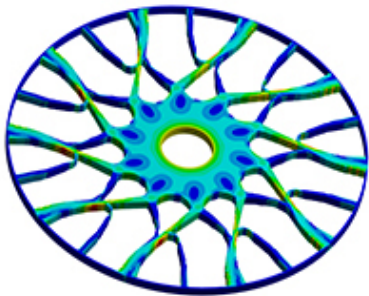
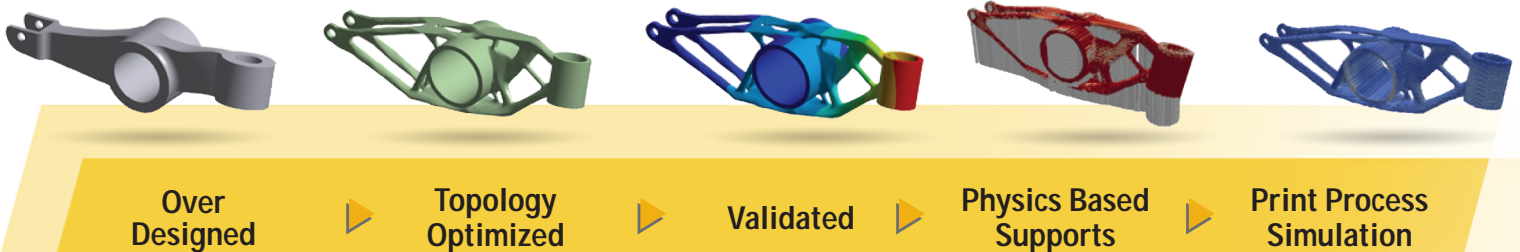




ANSYS Additive Suite

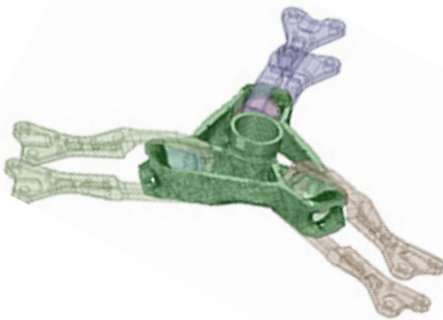
The most powerful simulation solution for metal additive manufacturing

ANSYS Additive Suite delivers the critical insights required by designers, engineers and analysts to avoid build failures and create parts that accurately conform to design specifications. This comprehensive solution spans the entire workflow — from design for additive manufacturing (DfAM) through validation, print design, process simulation and exploration of materials.



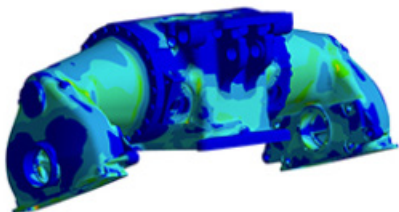
Topology Optimization

For weight reduction and lattice density optimization



STL File and Geometry Manipulation

For geometry repair, lattice creation and cleanup of parts using the software's faceted data tools



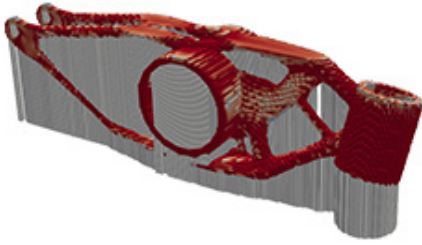
Structural and Thermal Analysis and Design Validation

Full nonlinear, including transient, and linear analysis capability to validate designs under a vast range of scenarios. Both thermal and structural loading conditions can be applied to models to understand performance and durability.

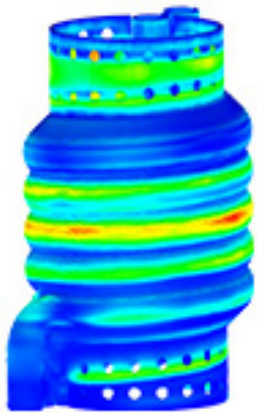


Workbench Mechanical Additive Process Simulation

Native feature in ANSYS Mechanical for predicting part shape, distortion and stresses before printing. It facilitates the set up and solving of print simulations, while offering maximum flexibility for adjusting workflow settings as needed.



- Simulate AM processes within the ANSYS Mechanical environment
- Physics-based topology optimization with built-in manufacturing constraints for AM
- Generate efficient lattice structures
- Simulate the thermal-mechanical build process for accurate prediction of part distortion and stresses
- Use of nonlinear and temperature-dependent material properties (with no inherent strain assumptions)
- Efficient HPC performance scaling with ANSYS HPC products



Courtesy of Additive Industries

ANSYS Additive Print

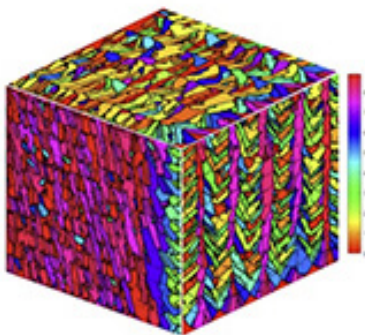
A stand-alone product for prediction of part shape, distortion and stresses, and for the automatic generation of optimal support structures and distortion-compensated STL files.

Unparalleled accuracy in predicting:

- Final shape of the printed part
- Layer-by-layer distortion and stress
- Optimal support structures
- Distortion-compensated STL files
- Potential blade crash

ANSYS Additive Science

A stand-alone application for design-stage investigation of materials and optimal machine parameters.



- Determine optimum machine/material parameters
- Control microstructure and material properties
- Manufacture using new metal powders faster and more efficiently
- Reduce the number of experiments needed to qualify components
- Create process qualification procedures based on comparisons between simulation-predicted “correct” — and sensor-measured “actual” — machine behavior

Visit www.ansys.com/additive to learn more.

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