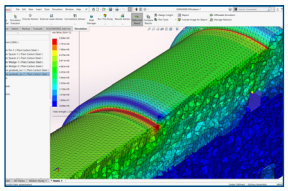
WHAT'S NEW IN SOLIDWORKS 2020—SIMULATION

SOLIDWORKS Simulation

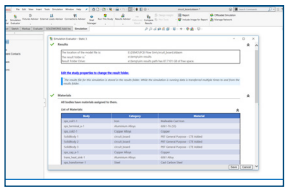


1 Accelerated Simulation Calculations

- Combine linear elements for faster solution and quadratic elements for higher accuracy in the same simulation study.

Benefits

Validate designs more quickly while still capturing accurate results for critical components.

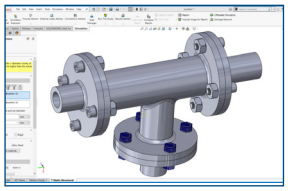


2 Simulation Evaluator

- Check for common errors in simulation, such as result location, material, and mesh volume.

Benefits

Be confident that you have the correct simulation setup and results.

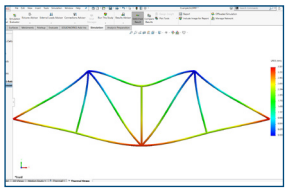


3 Distributed Coupling for Pins and Bolts

- Allow faces attached to Pin and Bolt connectors to deform.

Benefits

Achieve a more realistic representation of a connector's behavior.

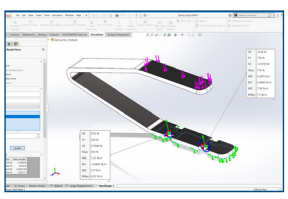


4 Thermal Loads for Beams

- Import temperatures from thermal analysis on models with beams as load to perform stress analysis.

Benefits

Save a substantial amount of time and computer resources by using beams instead of shells and solids.



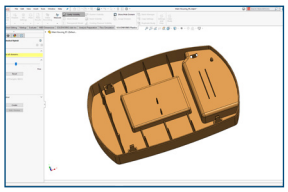
5 Free-Body Forces for Nonlinear Studies

- Now you can calculate free-body forces for contact, external loads, restraints, and more in nonlinear studies.

Benefits

Help users quickly obtain results such as Reaction Forces.

SOLIDWORKS Plastics

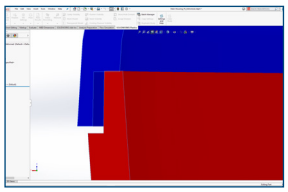


6 Redesigned Mesh Property Manager and Enhanced Solid Mesh Workflow

- Streamline mesh creation with Mesh Property Manager and create a hybrid mesh, combining tetrahedral and prism elements, with Solid Mesh.

Benefits

Reduce the number of steps to create a mesh and make it better suited for plastic injection molding.

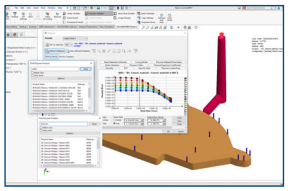


7 Ability to Create Body from Deformed Shape

- Export a deformed shape as a SOLIDWORKS part after running a warpage analysis.

Benefits

Evaluate a part's deformed shape and assembly fit requirements for the plastic injection molding process.

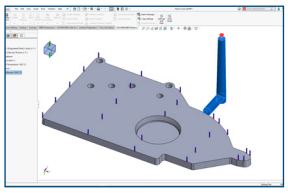


8 Material Library Updates

- Access an accurate and up-to-date online database for plastic materials.

Benefits

Save time by finding the material you need ready for use in the Plastics Material Library.



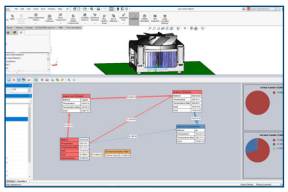
9 Geometry-Based Boundary Conditions

- Assign more boundary conditions, such as injection points and control valves, directly on geometry entities. Geometry and boundary conditions are directly connected and automatically updated when changes occur.

Benefits

Position injection points and control valves more accurately.

SOLIDWORKS Flow Simulation



10 Flux Plot

- Display as a graph the amount of heat transferred from one component to another by conduction.

Benefits

Easily explore the heat path and understand your thermal design.

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