

*Into the future of travel at 1200 kilometres per hour:*

## **VACUUMSCHMELZE supplies technology to the winner of the Hyperloop Pod Competition**

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The pod of the TU Delft team, incorporating VAC's magnet system

**Hanau – First place for VACUUMSCHMELZE (VAC) in the international Hyperloop Pod Competition. Hyperloop is a transport system concept based on the principle of pneumatic tube transport, aimed at rapid transport of people or goods in capsules, even over long distances. As a developer and manufacturer of advanced magnetic materials and related products, VAC supplied a magnet system to Delft University of Technology; the team that beat 29 other entrants to win the first test phase.**

The students from Delft University of Technology designed a system that focused on low weight. VAC supported the team by supplying a special magnet system that levitates the capsule, or 'pod', over the rails and catapults it at speeds of up to 1200 kilometres per hour. Norman Lemm, Head of Marketing at VAC, explained "We supplied two linear Halbach arrays incorporating magnets made from our VACODYM<sup>®</sup> 655 HR alloy. The magnetic sections are arranged to maximize magnetic flux density. As the magnet system is a critical factor in achieving a competitive edge, the team from TU Delft approached us with their problem. Supporting student projects is a major priority for VAC, as it enables us to demonstrate the difference that our advanced components can make. We decided to act as a sponsor for this project."

The Hyperloop concept for passenger and freight transport was introduced in 2013 by Tesla Motors entrepreneur Elon Musk. SpaceX, Musk's private aerospace company, launched the Pod Competition in 2015 with the aim of driving the development of a functioning prototype. In the first phase, 115 entrants were whittled down to 30 teams, which were then invited to realize their designs. After extensive trials, the best three were chosen to test their pods at the 1.6-kilometre test track at the SpaceX headquarters at Hawthorne, California. TU Delft achieved the best results.

## **VACUUMSCHMELZE GmbH & Co. KG**

VACUUMSCHMELZE (VAC), based in Hanau, has 4300 employees worldwide, 1,450 of whom are in Hanau. The company designs, produces and markets advanced materials, particularly with magnetic, but also with other physical qualities as well as related products. In 1914, the first vacuum furnace laid the foundation for today's VACUUMSCHMELZE. Industrial vacuum melting techniques for alloys have been in operation since 1923.

VAC Group today achieves annual sales of approx. 380 million euros in over 50 countries and is holder of around 800 patents. The company is among the world's most highly innovative developers of advanced industrial materials.

VAC's range of products comprises a broad array of advanced semi-finished materials and parts, inductive components for electronics, magnets and magnet systems for use in a wide variety of fields and industries spanning watch-making and medical technology, renewable energies, shipbuilding, installation technology, automotive and aviation. VAC's custom solutions are developed in close collaboration with the customer, reflecting the company's expertise in materials, applications and state-of-the-art production technology.

For more information, visit [www.vacuumschmelze.com](http://www.vacuumschmelze.com)

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