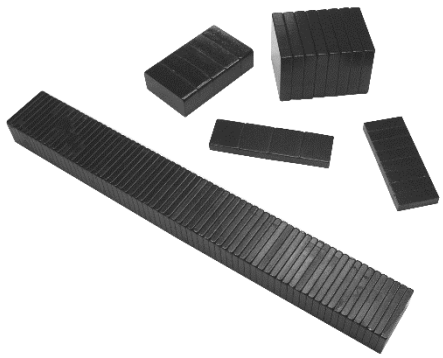
Improved magnetic properties at reasonable prices

New rare-earth permanent magnet family

Hanau - Innovative ideas in product development - this is what characterizes the material specialists at VACUUMSCHMELZE (VAC), who continuously optimize the range of rare earth permanent magnets. The latest result of this development work is a new performance class of neodymium-iron-boron magnets, VACODYM 80X TP. The main features of this alloy are improved magnetic properties and higher environmental compatibility.



A reduction of volatile heavy rare earths, in this case dysprosium, by 1.5 % facilitates the supply of raw materials and supports environmental protection. A remanence increase of up to 50mT contributes to the performance increase in the application. The coercivity field strength (HcJ) can be increased by up to 600 kA/m at part thicknesses of a few millimeters by the grain boundary diffusion process established at VAC. Depending on the coercivity, permanent magnets from this new family of alloys can be used at temperatures exceeding 200 °C. This is opening up a wide range of applications in the automotive, aerospace and high-performance engine sectors.

"VACODYM 80X TP is not only a technical advancement, but also allows us to lower our price level by reducing heavy rare earths," says Michael Putz, Product Manager for Permanent Magnets.