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Rheinmetall awarded important sample contracts for fuel cell systems

As an innovative development partner for all aspects of fuel cell-related technology, Rheinmetall AG has just won important new orders for sample hydrogen recirculation blowers, or HRBs. During the first two quarters of the year, two more leading makers of fuel cell systems placed orders with the company for prototype HRBs. Production of the samples, which will be delivered during the 2021-2023 timeframe, is already due to start in July 2021. In the wake of a serial nomination, Rheinmetall therefore sees itself in a strong position for the period starting in 2024 as well, when these customers are expected to issue orders for larger numbers of these components.

Because they redirect unused hydrogen back to the stack during the reaction process, hydrogen recirculation blowers play a central role in the way fuel cell systems function. This increases the efficiency of the fuel cell and extends its service life. In addition, the equal distribution of hydrogen in the stack enables improved starting performance of the system.

Characterized by remarkably low leakage throughout its entire lifespan, these blowers is available in high- and low-voltage versions. Extremely compact, it takes up very little space and features outstanding NVH behaviour. The electrical output ranges from 0.7 to 2 kilowatts, or up to 400 watts in the low-volt version. It is powered by a non-sensor-controlled brushless motor and also features LIN / CAN bus communication and diagnosis functions.

These hydrogen recirculation blowers are so-called balance-of-plant (BoP) products, that is to say, components that supply the fuel cell stack with media. Rheinmetall's Sensors and Actuators division develops these products, benefiting from knowledge and experience gained during two decades in the fuel cell business. Today Rheinmetall is already a leading supplier in the field. Due to the latest successes and anticipated rapid growth in the market, the company is stepping up its development efforts in the BoP product segment; with a number of innovative new components now in the pipeline, the product portfolio is poised to steadily increase.

Hydrogen fuel cell technology is a strategic field of business for Rheinmetall. The company is pushing ahead with various developments in this field, and now plans – among other things – to build a hydrogen development centre in Neuss.

► Key facts

- Sample orders for hydrogen recirculation blowers
- Components going to leading makers of fuel systems
- Shipments scheduled for 2021-2023 timeframe
- Blowers enhance the efficiency and extend the service life of fuel cells
- Development of innovative Bop products for the future of hydrogen technology

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