



**ISMR SAYS:** Autoform has launched its new HydroDesigner module for rapid die and process design of hydroformed parts

**Focus on hydroforming and tubefforming**

**F**or rapid die and process design of hydroformed parts, AutoForm has launched its new AutoForm-HydroDesigner module.

For tubular hydroformed parts, it allows die designers and process engineers to select the appropriate initial tube diameter, create a parametric addendum, define the parting-line (tool-separating-plane) and to determine the bending line – in about one hour.

“Design modifications can be implemented in seconds,” AutoForm told ISMR. “Thanks to parametric linking to our tryout and optimiser modules, the process developed in AutoForm-HydroDesigner can be immediately tried out and automatically optimised.”

**Part geometry analysis**

The AutoForm software solution for tube hydroforming consists of the AutoForm-HydroDesigner and AutoForm-Hydro modules. AutoForm-HydroDesigner allows a user to analyse the part geometry and to design a tool concept in minutes.

“This is especially important for part designers, die face engineers, process planners and tool makers in the automotive industry where product cycles are being drastically reduced,” said the company. “AutoForm-Hydro then allows a user to rapidly perform accurate tryout simulations of the tube hydroforming process.”

Used together, these software modules are designed to automatically close all holes; define the centre line; analyse appropriate strains; generate an addendum at both ends of the part; create upper and lower tools; specify the bending line and perform tryout simulation.

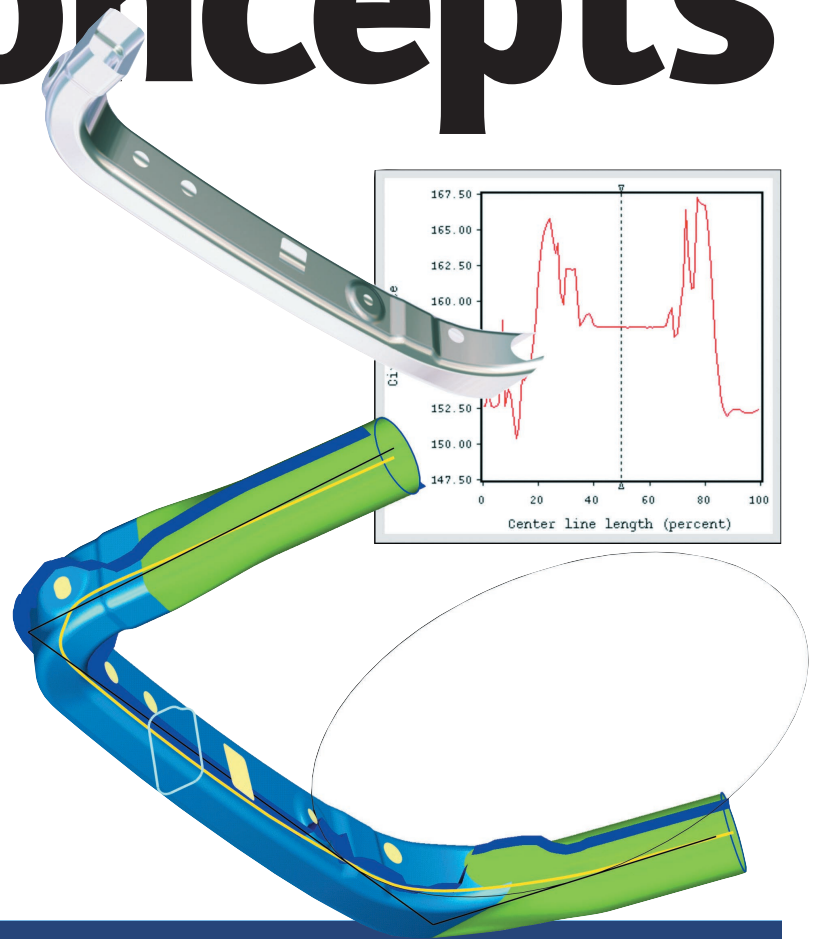
With the AutoForm-Hydro simulation module, users can try-out the complete hydroforming process involving all process steps: pre-bending, pre-forming, annealing, hydroforming and calibration. It now includes an incremental solver for pre-bending.

“AutoForm-Hydro is very fast, so a user can perform many simulations in a short period of time,” the company told ISMR. “This makes it possible to optimise the entire hydroforming process in just one day.” **ISMR**

A new software solution bridges the gap between part design and tryout simulations

# Rapid tooling concepts

**Right: ‘The entire hydroforming process can be optimised in one day.’**



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**EDITOR'S NOTE**

For rapid die face design of stamped parts, AutoForm has released new features of its AutoForm-DieDesigner software module. This software is used to develop and evaluate multiple die face concepts in a few hours. The module's new features include the ability to develop flanges on the addendum to determine the trim line and an option for evaluating and optimising trim angles.

AutoForm's new AutoForm-BlankDesigner and AutoForm-Nest allow users to determine minimum rectangular, trapezoidal or developed blanks and to nest them optimally on the coil. In establishing the optimal nested configuration, the software considers not only material usage but also the costs of different coil widths. With parametric linking to AutoForm-DieDesigner and AutoForm's tryout and optimiser modules, die designers can optimise die geometry, with regard to material costs, very early in the tooling design cycle.