

## Media Release

January 22, 2025

### **Swedish Impact Coatings complement ready-to-install hydrogen component production**

Feintool and SITEC announce their latest production partnership with industry-leading Swedish coating specialist Impact Coatings AB. This non-exclusive cooperation further strengthens our capability to provide customers with the entire process chain in the production of ready-to-install metallic bipolar plates and interconnects for fuel cells and electrolyzers – from early development to high-volume production.

As leading manufacturers of metallic high-precision components for fuel cells and electrolyzers we are continuously enhancing our manufacturing processes to address the needs of the hydrogen industry. To strengthen our customers' competitiveness, we find partners that share the same spirit of driving innovation and cost advantages as we do. With Swedish Impact Coatings AB we cooperate with a proven, reliable, and globally present specialist to further evolve our state-of-the-art development and production capabilities.

Impact Coatings' expertise lies in physical vapor deposition (PVD), a clean coating process for the modification and enhancement of surface properties with minimal environmental impact. PVD and the corresponding quality control complement our coating capability which is an integral production step to provide customers with ready-to-install bipolar plates and interconnects.

#### **Bipolar plates and interconnects form the core of fuel cells and electrolyzers**

Fuel cells are electrochemical energy converters that generate electricity from hydrogen and oxygen. They emit only water vapor. This is how fuel cells power electric vehicles and, for example, emergency power generators. They offer a clean alternative to fossil fuels and thus contribute to a greener future. Electrolyzers use the same principle as fuel cells in reverse to store energy in hydrogen.

Our metallic bipolar plates and interconnects constitute the cores of fuel cells and electrolyzers. These high-precision components enable efficient gas flow, cooling and electrical connection at low production cost. Several hundred plates are layered to form the fuel cell or electrolyzer stack.

Feintool and SITEC's strategic goal is to become one of the world's leading suppliers of metallic bipolar plates and interconnects.

Learn more: <https://bipolarplates.com/>

## Applied Technologies

### FEINforming: Advantage through precision

Feintool's FEINforming technology enables the precise processing of ultra-thin material thicknesses with maximum accuracy. This results in weight and volume reduction, facilitating a more compact arrangement of the cells within the fuel cell stack and in electrolyzers. Through the optimization of material use, design implementation, and production processes, we unlock significant potential for reducing costs and increasing the efficiency of fuel cell and electrolyzer technology.

### FLEXwelding: Advantage through efficiency

Employing efficient laser technology from SITEC, FLEXwelding stands out as an extremely economical process. Characterized by the highest welding speeds, maximum contour accuracy, and virtually distortion-free components, FLEXwelding ensures optimal results. In addition, the intelligent systems specially developed by SITEC form the basis for excellent weld seams. Integrated, intelligent monitoring processes ensure 100% quality control and traceability within automated production systems.

### Physical vapor deposition (PVD)

Impact Coatings' Physical Vapor Deposition (PVD) is a technology where a material is evaporated and condensed to form a thin film coating over an object (substrate). The coatings consist of metals or ceramics, such as nitrides, carbides, and oxides. With the highly flexible PVD method, the thicknesses of the coatings can be varied from a few atomic layers to several  $\mu\text{m}$ .

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