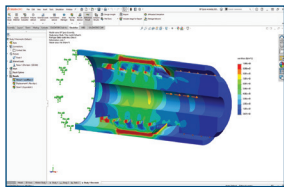


WHAT'S NEW IN SOLIDWORKS® 2021— SIMULATION

SOLIDWORKS Simulation



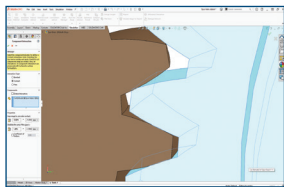
1

Faster Contact Simulation

- Significantly speeds up contact simulation calculation
- Improvements include parallel computing, better CPU usage, faster stiffness calculation and more robust data communication for contact

Benefits

Solve models with contact considerably faster.



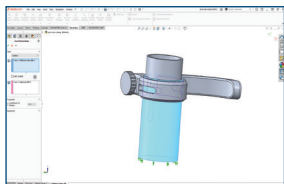
2

Contact Stabilization

- Apply small stiffness to qualified regions to stabilize models so solver can get started without instability issues

Benefits

Achieve better convergence for contact.



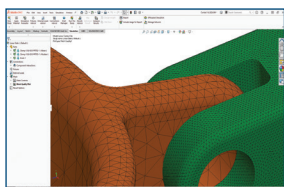
3

Geometry Correction for More Realistic Contact Representation

- Geometry correction terms are automatically calculated and applied for contact between curved surfaces

Benefits

Improve contact convergence and accuracy for curved surface contact.



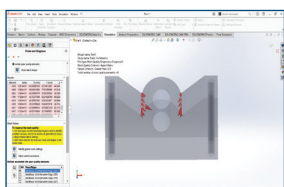
4

New Mesh Default: No Enforced Common Nodes

- Improvements in accuracy for bonding interactions enable robust and fast meshing

Benefits

Obtain mesh much faster with substantially same accuracy as with common nodes between parts.



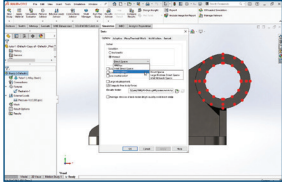
5

Mesh Diagnostics

- Identify, isolate and prompt to fix poor quality elements

Benefits

Improve mesh quality with new set of mesh diagnostic tools.



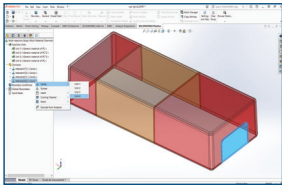
6 Automatic Equation-Solver Selection

- More accurate auto-selection of equation solver with commensurate improvements in speed and memory usage

Benefits

Use built-in intelligence to choose best solver to save time.

SOLIDWORKS Plastics

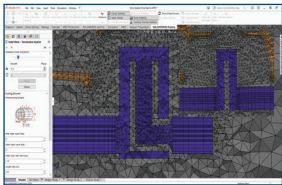


7 Redesigned Plastics Manager Tree

- Redesign of various nodes of Plastics Manager tree provides more streamlined and logical workflow for material selection, domain specification, process parameters and other key plastics simulation tasks

Benefits

Take advantage of new workflow that greatly simplifies simulation preprocessing.

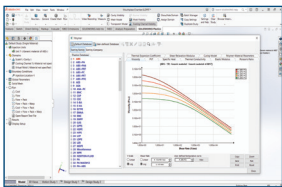


8 Automate Baffle and Bubbler Modeling and Meshing

- Improvements to baffle and bubbler cooling system components (used in mold areas that can't be cooled effectively by regular cooling channels).
- For baffles, blade inserted in channel splits flow passage into two halves
- With bubblers, plate is replaced with smaller inner tube

Benefits

Improve cooling results accuracy by modeling and meshing real baffles and bubblers.



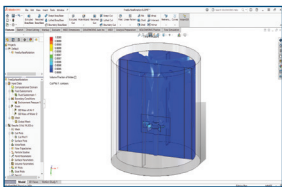
9 Plastics Material Library Enhancements

- Dassault Systèmes partnerships with leading global plastics material suppliers ensure customer access to most up-to-date and accurate plastics material data

Benefits

Improve results accuracy with accurate and up-to-date material data.

SOLIDWORKS Flow Simulation



10 Free Surface for Rotation

- Calculation of free surface for tasks, including rotating equipment

Benefits

Easily explore and understand your mixing process.

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