

Pro/ENGINEER Advanced Mechanica

Features and Specifications

Pro/ENGINEER Advanced Mechanica Has All the Capabilities of Pro/ENGINEER Mechanica, Plus the Following Advanced Simulation Capabilities:

Simulate a broader range of analysis types

- Large non-linear deformation analysis
- Pre-stress static analysis, including stress-stiffening effects
- Pre-stress modal analysis, including spin-softening effects
- Transient thermal analysis
- Dynamic analyses for:
 - Time response
 - Frequency response
 - Random response
 - Shock

Support for Advanced Connection Definitions

- Use Rigid Links to bond geometry together as a rigid body
- Use Weighted Links to couple a point to the average of the displacements of a set of referenced geometry

Laminate Modeling Capabilities

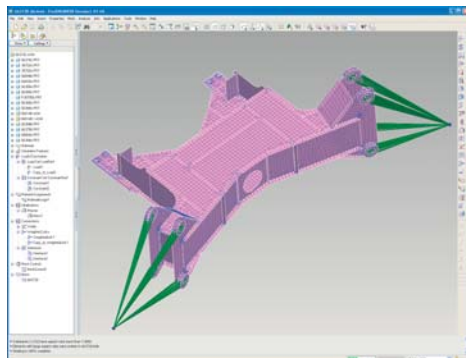
- Support for orthotropic and transversely orthotropic materials
- Tsai-Wu, Maximum Strain, and Maximum Stress failure criteria
- Define shell properties with a laminate ply editor
- Flexible options to view results by ply or relative to material orientation

Access to More Sophisticated Idealization Types

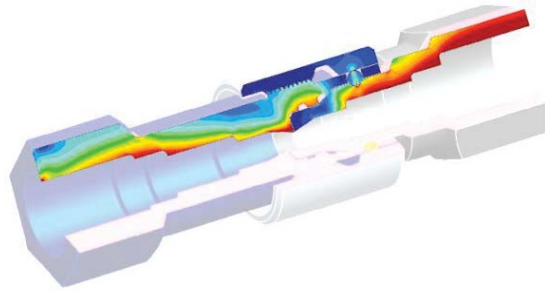
- Mass idealizations defined by component or the full inertia tensor
- Spring idealizations defined by the stiffness matrix including off diagonal terms
- Define advanced conditions for bolt fasteners such as pre-load, stiffness properties and coupling control
- Shell idealizations support for material orientations and non-isotropic material definitions

2D Model Support

- Plane Strain
- Plane Stress
- 2D axis-symmetric



Take advantage of rigid and weighted links to more realistically simulate product behavior.



2D axisymmetry allows you to simplify complex problems, greatly reducing solution time.

Advanced FEM Mode Support

- Hierarchical meshing: assemble meshed models from lower-level components into higher-level assemblies
- Rigid- and weighted-link support
- Laminate support to NASTRAN with PCOMP and PSHLL export options

Language Support

- English, German, French and Japanese

Platform Requirements

- Microsoft Windows (XP, 2000)
- UNIX platforms (Solaris, HP-UX)

For specific operating system levels, visit:

www.ptc.com/partners/hardware/current/support.htm

The Pro/ENGINEER Advantage

With every Pro/ENGINEER add-on module, you gain an advantage over any other CAD/CAM/CAE product, due to the power of associativity. Because all Pro/ENGINEER modules share the same architecture, you don't have to worry about translating model information between applications, which wastes time and often introduces errors in your design. Once you modify your model in the design environment, you can instantly rerun the analysis in Pro/ENGINEER Advanced Mechanica. You don't waste a minute setting up the simulation again and again with each design change. Also, with the Materials Library, you have central access to material properties, including structural and thermal properties, throughout all Pro/ENGINEER modules. By giving you full associativity across CAD, CAM, and CAE functions, Pro/ENGINEER offers a level of speed and ease that's second to none.