

Feintool is an international technology and market leader in the technologies of fineblanking, forming and e-sheet stamping for the processing of sheet steel. These technologies are characterized by economy, quality and productivity.

As a driver of innovation, Feintool is constantly expanding the limits of these technologies and developing intelligent solutions for the needs of its customers: high-performance fineblanking systems, innovative tools and state-of-the-art manufacturing processes for sheet steel in large quantities for automotive and industrial applications as well as renewable energies. The processes used support the megatrends of generating, storing and using green energy.

Founded in 1959 and headquartered in Switzerland, the company has 19 of its own production plants and technology centers in Europe, the USA, China and Japan, and is therefore always close to the customer. Around 3500 employees and over 100 trainees work on new solutions worldwide.