

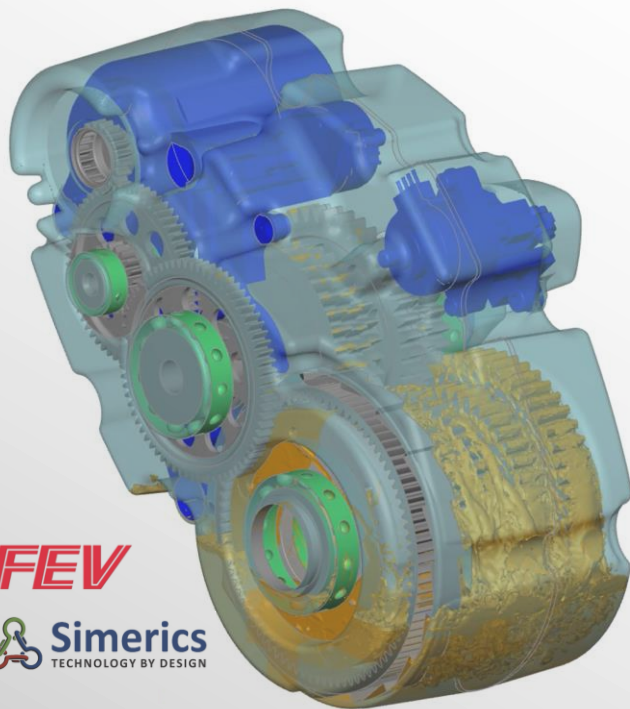
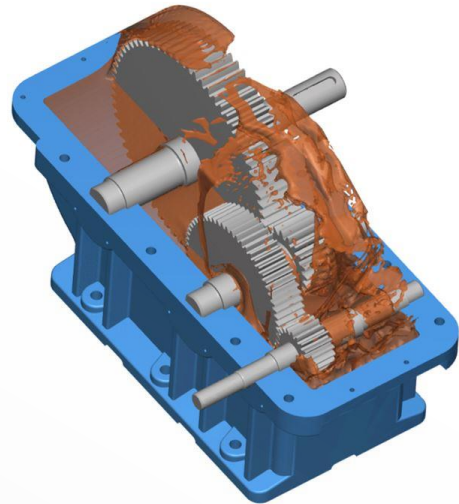


SIMERICS MP+

Drivetrain Oil Splashing

Multiphase Simulation of oil splashing and sloshing

SIMERICS MP+ CFD software can be used to perform three-dimensional CFD analysis with the Volume of Fluid (VOF) approach for multi-phase flows to evaluate the lubrication and cooling of drivetrain components. Splashing and sloshing of oil leads to churning losses, friction driven temperature rise, and added structural loads resulting from fluid forces.



FEV

Simerics
TECHNOLOGY BY DESIGN

Gears and gear boxes are important components in the drivetrain. **SIMERICS MP+** CFD software can accurately resolve gear teeth shape and engagement without need for shrinkage, shifting of gear axes, slicing of teeth etc. Complete gear sets including unlimited number of gears, planetary gears, as well as oil films on the surfaces of the gears can be simulated.

Drivetrain and therefore gears are present in fuel cell propulsion systems as well as traditional internal combustion engine propulsion systems and are thus an important area for CFD analysis.

SIMERICS MP+ is a CFD software environment that includes a robust distributed memory multi-node parallel solver, user friendly GUI based pre- and post-processors, semi-automated model set-up, automated meshing and an expression editor for user functions. The complete set of transient, three-dimensional transport equations are solved. A wide range of applications and physics can be simulated. The latter includes multi-phase flows, cavitation, fluid structure interaction, conjugate heat transfer, radiation heat transfer, design optimization and more.

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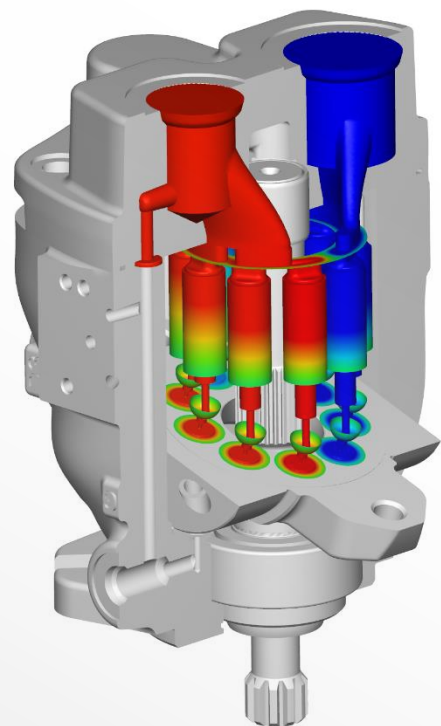
FLOW SIMULATION SOFTWARE



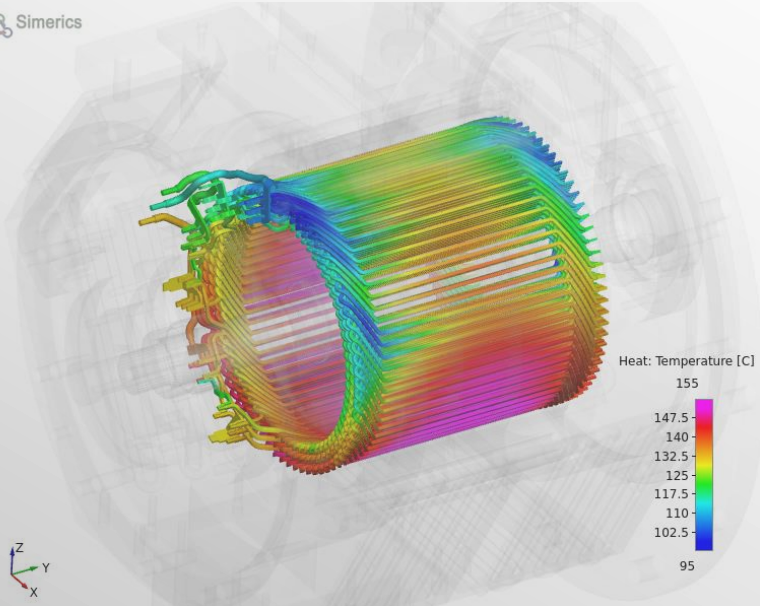
ACCURATE

RELIABLE

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- ACCURATE RESULTS
- RELIABLE SIMULATIONS
- FAST MODEL SETUP

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