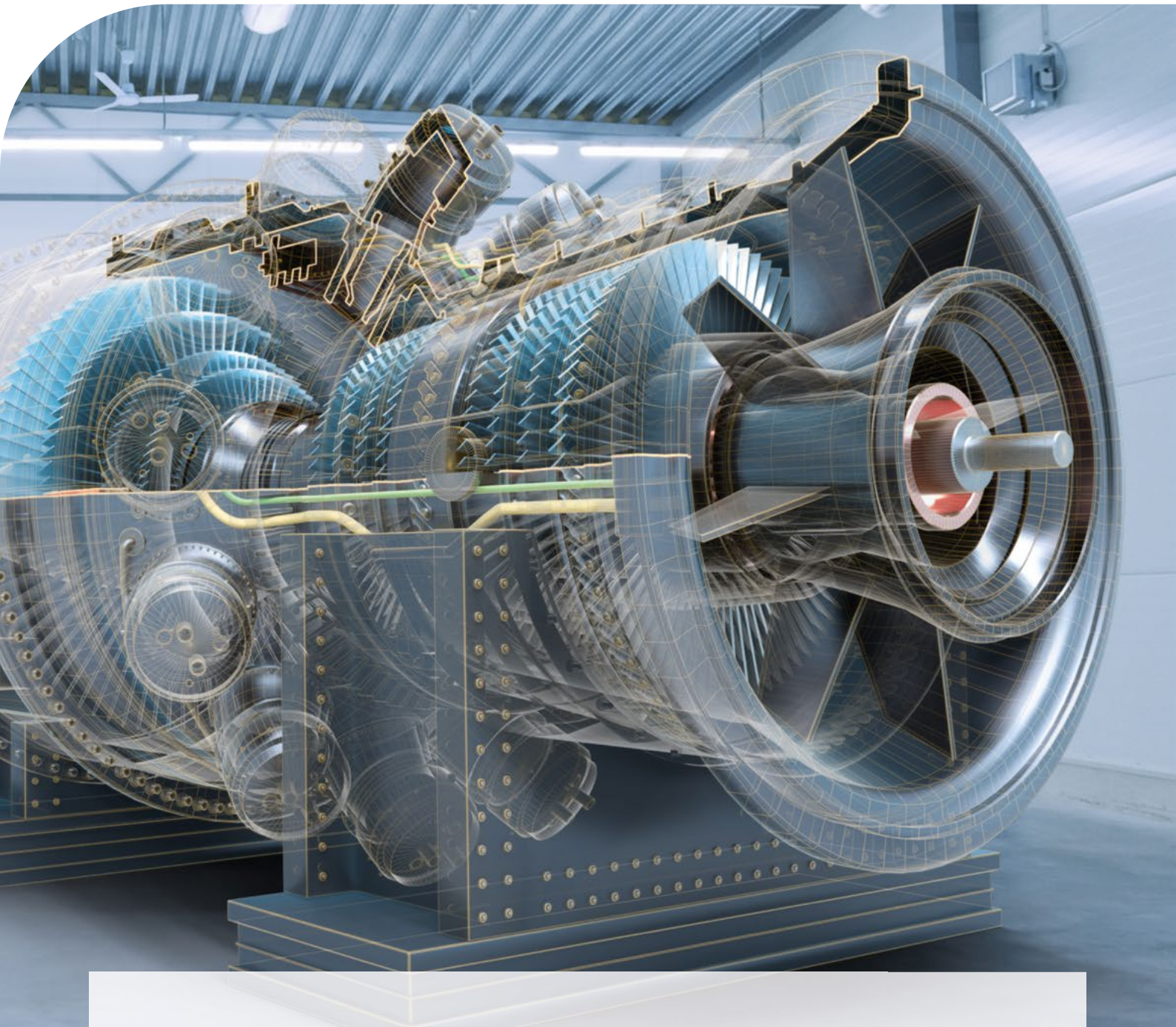


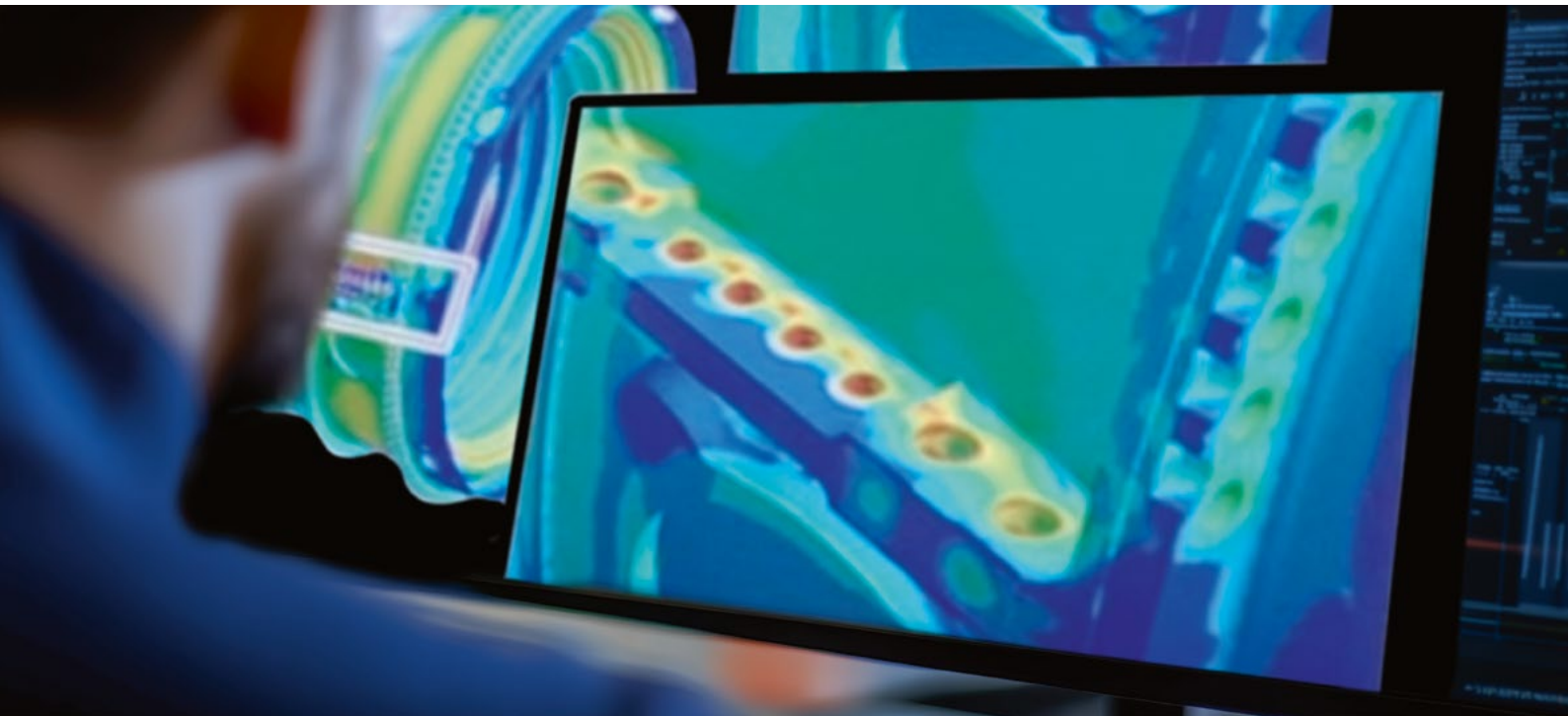
simulations driven by engineering excellence



FEM calculation: Accuracy of detail meets reliability

With our expertise, you can reduce prototype costs, accelerate innovations and bring safe products to market more efficiently

simulations driven by engineering excellence



Knowledge gained through FEM-simulation

Reliable evidence as a basis for economic and ecological optimisations

Component analysis using FEM calculation (finite element method) is a key technology for determining mechanical behaviour in product development. Our range of services focuses on structural-mechanical FEM calculations. Our portfolio includes thermal, static and dynamic analyses as well as highly dynamic and fracture mechanics investigations.

Our offer: The results of our component analysis form the basis for strength verifications, fracture mechanics evaluations or the analysis of deformation states.

Your benefits: Our many years of experience make us a reliable partner for component analyses. We help you to take responsibility for your products efficiently and to implement optimisations sustainably.

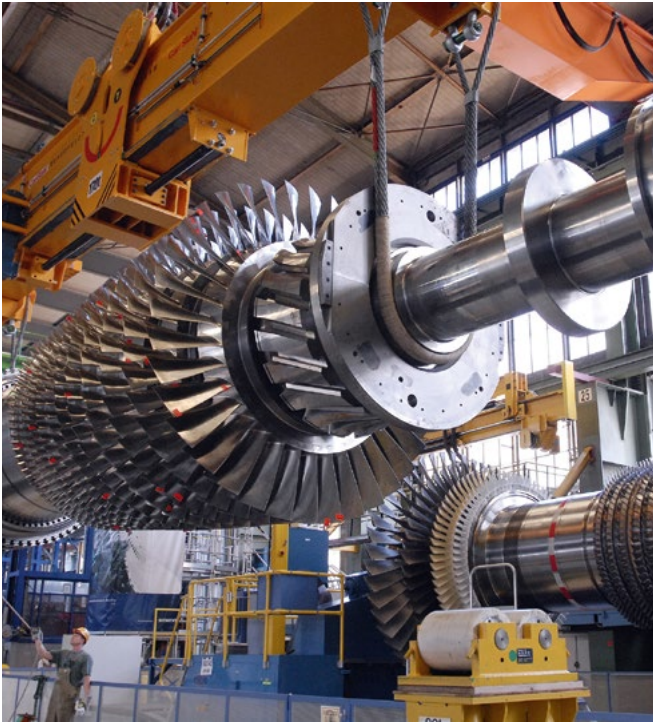
Would you like to find out more?

If your product has to fulfil certain deformation requirements or if you are looking for optimisation for economic or ecological reasons, we are ready to show you concrete potential.



Our services

- Static and dynamic analyses
- Short-term dynamic analyses
- Thermal and fracture mechanics analyses
- Sensitivity and robustness analyses
- Optimisation with regard to quality, production costs and maintenance



Photos courtesy of Siemens Energy GmbH and Siemens Mobility GmbH

Reliable component verifications according to all rules

Are you required to provide evidence to your customer or are you a part owner / product owner and responsible for the development and optimisation of the product in your company? Thanks to our extensive experience we are your reliable partner for component verification.

Our FEM calculations offer you reliable verifications, economic optimisations and innovative development possibilities. Our work is based on established regulations and standards.

Component / Proof	Guideline		
Basis / Action on Structures	DIN EN 1990 (EC)	DIN EN 1991 (EC1)	DIN EN 13001-2
Aluminium Components	FKM-Guideline	DIN EN 1999-1-1 (EC9)	DVS 1608 (weld seam)
Pressure Vessels	DIN EN 13445	AD 2000 Code	ASME BPV-Code
Bolts	VDI-Guideline 2230	DIN EN 1993-1-8 (EC3)	KTA 3201.2
Weld Seam, i. g.	FKM-Guideline	DIN EN 1993-1-8 (EC3)	IIW-Recommendations
Weld Seam, Railway Technology	DVS 1612 (steel)	DVS 1608 (aluminium)	
Load Attachment Point	DIN EN 1993-1-1 (EC3)	KTA 3905	
Lifting Equipment	DIN EN 13155	KTA 3902	ASME BTH-1
Fatigue Strength	FKM-Guideline	DIN EN 1993-1-9 (EC3)	DIN EN 1999-1-3 (EC9, aluminium)
Earthquake	DIN EN 1998-1 (EC8)	KTA 2201 Part 1 - 6	



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Through virtual simulations and precise calculations of physical and technical requirements, we drive our customers' innovations forward. We translate the results of our work into practice-orientated solutions, that enable our customers to achieve excellence in engineering technology.



Dr. Frank Brehmer,
Managing Director ITB

Our services



Component
Strength Analysis



CAD Design



Component
Verification



Electrothermal
Simulation



Flow
Simulation



Light
Simulation

**Are you planning your next project
and want more safety from our
expertise? Then get in touch with us:**

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