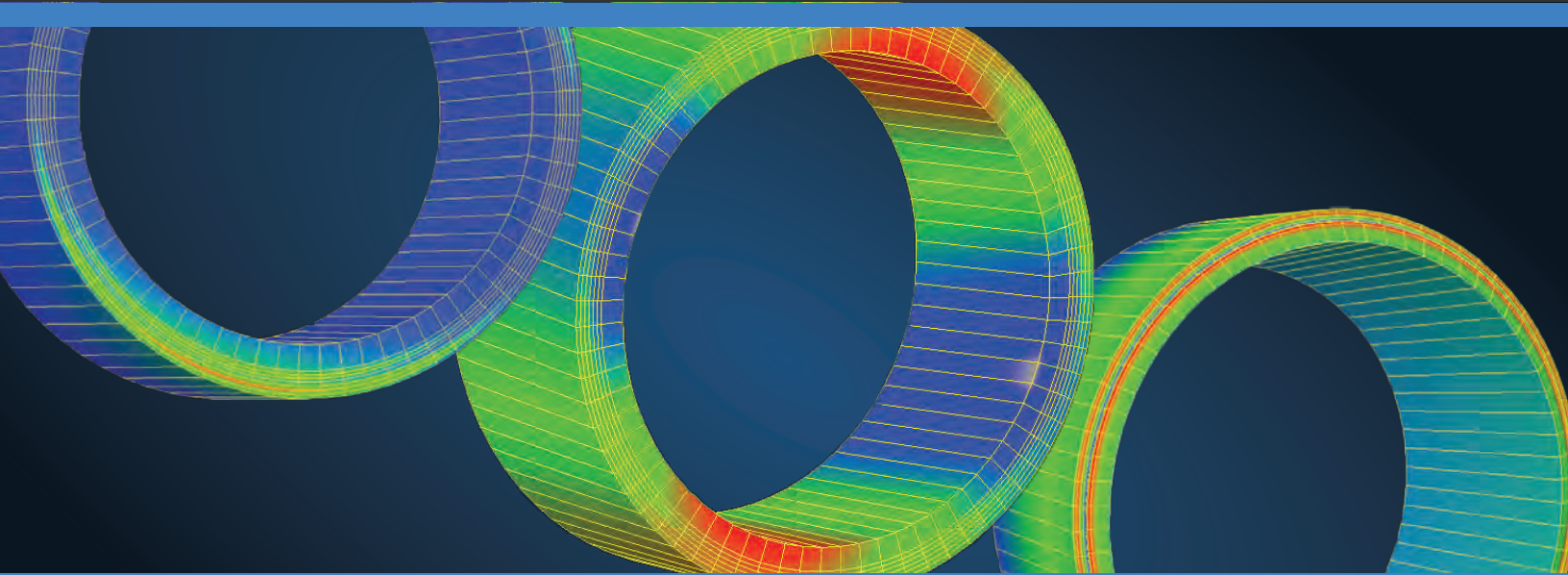
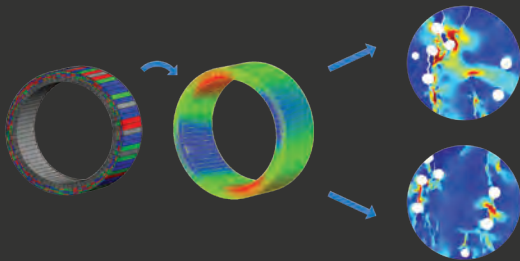


MultiMech

Virtual Testing Software for the World's Most Advanced Materials



Optimization of Composite Tubes and Pressure Vessels using MultiMech



MultiMech offers an advanced optimization tool that applies our TRUE Multiscale technology to composite tubes and pressure vessels. Combining genetic algorithms and the ability to accurately represent microstructural damage within these advanced materials allows for automatic design of high performance composite tube structures, streamlining the engineering design loop.

About The Tube Optimizer

Key Capabilities

- High accuracy due to the characterization of microstructural damage using FEA
- Generates, runs, and alters models autonomously to converge on an optimal tube geometry and layup orientation
- Additional feature randomly inserts customizable manufacturing defects (resin pockets, voids, etc.) resulting in a range of burst pressures for any given tube design

Product Development Benefits

- Automatic model generation eliminates the FEA learning curve and pre-processing time allowing for more efficient engineering analysis.
- Tube optimizer automatically runs multiple simulations based on design constraints, permitting overnight analyses.
- Eliminates the need to fabricate and test multiple physical prototypes, reducing substantial time and cost.

DAMAGE CRITERIA Fiber-matrix debonding • Stochastic Fiber Rupture • Continuum Damage • Matrix Cracking

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