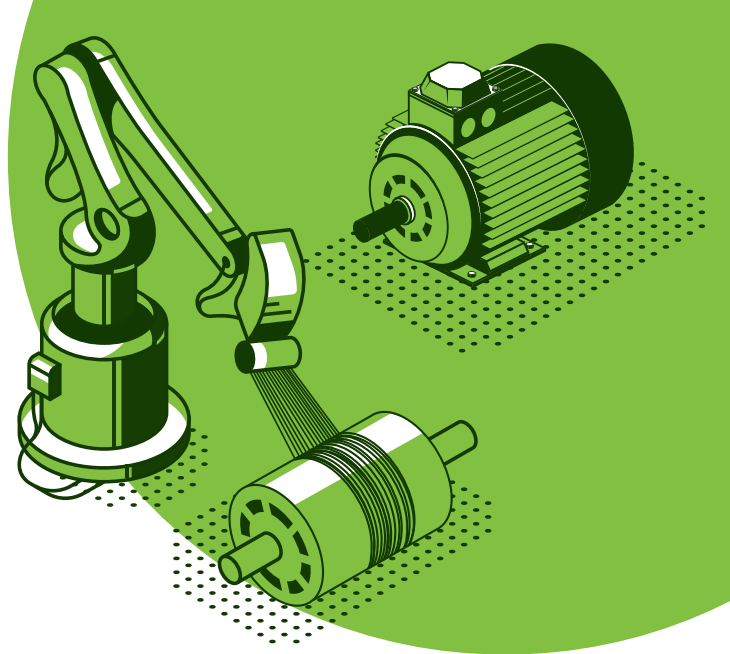


AZL Joint Partner Project

Rotor Sleeves for Electric Motors

Potentials for composite materials and technologies for rotor sleeves to improve electric drive trains



Electric motors are playing an increasingly important role, especially for future mobility. High-speed permanent magnet motors offer several advantages, including high power density and efficiency.

Did you know?

- Providing improved efficiency, high power-to-weight ratio and compact design in combination with optimized performance is the key to powertrain development. Composite-based rotor sleeves are particularly suitable for contributing to all of these development goals.
- Stabilizing the rotor at high rotational speeds in terms of strength and radial elongation with composite rotor sleeves enables tighter air gaps between rotor and stator and reduces eddy current losses compared to metal reinforcements.
- Some manufacturers of high-performance battery electric vehicles, drones and eVTOLs are already using composite rotor sleeves. The technology is now ready for spreading into mass applications, besides mobility also into industrial applications like power tools.

What you will get?

Expert assessment and evaluation of potentials for composite materials and technologies in the field of rotor sleeves for high-speed electric motors.

- WP1: Screening of current and future applications, research landscape and market situation.
- WP2: Impact analysis on requirements, material, process and design layout.
- WP3: Business case scenarios for future design- and manufacturing concepts of selected highlight-applications.

Open to join

Kick-off: October 8th, 2024

Duration: approx. 9 month



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