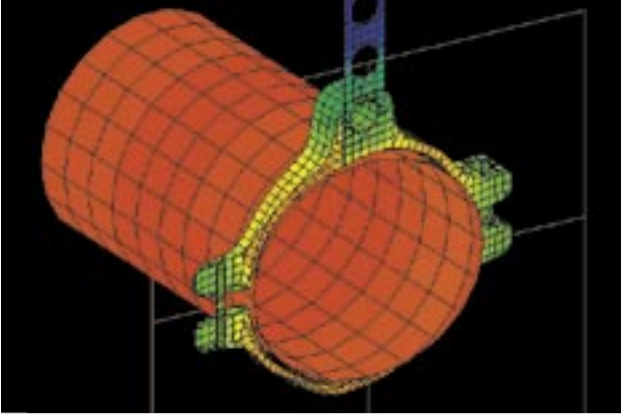




WinTherm[®] 9.0

Thermal Analysis Software



Component-Level Analysis

WinTherm is a component-level thermal modeling tool for Windows-based heat transfer analysis. WinTherm allows users from any engineering background (thermal or other) to simulate heat transfer quickly and accurately through the user interface. The intuitive arrangement of the user interface permits both novice and expert users to set up and analyze thermal systems with minimum user input and no programming.

WinTherm is divided into four distinct segments to guide the user through the solution procedure: Geometry, Editor, Analysis, and Post Processor. Several tutorials included with the software will familiarize users with the simple but elegant modeling procedure. WinTherm begins by importing a surface mesh of the components, editing their dimensions, and defining materials and surface conditions. Appropriate boundary conditions are chosen, and the modeling procedure is complete and ready to run. Users can perform full sweeps of their component level design much faster than with any other software. Improve your bottom line and your product's thermal performance with WinTherm.

Key Features

Complete Thermal Analysis

- Multi-bounce Radiation
- Solid Conduction (steady state)
- Planar ConductionConvection
- 1-D Advection
- Natural Environments
- High Speed / High AccuracyFast Model Setup
- Easy Editing of Parameters
- Engineer-Designed Graphical User Interface

Benefits

- Faster Product Development
- Reduced Reliance on Testing
- Increased Productivity

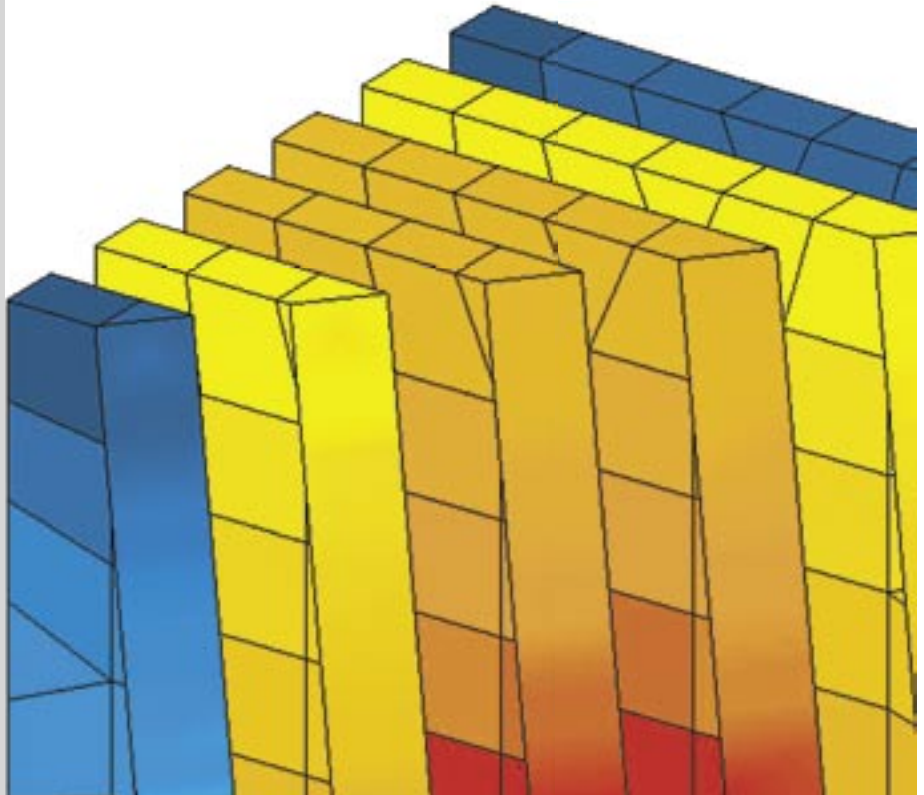
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"Last year alone, WinTherm saved our company thousands of dollars through reduced testing. Our designs are refined earlier in the development cycle, and we can share the thermal results with our customers using ViewTherm."

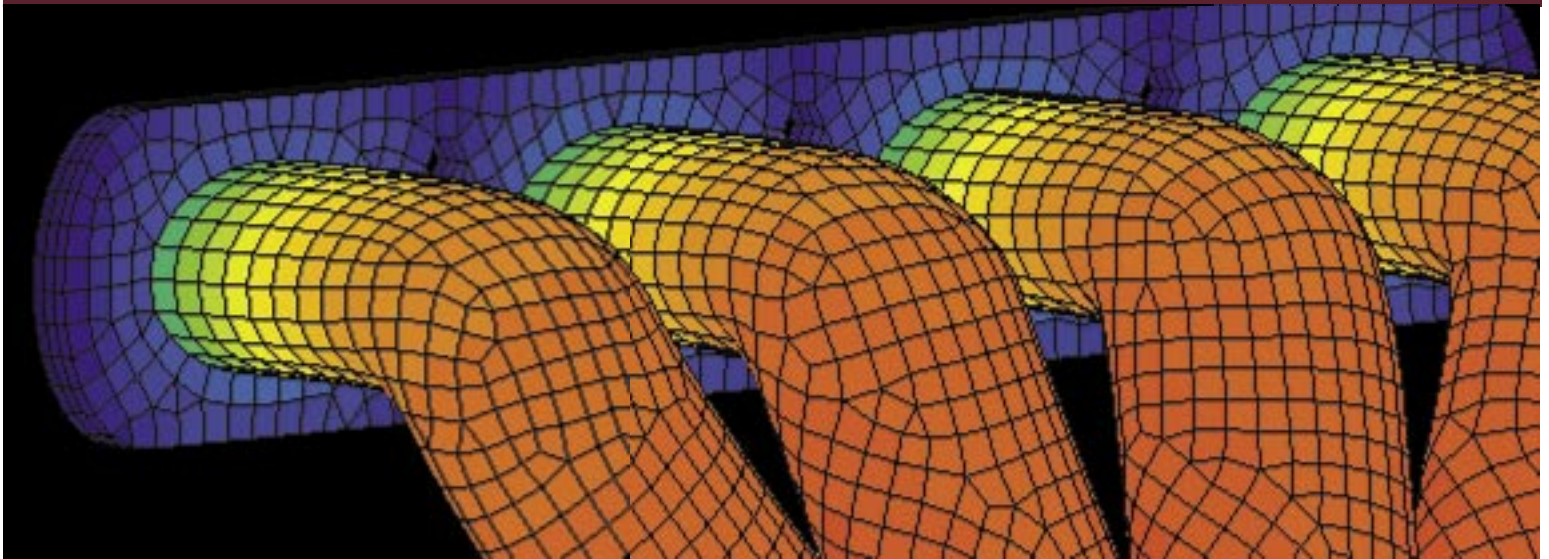
–Engineering Manager

Common Applications

- Electronics and Enclosures
- Heat Shield Analysis
- HVAC Design
- Passive Cooling / Heating
- Brakes & Clutches
- Lighting



ThermoAnalytics[®]



Version 9.0 Features

Face to Face Conduction

Simulates part to part contact
Reduces meshing time
Support for contact resistance

Aerothermal Heating

Blunt and round nose
Wing leading edge

Solid Conduction (steady state)

Support for solid 3D conduction
Solid solution coupled with full conjugate heat transfer analysis
Clipping plane display of internal temp.

Complex Multilayer Parts

Planar mesh objects with up to 20 layers
Solid, air, or vacuum layers
Mixed solid/air layers

Parallel Processing

Shared memory licensing
2 CPU Speedup Average 1.8
4 CPU Speedup Average 3.3

Fluid Stream

1-D Advective fluid flow in ducts automated setup
Multiple fluid nodes in a single part
Automated connection to geometry
Node placement can be visualized

Total Thermal Solutions

Deliver Solutions – to component-level heat management problems. WinTherm predicts the full temperature distribution of your product. From these results, you can modify your design and test the thermal response to the change. For example, a heat shield design can be optimized by varying material, thickness, and proximity to the heat source.

Deliver Speed – WinTherm's state-of-the-art algorithms yield more results in less time. Streamlined model setup gives you more time to focus on optimization, customer needs, and reducing time-to-market.

Deliver Flexibility – Import your surface geometry and change designs with ease; manipulate the geometry within WinTherm to improve your heat management. WinTherm typically has a full return on investment after only one or two projects - based on product improvement, reduced testing, and shorter product development cycle.

