CAN Newsletter Online

FUEL CELL-RELATED TECHNOLOGY

Orders for sample hydrogen recirculation blowers

As development partner for aspects of fuel cell-related technology, Rheinmetall has just received orders for sample hydrogen recirculation blowers (HRB). The used non-sensor-controlled brushless motor features CAN communication and diagnosis functions.

Rheinmetall headquarters in Neckarsulm, Germany (Source: Rheinmetall)

During the first two quarters of the year, two more makers of fuel cell systems placed orders with the company for prototype HRBs. Production of the samples, which will be delivered during the 2021 to 2023 timeframe, already started 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, explained the company.

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 are available in high- and low-voltage versions, said the company. The products take up little space and feature noise vibration harshness behavior, the company added. The electrical output ranges from 0,7 to 2 kW, or up to 400 W in the low-volt version. It is powered by a non-sensor-controlled brushless motor and also features CAN and LIN 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.

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