

Media release

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Market development

Strategic cooperation between Feintool and SITEC in China

The two technology companies have signed a Memorandum of Understanding. They will collaborate on the metallic bipolar plates production for fuel cells in China.

The market for hydrogen and fuel cell applications in China is developing extremely dynamically and offers a high potential. In order to produce metallic bipolar plates - the core of a fuel cell - economically and on an industrial scale - the forming and joining process needs to meet highest requirements in terms of tightness, precision and repeatability. With the "FEINforming" process developed by Feintool, the group intends to take off not only in Europe but also in China. Together with laser specialist SITEC, the first step in the collaboration will be to set up equipment at Feintool's existing production plant in Taicang, near Shanghai. In a "shop-in-shop" concept, SITEC is contributing machines and employees with expertise in joining. In an integrated process of FEINforming and laser welding, high-precision individual plates are joined to form bipolar plates and then tested for leakage.

Thanks to the partnership, Feintool can supply customers with bipolar plates of the highest quality and competitiveness in a high-volume production. Furthermore, the two technology partners will continuously develop the manufacturing processes.

Marcel Pernici, Feintool President of System Parts Asia, sees only advantages in the collaboration: "Two strong partners are joining their expertise and intend to produce metallic bipolar plates in China in high volumes. Each vehicle powered by fuel cells requires up to 400 bipolar plates, or 800 individual plates. The high demand offers great potential, which we want to exploit."

Dr. Jörg Lässig, Managing Director of SITEC Laser Technology (Shanghai) Co., Ltd. adds, "We bring our many years of experience as a global system supplier of high-tech laser processing systems and automation solutions, as well as series manufacturer of precision parts, to the cooperation."

FEINforming: Progress through precision

The Feintool technology is a key to the future viability of fuel cells. The high-precision processing of the thinnest material thicknesses leads to a reduction in weight and volume and thus to a more compact arrangement of the fuel cells in a stack. Higher power density in the cell stack paves the way for powerful and compact vehicle drive systems. Feintool offers a complete, customer-specific solution for the production of optimized bipolar plates from a single source: presses specialized in bipolar plate production, FEM-optimized tool design, comprehensive engineering services, and prototype, preproduction, and high-volume production.

Laser welding: Maximum 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 the laser, including high-tech welding optics and intelligent monitoring systems, into automated production systems for the series production of bipolar plates.

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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 internationally acting technology and market leader in the business area of fineblanking. This technology is characterized by high-quality-standards and cost-effectiveness. The company produces fineblanked goods, formed steel components and punched electro sheet metal products.

As an innovation driver, Feintool is consistently expanding the horizons of these technologies and developing smart solutions to meet customer requirements. Feintool offers complete production of precise fineblanked and formed components as well as punched electro sheet metal products in high volumes for demanding applications in the automotive, industrial and energy industry

The processes used by Feintool are ideally suited to implement automobile industry trends. Feintool is a project and development partner in the field of lightweight construction/sustainability, module variations/platforms and alternative drive concepts such as hybrid and electric drives.

The company, established in 1959 and headquartered in Lyss, Switzerland, owns production plants and technology centers in Europe, the United States, China and Japan. It is crucial to the company to be geographically close to its customers at all times. Around 2,600 employees and 80 apprentices work globally to develop new solutions and create key advantages for Feintool customers.