

PRESS RELEASE

Dresden, Müllheim, Tübingen, 20 February 2024

**Premiere at H2 FC EXPO 2024 in Tokyo:
German Fuel Cell Cooperation (GFC) Presents High-Volume Production Line for Metal Bipolar Plates**

For the first time, the German Fuel Cell Cooperation (GFC) will present a highly productive, interface-tuned complete line for the production of metal bipolar plates in Japan at the International Hydrogen & Fuel Cell Expo.

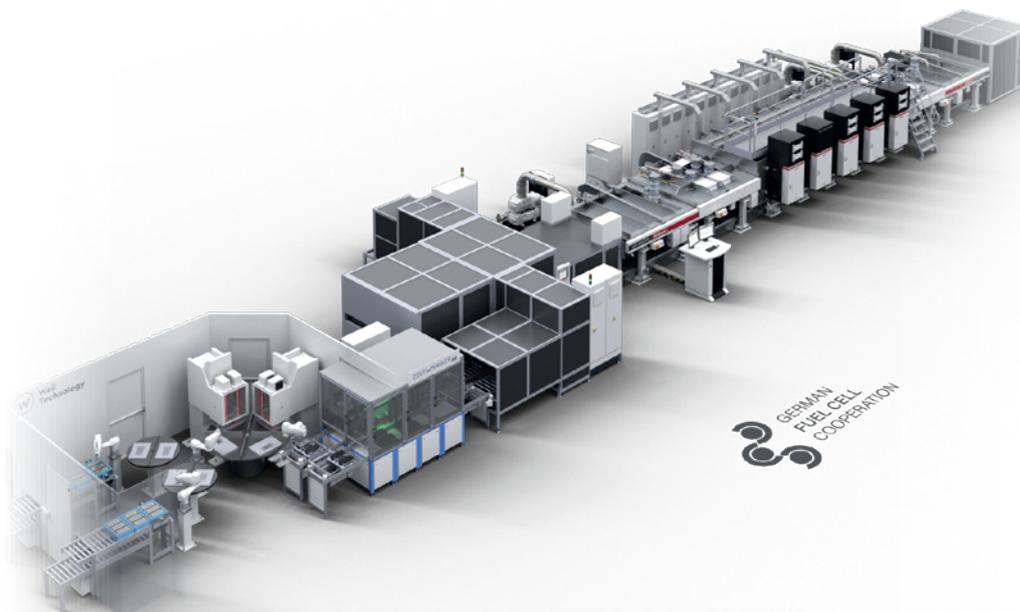
The event will take place from 28 February to 1 March 2024 at the Tokyo Big Sight and the GFC will exhibit at booth W4/46.

Perfect tool to meet ambitious goals

The Cooperation's fully coordinated production line plays a pioneering role in the market: By bundling their respective competences, the three German companies VON ARDENNE (Dresden), Weil Technology (Müllheim) and ZELTWANGER (Tübingen), as partners in the GFC, offer manufacturers of fuel cell and electrolyzer stacks comprehensive know-how in all sub-processes for the efficient production of metallic bipolar plates. With an annual production capacity of several million bipolar plates, it covers the current needs of the industry.

Weil Technology has developed the Laser Welding Cell (LWC), which precisely joins the thin metal foils at high welding speeds. For leak testing, ZELTWANGER brings in the fully automated ZED BPP 4-2 test station in addition to a manual test station, which also achieves very low cycle times. The VON ARDENNE coating system uses cathode sputtering or magnetron sputtering in the post-coating process to coat the bipolar plates directly on both sides. The GFC partners support their customers in the scaling of processes and systems from development on a laboratory scale to pilot production and high-volume production.

Machines are already being built for leading companies in the hydrogen and fuel cell industry. An ideal prerequisite for reducing dependence on fossil fuels quickly and efficiently.

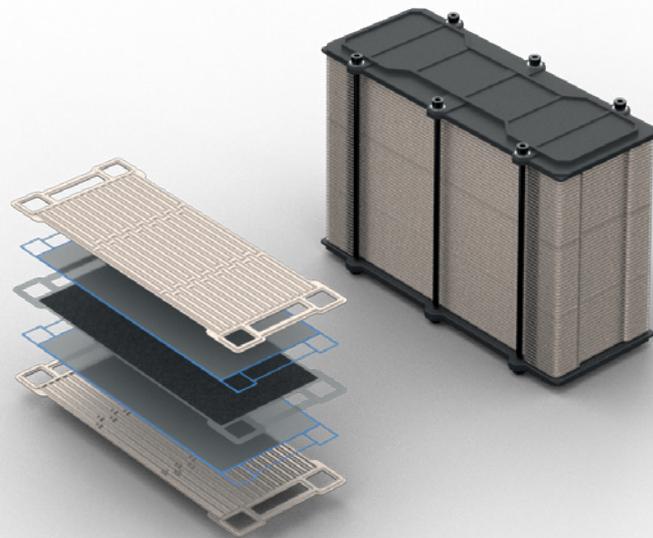
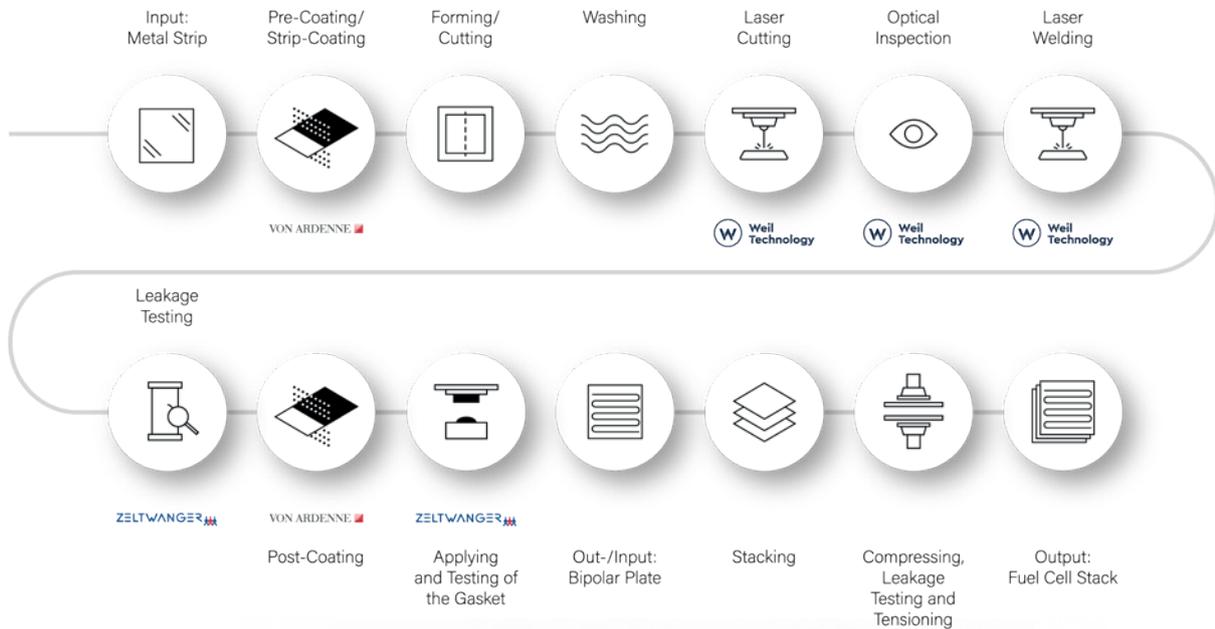


PRESS RELEASE

Dresden, Müllheim, Tübingen, 20 February 2024

From metal strip to fuel cell or elektrolyzer stack

The long-standing expertise of the three mechanical engineering companies covers all process steps. The joint development and careful coordination of the line concept enables smooth transitions at the interfaces of the individual production steps. For this purpose, the line processes pre-embossed half-plates made of stainless steel or titanium. In a first step, these are welded into bipolar plates, then tested for leak tightness and finally receive a PVD coating to functionalize the surface.



PRESS RELEASE

Dresden, Müllheim, Tübingen, 20 February 2024

With their extensive shared knowledge of the complex value chain and high degree of specialization in the sub-processes, the three GFC companies can develop a customized production line together with their customers. These specification-compliant production lines optimally integrate the various customer-specific approaches.

VON ARDENNE contributes its expertise in the development and manufacturing of vacuum coating systems used to functionalize surfaces of metal strip (pre-coating) or bipolar plates (post-coating). Weil Technology is an experienced supplier of equipment in the field of laser cutting and laser welding of metallic bipolar plates. ZELTWANGER provides the equipment for automated leak testing into the production chain.

Booth & Contact

Date: 28 February - 1 March 2024

Booth: W4/46

Web: www.fuel-cell-cooperation.com | www.wsew.jp

Contact:

VON ARDENNE GmbH

Ingo Bauer | +49 351 2637 9000 | presse@vonardenne.com | vonardenne.com

Weil Technology GmbH

Felicitas Ledig | +49 7631 1809 399 | f.ledig@weil-technology.com | www.weil-technology.com

ZELTWANGER Group

Benjamin Rilling | +49 7071 3663-119 | B.Rilling@zeltwanger.de | www.zeltwanger.de

PRESS RELEASE

Dresden, Müllheim, Tübingen, 20 February 2024

The GERMAN FUEL CELL COOPERATION Member Companies

VON ARDENNE

VON ARDENNE develops and manufactures systems for the industrial vacuum coating of materials, such as glass, wafers, metal strips or polymer films. Depending on the application, these coatings are one nanometer to a few micrometers thin and give the materials new functional properties. Our customers use these materials to produce high quality products, such as solar cells and solar modules, architectural glass and vehicle glazing, fuel cells, lithium-ion batteries or microelectronic components for sensor systems and optics. Systems and components provided by VON ARDENNE make an important contribution to protecting our environment. They are crucial when producing products that help to consume less energy or that generate energy from renewable resources.

With more than 60 years of experience in electron beam technology and 50 years of experience in magnetron sputtering, VON ARDENNE is a pioneer and worldwide leading supplier of systems and technologies in PVD thin-film and vacuum process technology. We offer our customers technologically mature vacuum coating systems, comprehensive expertise, and global service. The key components are developed and manufactured in-house at VON ARDENNE.

Weil Technology

As a machine builder and solution provider, Weil Technology helps to implement new production processes in sheet metal processing and to optimize, automate and make more sustainable existing sheet metal processing.

The company's core expertise is machines for sheet metal processing via laser welding and laser cutting. Weil Technology can look back on over 30 years of experience here. At the company head office in Müllheim in Baden-Wuerttemberg, approximately 250 employees develop and produce custom concepts and systems.

ZELTWANGER

ZELTWANGER Leaktesting & Automation GmbH is a leading provider of advanced technical solutions for leak and functional testing with air and tracer gases. The portfolio ranges from standardized, configurable test devices to customer-specific testing systems at every level of automation.

ZELTWANGER supports its customers with expertise and a comprehensive service offering, covering the entire spectrum from development to series production. The company's solutions find application in various markets and industries, with a particular emphasis on leak testing for batteries and fuel cells.