

ACROSS INDUSTRIES SIMULATION AND STRENGTH ASSESSMENT

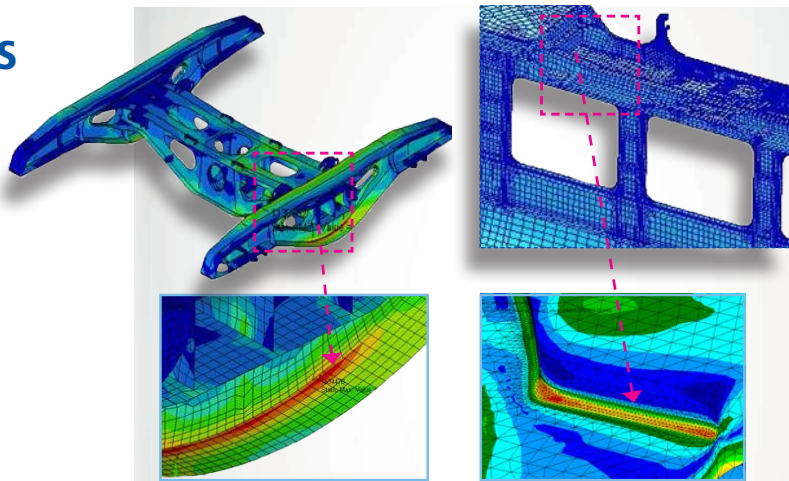
We support you from evaluation of measurement data, via FE analysis through to analytical and experimental strength assessment.

Positioned between research and industry, Applus+ IMA Dresden 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.

Our employee's 40 years of experience across all industries in the field of FE analysis, measurement data evaluation and strength assessment combined with young, innovative minds from science form the foundation for this and open up new possibilities in product development.

RANGE OF SERVICES FE ANALYSIS

- Large structures as well as components and assemblies
- Contact simulation with/without friction
- Material properties (isotropic/orthotropic, plastic/elastic/viscous, 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
- Eigenfrequencies and Eigenforms
- 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

CONTACT

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