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Hydrogen strategy: new customer awards Rheinmetall two orders for control valves – aggregate value in mid-two-digit million-euro range

The technology enterprise Rheinmetall AG continues to successfully grow its business in fuel cell-related products. One of the biggest international truckmakers has placed two first-ever orders with the Group for coolant control valves for use in fuel cell-powered trucks. The fuel cell is a crucially important CO₂-neutral drive solution, especially for heavy transport trucks.

The aggregate value of the orders is in the mid-two-digit million-euro range. The first lot is due to be delivered in 2024 for initial installation in several hundred trucks. Full-scale production is set to commence in 2028.

An electronic thermostatic valve (3/2-way valve) and an electronic coolant valve (2/2-way valve) were ordered for use in the cooling circuit of a fuel cell.

High coolant temperatures have a strongly negative impact on the longevity of a fuel cell. Representing a key improvement, Rheinmetall's newly developed valves assure a highly dynamic yet very exact regulation of the coolant temperature. Previously used thermostats with expansion elements are subject to hysteresis, making them both sluggish and inexact.

Temperatures that are too low can also have a negative effect on fuel cells. Rheinmetall valves – in accordance with individual application requirements – enable freely selectable, precise setting of the required coolant flow. The electronic actuator used here is a tried-and-tested smart truck actuator with CAN bus-capable electronics and an electronically commutated motor.

Moreover, the components' extremely low loss of coolant pressure, coupled with negligible leakage and an innovative valve design enabling an optimum installation space connection and compact packaging, were also important in winning over the customer.

Rheinmetall has developed an extensive array of fuel cell-related products. The Group has been actively involved in hydrogen technology for almost twenty years now and can thus draw on extensive experience.

► Key facts

- Rheinmetall awarded orders for fuel cell control valves
- New customer is a maker of heavy trucks
- Aggregate value in the mid-two-digit million-euro range
- High-performance thermal management vital for efficient operation
- Group has almost 20 years of experience in fuel cell technology



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