

Press Release

Springback Compensation with AutoForm Version 4.1

Zurich, Switzerland, August 16, 2006: AutoForm Engineering GmbH, the leading provider of software solutions for the die-making and sheet metal forming industries, releases AutoForm software version 4.1 with a unique solution for geometry compensation of part and tool based on springback results - at EuroBLECH 2006 (Hall 11, Booth F40).

Dr. Waldemar Kubli, CEO of AutoForm, explains: "With a user oriented approach combined with full integration in our existing software and automatic surface modifications, the geometry compensation of part and tool is now available in AutoForm version 4.1."

With version 4.1, AutoForm again demonstrates its innovative strengths, fully integrating geometry compensation for springback in its existing software. Therefore, die-face engineers can directly take into account springback results and compensate the appropriate tool geometry. Automatically, springback values of the stamped part are transferred to the draw die, both for free and clamped springback. Compensation regions are automatically determined and can also be modified manually. The link between springback results and tool geometry and the definition of compensation is realized with just a few parameters. Compensation of the die faces is implemented in the opposite direction of springback, with the same value. The computation of the compensation value is performed in a few minutes with the most modern algorithms, and the compensated tool geometry is automatically used as input for the next simulation. With few optimization loops, a final stamping can be achieved within the required tolerances. The die-face engineer's work is therefore reduced to a minimum.

AutoForm's springback methodology has been validated in various industrial applications, substantially improving processes in tooling departments and significantly reducing manufacturing costs. Firstly, the number of tryout loops is reduced, which directly reduces manufacturing time and costs. Secondly, the planning reliability for capacity and logistics is improved throughout die development departments, tool shop and assembly operations, increasing throughput and productivity.

"In the international marketplace in which we operate, it is very important to continuously improve processes and to fulfill increasing customer requirements. It is an exciting question, which of the stamping companies will succeed and be the best and the fastest." added Dr. Waldemar Kubli.

The simulation of sheet metal forming and the prediction of wrinkles and cracks are state of the art developments that have led to major productivity increases in die-making industries over the last decade. The calculation of springback and the required tool compensation have been recent major challenges. Already with version 4.0, AutoForm's software enabled users to set up a fully associatively linked model of the entire process layout, including subsequent operations in the shortest time, and to simulate the entire manufacturing process including springback. As a result, it is possible to analyze and compare different manufacturing concepts starting with the first draw to the finished part, in only one day. The complete manufacturing process of the stamped part can be analyzed in detail, immediately after the release of part design. In addition, in order to check part quality, the part can be virtually clamped in the gauge and the deviation from the target geometry can be determined.

The implementation of springback compensation allows a process engineer to define the tool data so that the effect of springback is compensated, and by running a new simulation the stamped part can be analyzed. Today, only AutoForm software can automatically compensate for springback by running several optimization loops within an acceptable time-frame for industrial applications.

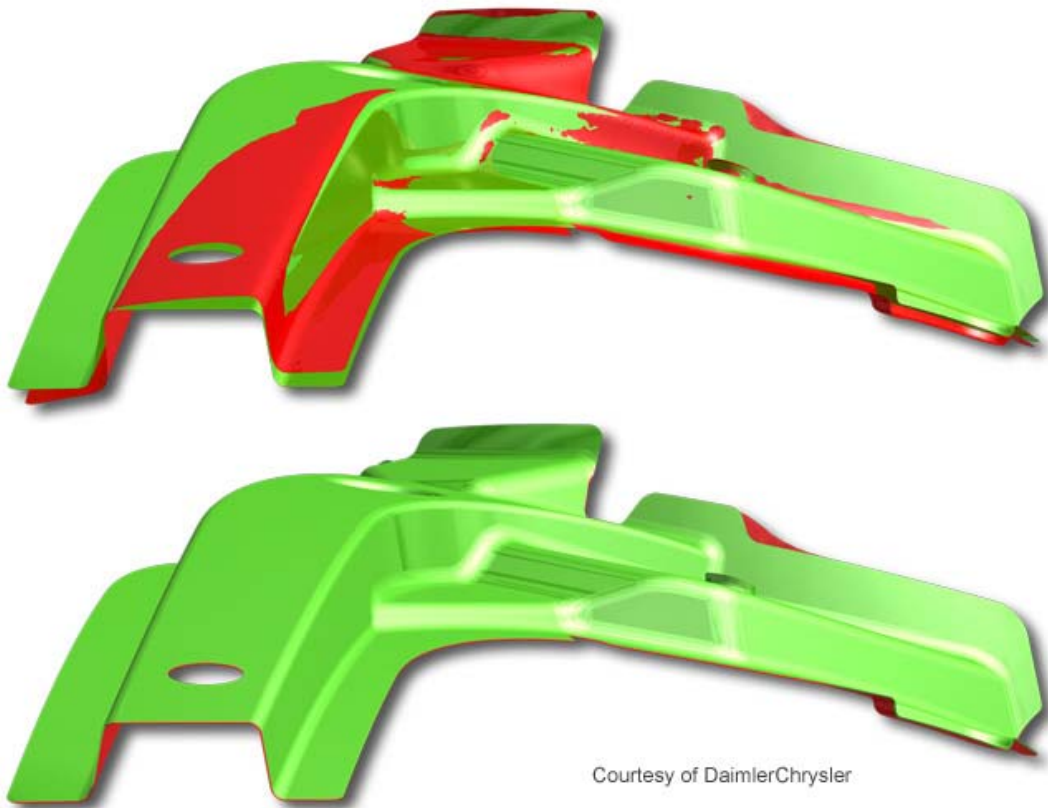
Contact:

Dr. Markus Thomma, Director of Marketing
AutoForm Engineering GmbH
Technoparkstrasse 1
CH-8005 Zurich
Switzerland

Phone: +41 43 444 61 61

Fax: +41 43 444 61 62

Email: markus.thomma@autoform.ch



Courtesy of DaimlerChrysler

Comparison of part geometry (red) with reference geometry (green)
before springback compensation (top) and after springback compensation (bottom)

If you need a high resolution image, please contact us.