

Honored as World Market Leader

From Hidden Champion to 'Hessen-Champion'



VACUUMSCHMELZE (VAC) products can almost never be seen in our everyday life, as they do their work deep inside electronic components or in the form of metallic cores, coils, wires or foils. For almost 100 years VAC has been developing products for multiple everyday situations, enabling the latest technologies and making our lives easier, more efficient and, above all, safer. This has always made VAC a true Hidden Champion. Last Tuesday, VAC was honored for one of its most versatile and at the same time most complex alloy classes.

The 'Hessen-Champions' are selected by a jury from business, politics and the media. This year, 61 companies applied, ten of them made it to the finals. VAC was victorious in the category 'World Market Leader' with its VITROPERM® alloy class.

„With their products and solutions, the 'Hessen-Champions 2022' are helping to shape the transition towards a climate-neutral, sustainable and future-proof economy.“

Minister of Economics Tarek Al-Wazir



The VAC Team at the 'Hessen-Champions' Award Ceremony



VITROPERM is a revolutionary material that enables wireless charging even in particularly thin smartphones. In electric vehicles, it reduces bearing currents and electromagnetic interference (EMI), protecting motors and batteries. Our market-leading benvac DI sensor utilizes VITROPERM technology to detect both DC and AC fault currents in electric vehicle charging infrastructure with the highest accuracy, ensuring maximum safety and charging efficiency.

VITROPERM is driving technologies of the future by providing our customers with benefits such as size reduction, lighter weight, higher temperature stability, the highest accuracy in sensor technology and superior EMI suppression over a wider frequency range compared to conventional soft magnetic materials.

These products are manufactured using the Rapid Solidification production process. Rapid Solidification is an incredibly precise process that has been developed and refined by VAC over decades. The process involves high-purity materials that are melted at very high temperatures. The emerging melt drop hits the rotating surface of a copper wheel, where it solidifies at an extremely high cooling rate of about 1,000,000K/s (one million degrees per second). The fast rotating motion creates a continuous ribbon with an amorphous structure that is significantly thinner than a human hair. The ribbon can then be further processed via proprietary annealing processes to produce an iron-based nanocrystalline material, with an outstanding combination of soft magnetic properties. This turns it into a cutting-edge material that enables a wide range of new applications.

"We are proud that the jury has honored the complexity and potential of our technology and awarded VAC as 'Hessen-Champion'. This award goes to the entire VAC Team and in particular, to our developers, who have created a fantastic product and an absolutely fascinating process technology, and to our employees, that work in three shifts every day on our furnaces, casters and shears to produce VITROPERM in highest quality. With this achievement, the team has brought the technology to where it is today – to World Market Leadership! I would like to take this opportunity to thank each and every one for this achievement."

Dr. Erik Eschen (CEO, VACUUMSCHMELZE GmbH & Co. KG)

For more information about our VITROPERM alloy class, please visit our [Website](#).

VACUUMSCHMELZE (VAC) is among the world's most highly innovative developers of magnetic materials, inductive components and other related products. With a global network of Sales and Field Application Engineers, VAC designs and manufactures tailor-made solutions for a wide variety of industries, comprising renewable energies, automotive, industrial automation installation technology, and aviation.