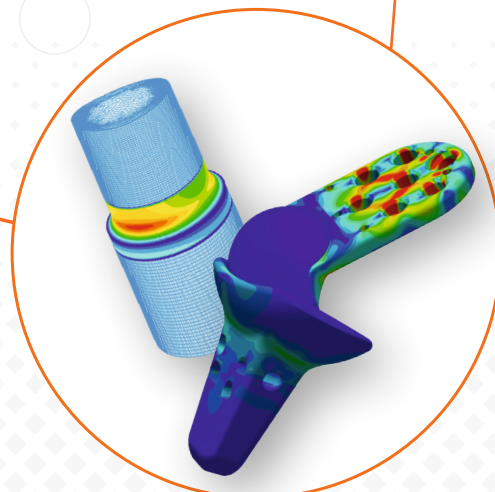
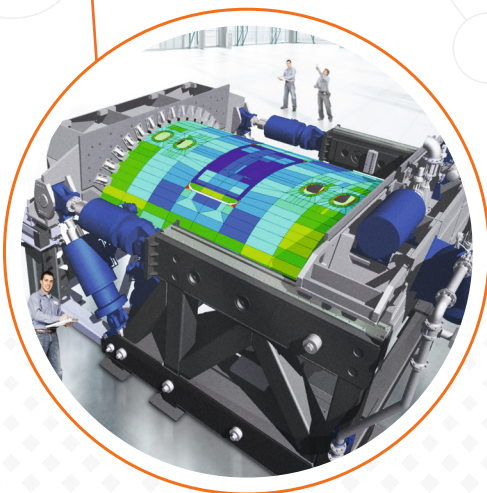


SIMULATION AND STRENGTH ASSESSMENT

Across Industries

We support you from evaluation of measurement data, via FE analysis through to analytical and experimental strength assessment.

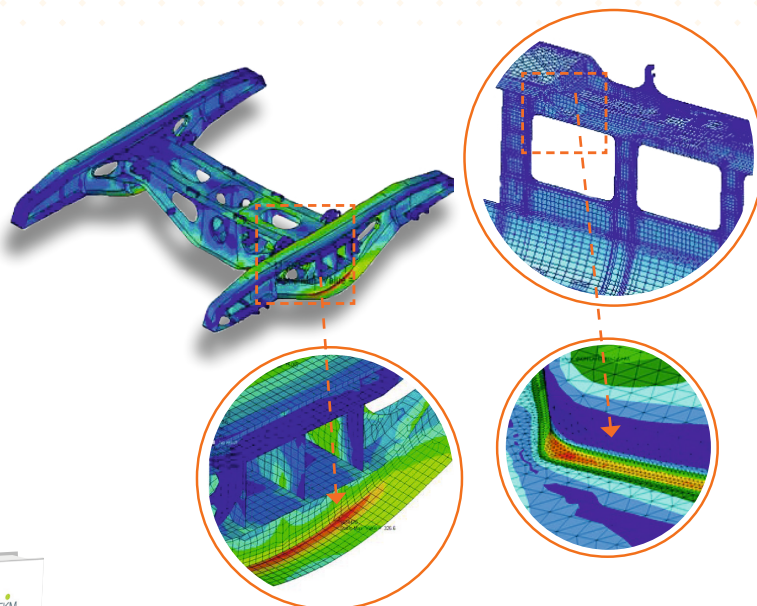


Positioned between research and industry, Applus+ IMA is an internationally recognized, accredited and independent testing service provider.

We support the engineering departments of manufacturers and suppliers along the entire development of a product to ensure its durability, function and safety.

RANGE OF SERVICES FE ANALYSIS

- Large structures as well as components and assemblies
- Contact simulation with/without friction
Material properties (isotropic / orthotropic, plastic / elastic / viscose, composites)
- Stresses and deformations (linear, material or geometrically non-linear)
- Transmission behavior in contact resp.in the connection
- Investigation of bearing ring creep and further slippage symptoms
- Buckling and stability
- Simulation of transient processes
- Harmonic analyses



STRENGTH ASSESSMENT

- We make statements about the safety of constructions on the basis of calculated and measured stresses
- static strength assessment
- fatigue strength assessment via cumulative damage approach
- fatigue strength assessment against endurance limit

according to:

- FKM-Guideline
- DVS 1612, DVS 1608
- Eurocode 3, Eurocode 9
- DIN EN 12663, DIN EN 13749, VDV152
- DIN 743

MEASUREMENTS AND EVALUATION OF MEASURED DATA

- Installation and operation of measurement systems
- Processing of large amounts of data (Big Data)
- Rule-based measurement data correction (drift correction, peak elimination), also partially automated
- Arithmetic operations with measurement channels (combinations, derived measured variables)
- Calculation of statistical parameters
- Correlation analyses, pattern recognition
- Frequency analyses, rain-flow counting
- Assignment of measurement data to GPS positions, creation of „damage maps“
- Test load generation
- Indirect load measurement



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