Faurecia

Customer Success Story

Autodesk® Simulation Moldflow®

Autodesk Simulation Moldflow software is an integral part of every product development project in our company. It is a very versatile solution that helps us to serve ever-changing and more challenging product requirements from our clients.

—Mr. Kishor Phadtare
Lead Engineer—Process CAE
Faurecia

Smooth under pressure.

Autodesk Simulation Moldflow helps Faurecia to better manage temperature and pressure issues during auto parts production.

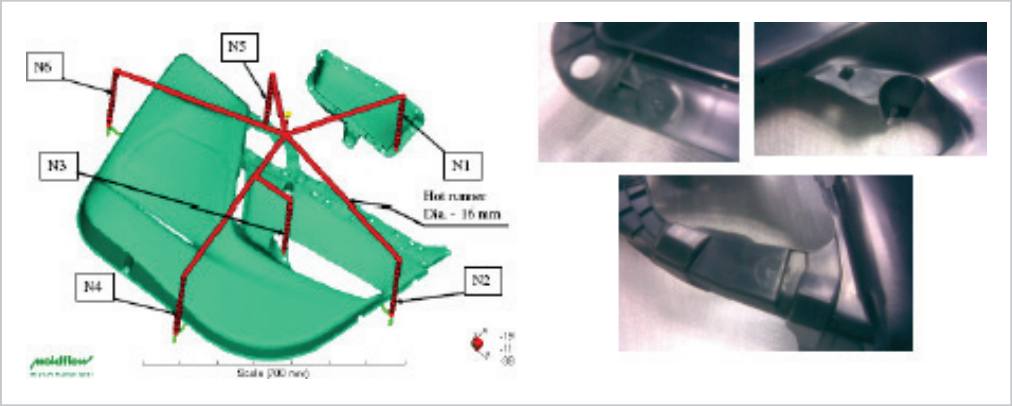

Image courtesy of Faurecia

Project Summary

Faurecia, headquartered in France, is a leading specialist in the engineering and production of automotive solutions. Through a series of acquisitions and mergers, the company has emerged as a global leader in automotive seating, emission control technologies, interior systems, and automotive exteriors. Today, Faurecia operates in 33 countries with 84,000 employees working across 270 production sites and 40 research and development (R&D) centers.

Faurecia's customer portfolio includes every leading automaker from around the world, including manufacturers in emerging economies such as China, India, and Korea. In India, specifically, the company operates manufacturing plants in Bangalore, Chennai, Hingewadi, and Manesar. It also recently opened an R&D center in Pune.

The Challenge

To differentiate themselves from the competition, automakers are always looking for ways to enhance the interior and exterior appearance of their vehicles. In India, while working for one of the world's leading automakers, engineers with Faurecia's Interior Systems unit faced a challenging situation in the development of a new door panel model that would include a speaker grill. The objectives were to create a map pocket family mold for the door panel with two differently sized parts assembled together, and to find the weld line positions and air trap in the speaker grill using talc-filled polypropolyne (TF-PP) material.

The Solution

The design team at Faurecia Interior Systems looked to Autodesk® Simulation Moldflow® plastic injection molding design software to achieve optimal inputs for the model design of the door panel. Using Moldflow's analysis tool, they were able to easily generate a mesh model for the speaker grill holes using the shape factor feature.

"Autodesk Simulation Moldflow made it possible to balance the pressure distribution in the two differently sized parts of the map pocket family mold for the door panel," says Mr. Kishor Phadtare, Lead Engineer—Process CAE for Faurecia. "Based on the analysis results in Moldflow, we were able to choose a design with a better nozzle position. Moldflow gives a perfect nozzle opening sequence regardless of the complexity of the part."

The Result

Autodesk Simulation Moldflow predictions helped Faurecia Interior Systems ensure that the required pressure and temperature were maintained during the filling of the TF-PP material in the speaker grill holes, and detect trapped air by locating the accurate positions for the air vents. Moldflow also helped Faurecia's design team to achieve optimum results for the map pocket family mold parts by providing accurate results on the filling pressure required for the different sizes of the parts in the door panel assembly.

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