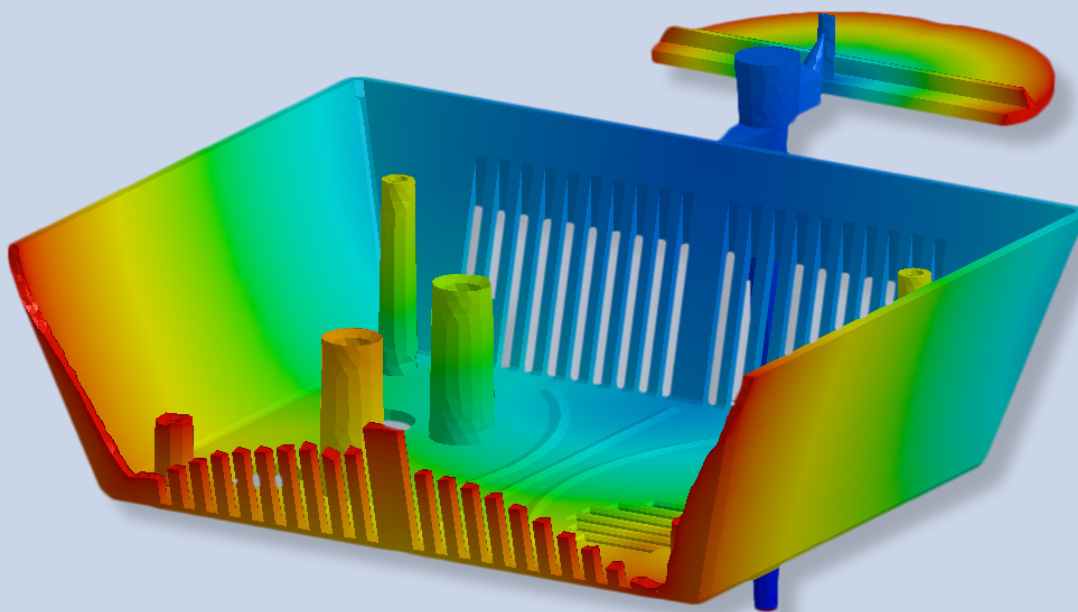# SIMPOE-MOLD
PLASTIC INJECTION SIMULATION

PREDICT AND AVOID MANUFACTURING DEFECTS DURING THE EARLIEST STAGES OF PART AND MOLD DESIGN

Simpoe-Mold enables part designers, mold designers and mold makers to optimize the design of plastic parts and injection molds.

For companies that design plastic parts or injection molds or manufacture plastic parts, Simpoe-Mold helps users predict and avoid manufacturing defects during the earliest stages of part and mold design, eliminating costly mold rework, improving part quality, decreasing time to market and optimizing production cycle times. The Simpoe-Mold plastic injection simulation solution is targeted towards all players involved in the plastic industry, whether they are product designers, mold designers, mold makers or plastic part manufacturers. Simpoe-Mold allows simulation with shell and solid mesh, with or without inserts, and it can handle complex shapes. Simpoe-Mold also allows simulation of more advanced processes, such as gas-assisted injection, co-injection molding, bi-refringance, overmolding, multishot or multi-domain injection.
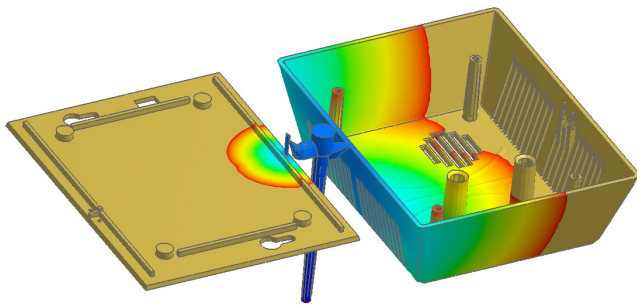
FOR PLASTIC PART DESIGNERS

Simpoe-Mold ENG

Simpoe-Mold ENG lets plastic part designers optimize plastic parts for manufacturability during the initial stages of product design. It lets designers simulate the filling and packing phases of the injection molding process thus helping identify common molding defects, including short shots, air traps, weld lines, fiber orientation and sink marks. It also helps predict required injection pressure and tool clamping forces thus enabling selection of an appropriate molding machine

- Easy-to-use interface
- Import CAD in STEP/IGES/STL formats
- Import CATIA V5
- Solid and shell parts support
- Built-in customizable material data base that includes more than 5,000 materials

- Built-in customizable machine data base that includes more than 3,000 references

- Automatic surface including midplane and volume meshers

- Simulate filling and packing phases of injection molding process up to ejection or de-molding

- Identify common molding defects such as short shots, air traps, weld lines, fiber orientation and sink marks

- Predict required injection pressure and tool clamping force, enabling selection of an appropriate injection molding machine

- Display distributions of shearing and temperature growth due to shear heating, allowing designers to avoid material degradation and optimize fill times

- Predicts process cycle time

- Visualize melt front animation, weld lines, air traps, sink marks, fiber orientation, volumetric shrinkage, and temperature/pressure fields

- Automatic report generation with HTML, PPT and Word Formats
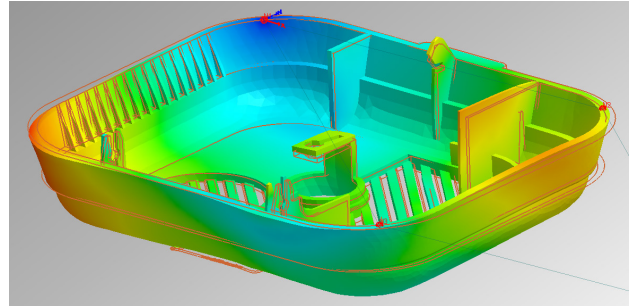

Fiiling Analysis using Simpoe-Mold ENG

FOR PLASTIC PART DESIGNERS, MOLD DESIGNERS AND MOLD MAKERS

Simpoe-Mold TOOL

Apart from the functionality embedded in Simpoe-Mold ENG, Simpoe-Mold TOOL additionally enables mold designers and mold makers to optimize their mold design. Simpoe-Mold TOOL allows users to create and analyze single, multicavity and family mold layouts. It also provides cooling system analysis, including multiple cooling channels, baffles and bubblers and

conformal cooling. It can predict part warpage due to internal stress, temperature and shrinkage.

- Provide cooling system analysis, including multiple cooling channels, baffles and bubblers and conformal cooling

- Predicts part warping due to internal stress, temperature, and shrinkage

- Links to structural analysis using Abaqus and other third-party software; export of deformed and counter deformed geometry

- Visualize warpage

Warpage analysis using Simpoe-Mold TOOL

Highlights

- Easy-to-use interface

- Import CAD in various formats such as STEP, IGES, STL and CATIA V5

- Easy-to-use and automatic solid and shell meshing

- Built-in customizable material data base that includes more than 5,000 materials

- Built-in customizable machine data base that includes more than 3,000 references

- Predict required injection pressure and tool clamping force

- Visualize melt front animation, weld lines, air traps, sink marks, fiber orientation, volumetric shrinkage, and temperature/pressure fields

- Automatic report generation with HTML, PPT and Word Formats

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