

MASONRY STRUCTURES

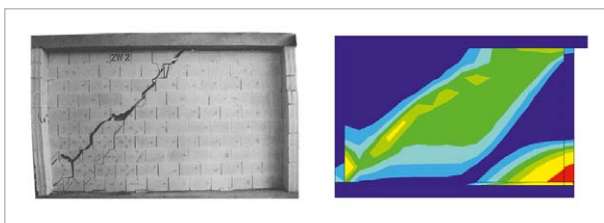
The material library multiPlas for ANSYS is an exceptional tool to use when simulating masonry structures.

Concept

multiPlas is a material library which provides the material models for FEM calculations in ANSYS in the field of civil engineering and geotechnics. multiPlas contains efficient, realistic material models for masonry, soil, rock, sand, concrete, reinforced concrete, steel, wood, mortar and stone. The material models are based on elasto-plastic flow criterion with associated and non-associated flow rules. For FEM calculations in ANSYS, multiPlas has an efficient and robust algorithm for the proceeding of single and multi surface plasticity. A special feature of the material model is the interconnection of isotropic and anisotropic yield conditions which can be combined in numerous ways by the user.

Modeling Masonry

Homogenous and discrete strategies with powerful material models (Ganz, Drucker-Prager, Mohr-Coulomb, DY-COSS) are available in multiPlas for ANSYS.



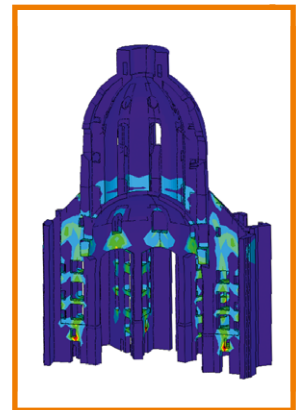
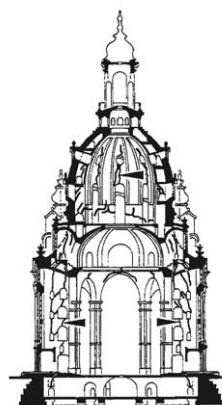
Continuum and discontinuum modeling with efficient nonlinear material models for masonry

Our Expertise

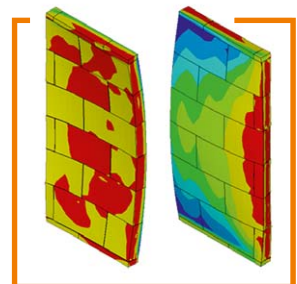
- Thermal simulation
- Mechanic simulation
- Acoustic simulation
- Earthquake analysis
- Sensitivity analysis, optimization and robust design optimization

With our knowledge, competence and long-term experience, we, the Dynardo consulting team, can support you in solving CAE-based tasks.

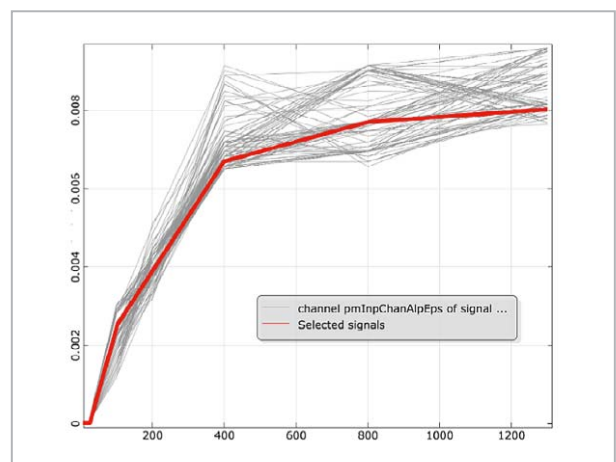
Projects



Stability and crack propagation analysis of the historic Frauenkirche in Dresden



Plastic strain vs. crack propagation



Parameter identification for the prognosis of fire resistance of masonry walls