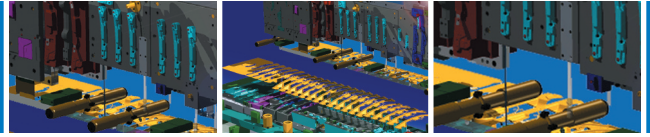


The task – bring simplicity to complex sheet metal die design

Summit Tool Design tackles challenges of 12-station stamping die

Siemens PLM Software

www.siemens.com/solidedge



► Issues:

Increasing die complexity made 2D design more prone to error

Multiple operating systems required multiple computers and constant rebooting for other applications

► Approach:

Eliminate the need for multiple operating systems and computers with Windows-based design system that is fully integrated with Microsoft Office environment

Employ solid modeling to improve visualization and eliminate interferences

Use process-specific part modeling and sheet metal design tools for faster project completion

► Results:

Increased detailing productivity by 25 percent

Allowed sub-assemblies to be released for detailing the moment the customer provided approval

Enabled any necessary design changes to be made quickly and easily

Reduced overall lead-time

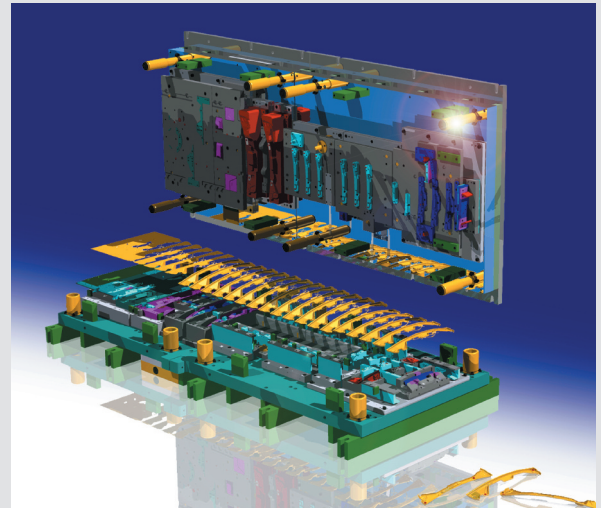
3D solution delivered greatly improved information accuracy and usability over 2D system

SUMMIT TOOL DESIGN

- Summit's die designers faced the challenge of squeezing many operations into a limited working envelope while addressing increasingly complex part shapes.

Stamping die design – numerous operations, small envelope, complex parts

Producing sheet metal now requires very complicated tools. It is not uncommon to have one progressive stamping die perform ten or more operations, including cutting, bending and piercing on multiple parts at one time. In addition, Summit Tool Design's customers, like others in the industry, are striving to increase productivity by eliminating costly secondary operations and incorporating them into the primary progressive die. These developments posed challenges to Summit Tool Design that its existing



design technology could not effectively address. For example, Summit's stamping die designers must increasingly squeeze more and more components into a limited working envelope. And they must do so while dealing with even greater shape complexity in the finished parts. "A large die will typically have twenty or more parts that require 3D machining," says Scott Christensen, president, Summit Tool Design. "If an NC programmer has to spend a day or more for each part creating complex 3D geometry from interpreted 2D data, that's an additional 80 to 160 hours required for NC programming."

Windows-based design – the right stuff

Summit upgraded to Solid Edge® software for a variety of reasons, with the key initiative to lower the cost of CAD ownership. "Using a Windows program eliminates the need for multiple computers or rebooting into a different operating system to run Office applications," says Christensen. Among anticipated benefits, Summit looked to Solid Edge to help reduce errors to virtually zero and to detect interferences before actual production of the finished product.

Solutions/Services

Solid Edge
www.siemens.com/solidedge

Client's primary business

Summit Tool Design provides progressive stamping die design.
www.summitsedge.com

Client location

Rockford, Illinois
 United States

Benefits – savings, confidence, quality and more

Solid Edge increased Summit's detailing productivity by 25 percent over the company's previous Unix software. In addition to saving overall design time, Christensen says that he can now release the sub-assembly of each station for detailing as soon as the customer has given approval. He can do so with confidence, knowing that any detail drawings already completed can be easily updated if a change is required. The net result is that the overall lead-time of a project is shortened. "It's very time-consuming and costly to recover from an error on the shop floor," says Christensen. In fact, the information quality provided by Solid Edge simply was not possible using Summit's old system. In addition, Summit uses Solid Edge to re-use existing designs. For example, after completing its first die design, Summit used it as the master to design two more 12-station dies for parts with slightly different sizes and contours. Christensen notes that the time for completing all three dies was significantly faster using 3D vs. 2D, and, what's more, the work was much more accurate.

"My time savings were substantial, but they are insignificant compared to what I saved the client by delivering a design that was free of interferences."

"Using a Windows program eliminates the need for multiple computers or rebooting into a different operating system to run Office applications."

Scott Christensen
 President
 Summit Tool Design

► For more information, contact your local Solid Edge representative:

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