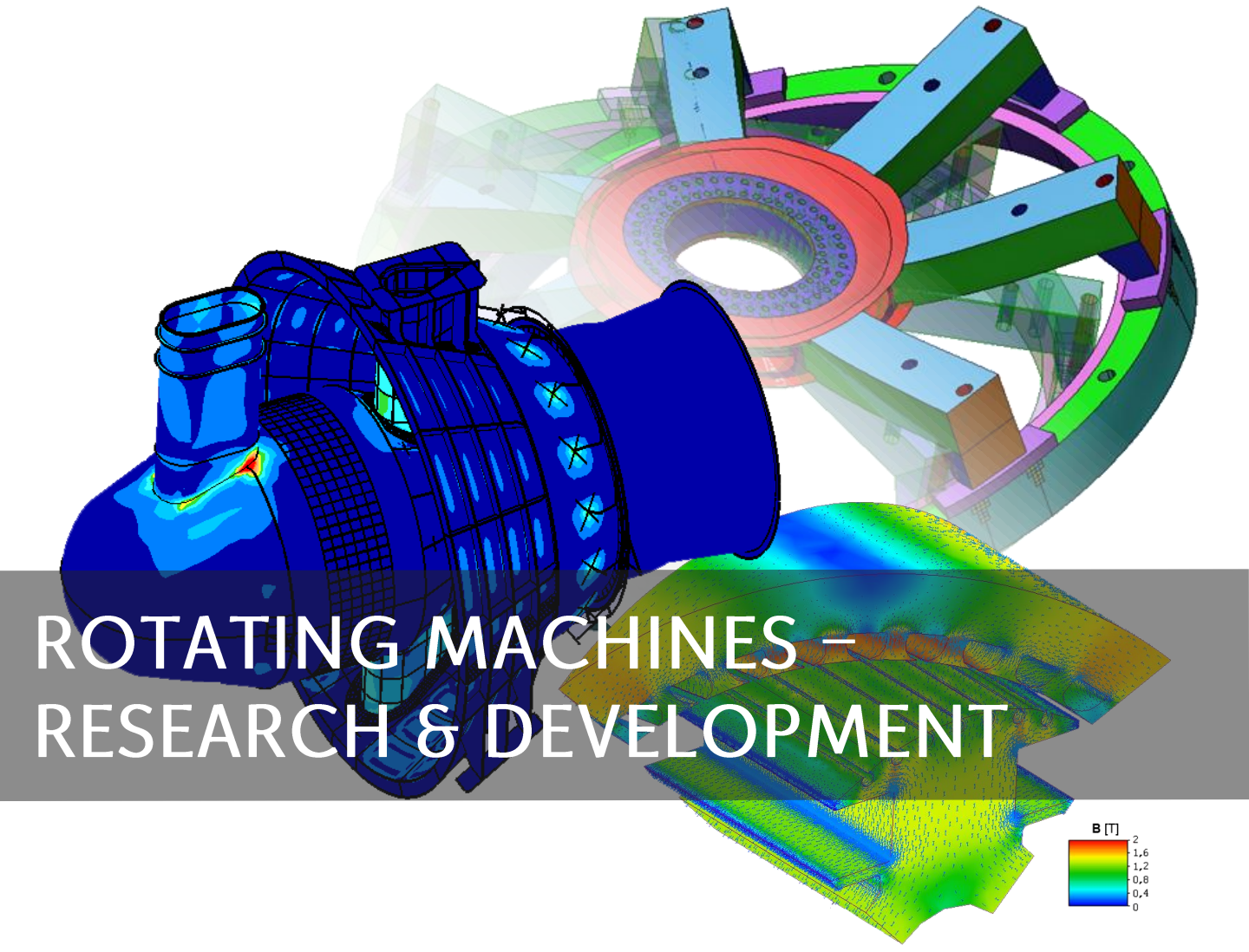
KONČAR
Electrical Engineering
INSTITUTE

tradition.knowledge.responsibility.



ROTATING MACHINES – RESEARCH & DEVELOPMENT

www.koncar-institut.com // www.koncarmonitoring.com

Rotating machines - research and development

Research capacities in KONČAR - Electrical Engineering Institute Inc. have more than 45 years of experience in solving various problems in the area of:

» mechanics,
» ventilation and heat exchange,
» electromagnetism,

using our own and commercial analytical and numerical software packages (FEM - Finite Element Method I CFD - Computational Fluid Dynamics). Simulation 2D and 3D models include actual geometry, real material properties, dynamic effects and motion.

R&D features and services

Mechanics

» Operational firmness calculations
  Linear and nonlinear analysis
» Vibrations and dynamic strength calculations
  Natural frequencies
  Forced vibrations
  Transient analysis
  Seismic resistance
» Lifetime calculations – material fatigue
  Fissure damage restoration
» Mechanisms kinematics and dynamics

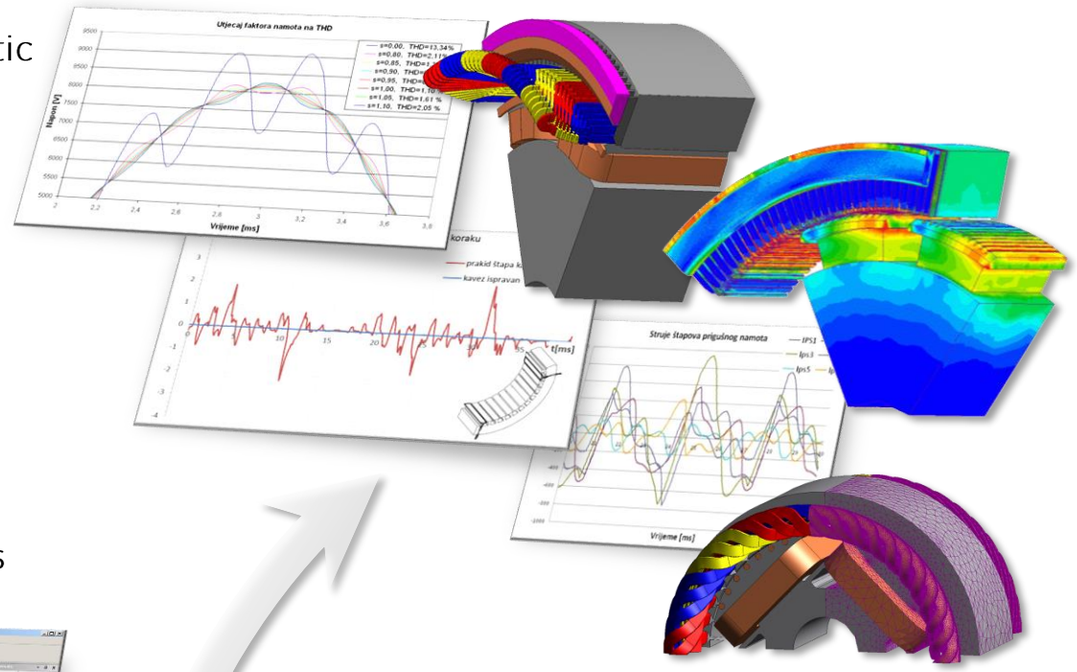
Air circulation and ventilation

» Detailed calculations of fluid flow and heat exchange
» Calculation of ventilation losses
» Modeling of specific components or complete machine geometry
» Ventilation and cooling optimization
» Heat exchange for determining hot spots
» Forced, mixed and free convection

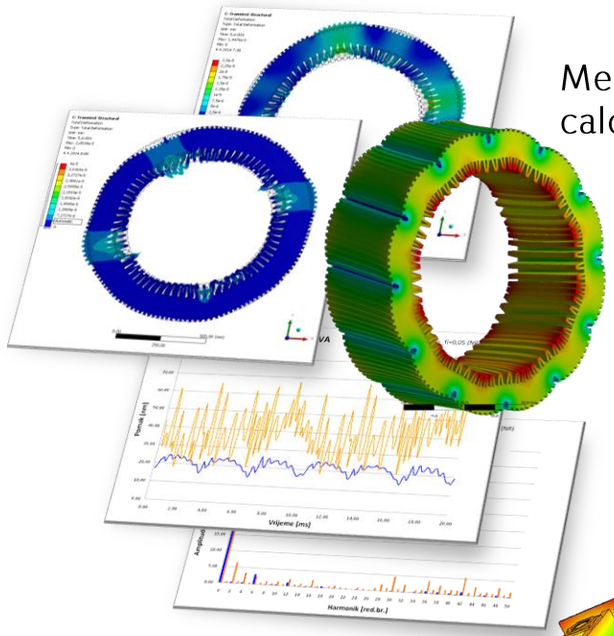
Electromagnetism

» Waveform calculations of voltage, current, magnetic field ...
» Work in different operating conditions
» Asymmetric electrical phenomena
» Eccentricities
» Calculation of losses
» Electromagnetic forces

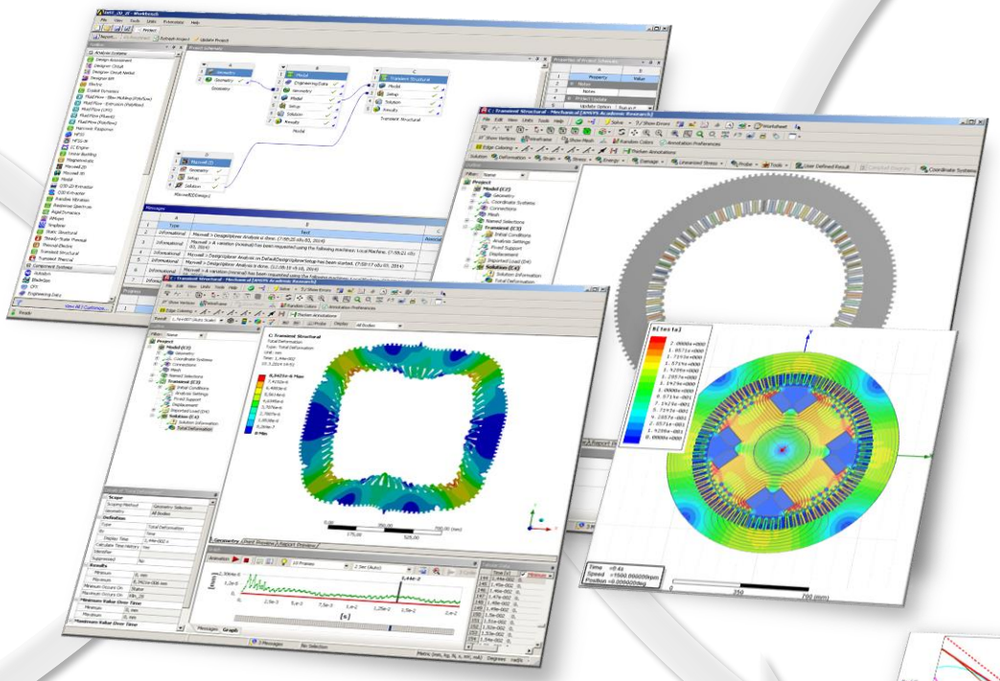
Electromagnetic calculations



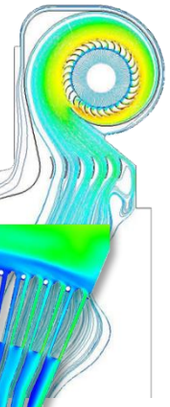
Mechanical calculations

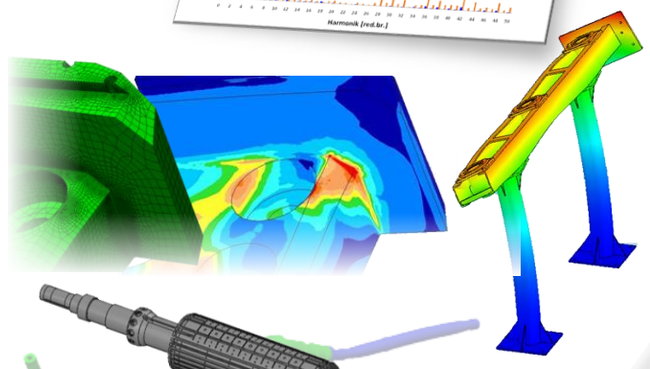


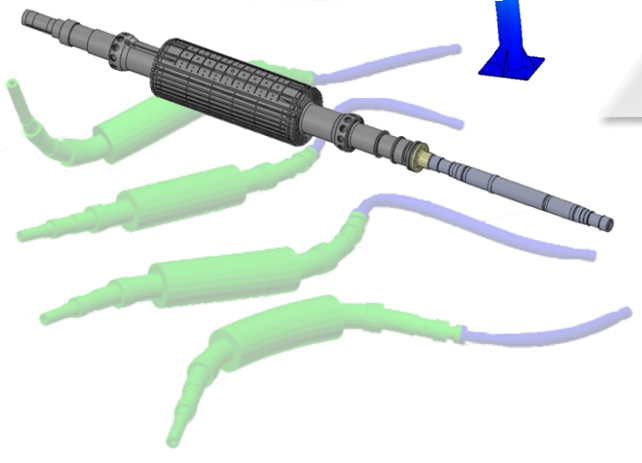
Composite software packages for calculations

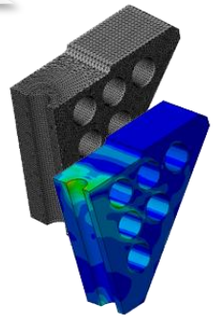


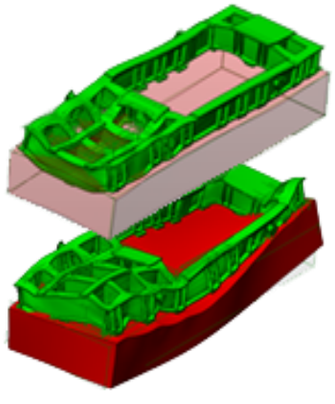
Ventilation and heat exchange calculations

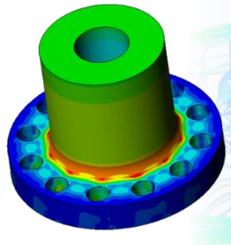


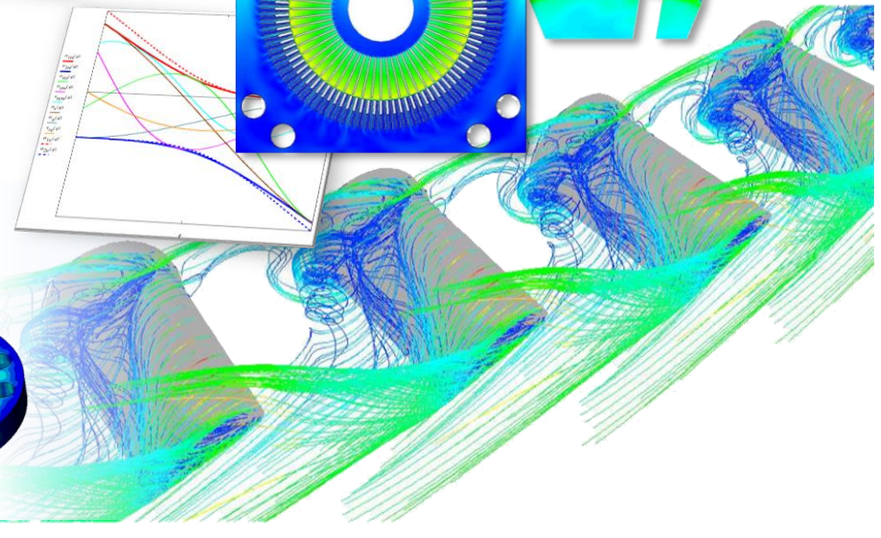












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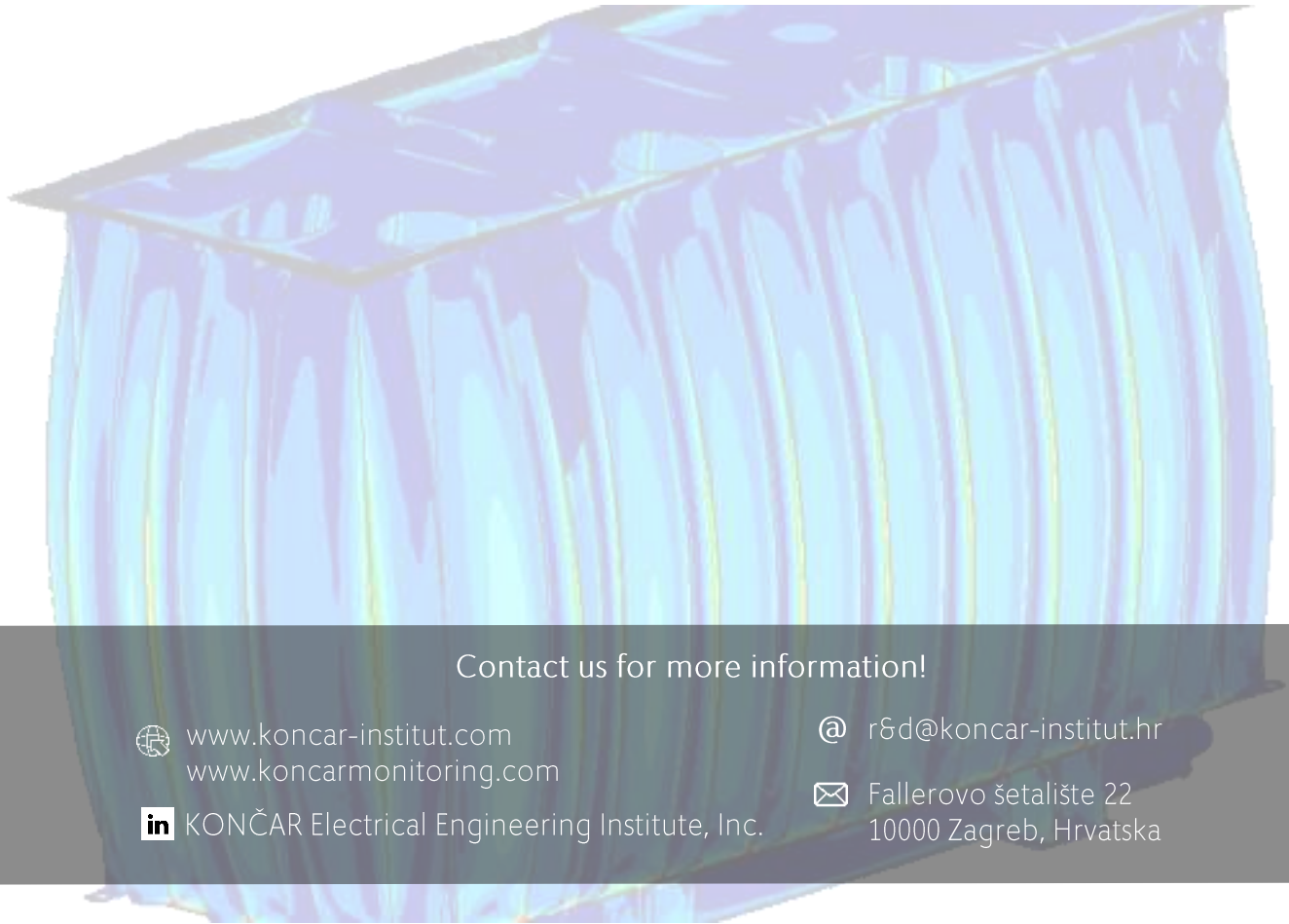

Contact us for more information!

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