

SIMULIA

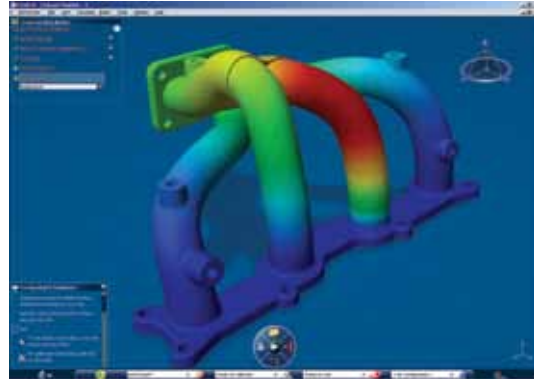
DesignSight Thermal (DTH)

Enables designers, design engineers, and other occasional users of simulation to evaluate part designs under realistic thermal loading conditions

Overview

DesignSight Thermal (DTH) extends the suite of DesignSight simulation products to enable occasional users of simulation to model the complexities of real-world thermal scenarios. The product models single parts under a variety of thermal loading conditions with the goal of providing insights to help designers improve their designs.

DesignSight is for occasional users of simulation who have limited training in FEA. With DesignSight the user is guided through the process of performing a simulation. ExSight, on the other hand, is an expert level product. It allows the user full access to all the expert analysis tools. CATIA Analysis works as a hybrid of DesignSight and ExSight. It is a tool developed for designer analysis, however it contains analyst capabilities similar to ExSight, and the user experience is not guided.



DesignSight Thermal enables the designer to quickly evaluate the temperature distribution in a part and validate the design with respect to thermal requirements.

Features & Benefits

- Simulate realistic behavior under steady-state thermal loading conditions
- Leverage the same Abaqus technology used by expert analysts
- High-performance computing on multi-core workstations
- Ability to run on remote HPC clusters if Abaqus tokens are available
- Automatically generate the right mesh with adaptive refinement
- Based on the new V6 lifelike user experience
- Provide guidance at all times to help the user understand what to do next
- Natural extension of the design experience
- Advanced simulation technology with an easy-to-use interface

DTH Highlights

Enables designers to improve their designs through simulation

DesignSight is a natural extension of the design experience in V6, enabling users to study their design's behavior and to explore different design options. DesignSight is designed to be easy to use and includes the functionality required to simulate the complexities of real-world behavior.

Enables occasional users of simulation to simulate their models under realistic loading conditions

The user experience eliminates the need to understand the nuances of analysis technology. Advanced analysis technology is handled automatically, while the options presented to the user are intuitive and explained in the language of designers. To make the user experience even more tractable, users receive continuous guidance regarding where they are in the simulation process and what they need to do next, so that they are never lost.

Simulations automatically managed through the integrated ENOVIA V6 IP management platform

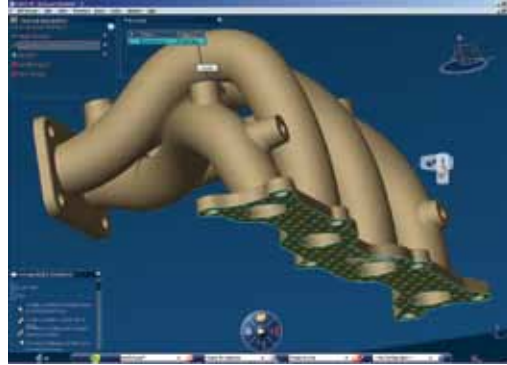
DesignSight leverages the values and benefits of V6. In particular, DesignSight provides a 3D lifelike experience, where the user interacts directly with the 3D model rather than icons and dialog boxes. V6 PLM manages all aspects of design, from part design to product assembly, and all the way through to simulation attributes and results.

Provides high-quality results using the latest Abaqus simulation technology

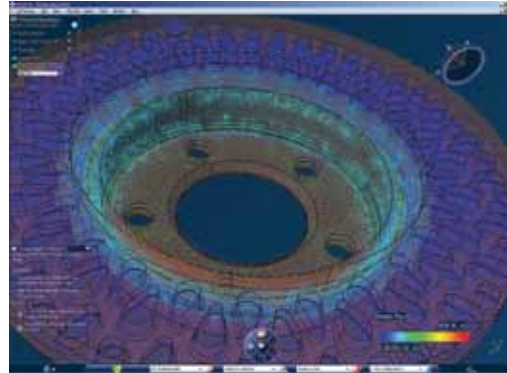
DesignSight uses the same, proven Abaqus technology used by expert analysts. Designers get reliable results backed by more than 30 years of development. Using the same technology in both designer and expert simulation fosters collaboration among the broad range of simulation users within the enterprise.

Rapid turnaround time of large models using high-performance computing resources to enable more design iterations

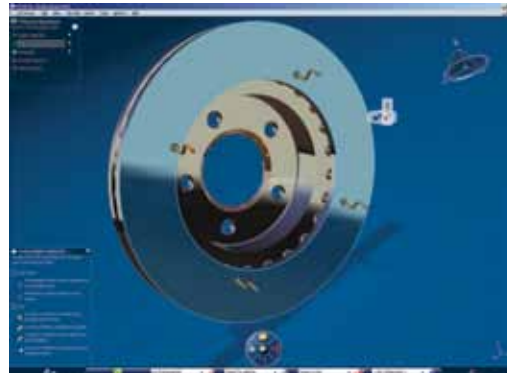
DesignSight includes cutting-edge computation technology to utilize the power of modern multi-core workstations to obtain simulation results quickly. Users with access to a compute cluster and Abaqus tokens can seamlessly run the simulation on the cluster and use up to 128 cores for extremely rapid turnaround times of large models.



Using DesignSight Thermal, the designer can interact directly with the model to define the thermal load application regions and magnitudes on this exhaust manifold.



As shown in this model of a brake disk, the designer can use DesignSight Thermal to study how parts react to thermal loads and to visualize the resulting temperature distribution and heat flow characteristics.



DesignSight provides unique, embedded help tools that guide users through the steps to define a simulation. The Thermal Simulation panel (upper left) and the DesignSight Assistant (lower left) are always available to ensure that the necessary tasks are clear.

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