

# Using PAM-STAMP 2G FAURECIA reduces tooling design time for seat components by 20%

**faurecia**

**S**eat slider rails are parts linking the seat to the car's floor, they are safety critical parts which Faurecia is expected to manufacture with outstanding quality in order to guarantee crash resistance. Part quality, lead-time, and tool and die costs make a seat's production challenging. Stamping simulation helps Faurecia tackle this challenge.

ESI Group has developed PAM-STAMP 2G, a complete, integrated, scalable and streamlined stamping solution taking into account the physics of materials. PAM-STAMP 2G offers a set of powerful interactive tools and functions providing guidance and support from part development to final stamping tool quotation, die design, formability and try-out validation. It includes PAM-AUTOSTAMP, a module based on a unique technology which allows Faurecia process engineering to easily and quickly prepare a single simulation for the seat components. This module delivers the detailed results required for validating the formability issues such as splits and wrinkles.

Once the component's design was finalized, PAM-STAMP 2G was used to run a formability test and define the stamping process. It enabled Faurecia to predict the binder wrap conditions, anticipating cracks and slip and controlling the shock line movement. The press and tooling features were measured and incorporated in the PAM-STAMP 2G simulation software in order to accurately model the process.

Springback being a major issue in stamping, Faurecia engineers used springback simulation to adjust the tooling geometry in order to produce seat components with the desired shape after springback.

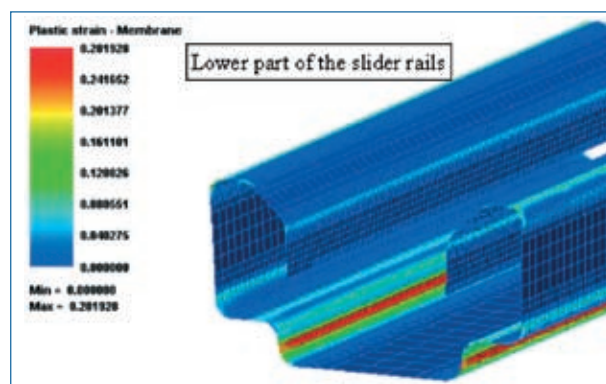
“ Thanks to PAM-STAMP 2G we have been able to predict with accuracy the stamping process of slider rails. We've used it to predict and manage thickness distribution, stress, strain and cracks apparition and springback distortion. Simulation results being identical to real parts, PAM-STAMP 2G helped us to adjust tool design and achieve high quality for die tooling and seat components. ”

**Vincent Retailaud, Tracks Product Line Bending Process Manufacturing Engineering Manager, Faurecia.**

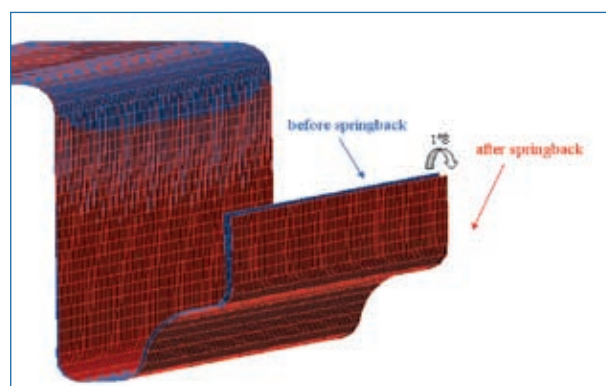
PAM-STAMP 2G helped Faurecia design right first time tooling, take decisions early in the design process and minimize manufacturing risks. As a result, Faurecia reduced tooling time to design seat components by 20%.



Slider shape – courtesy of Faurecia



Formability - Plastic strain analysis on the lower part of the slider rail



Adjustment - Springback effect on the upper part of the slider rail

## About Faurecia

*Faurecia is one of the global leaders in the automotive supply industry. It specializes in the design and assembly of six major modules that account for up to 15% of a vehicle's value: seats, cockpits, doors, acoustic package, front ends and exhaust systems. An engineering and services group for the automotive industry, Faurecia has a turnover of about 11 billion euros and employs 60,000 people. Operating 160 sites in 28 countries, the group is the second largest automotive supplier in Europe in terms of sales to carmakers. Faurecia designs, develops and manufactures vehicle modules that are delivered as complete physical entities to carmakers' assembly lines.*