

TechNotes

ISSUE 2004:3

TechNotes, a technical newsletter from the Mursix Corporation, is published and e-mailed approximately 4-5 times per year. In each issue, we address specific technical issues, answer technical questions, and communicate useful information about new equipment, processes, services and the ever-expanding capabilities of Twoson Tool, Twoson ESP, Dakota Engineering, and FX Springman.

This issue of **TechNotes** covers Twoson's recent installation of a new state-of-the-art Unigraphics NX2 engineering software package.

Engineering Software Investment Adds A New Dimension to Twoson's Capabilities

When Engineering Manager Bruce Thornburg says that Twoson's new Unigraphics NX2 engineering software "has added a whole new dimension" to Twoson's capabilities", he isn't just talking about upgrading from 2-D to 3-D drawings.

Recently, Twoson made the single largest non-capital equipment investment in the history of the Mursix Corporation when it purchased and installed its new Unigraphics NX2 package. "It's not like we just went from zero to all these great capabilities," says Thornburg. "With our existing CAD software, we already had a good system in place that tied together the Engineering Department and the manufacturing floor. That has always been a hallmark of the Twoson system. But the NX2 system has let us take that up to the next level. It gives us the tools to build an engineering data path that stretches from the customer, through our engineering department and tool room, to the shop floor. It is truly a 21st century system.

Tooling Design

Thornburg states that what really sold him (and Twoson's senior management) on the NX2 system was its capability to facilitate and automate Twoson's design of progressive dies. "Development of tooling is a key element in our critical path between product design and manufacturing, so efficient tooling design is essential to meeting overall time-to-market schedules for our customers. Because a large part of our business is in the automotive and electrical appliance markets, we use a lot of progressive dies. The requirements for progressive die design and building are becoming more stringent as shorter delivery times, higher quality requirements and more innovative designs stretch abilities. With NX2, we're able to engineer this tooling in concert with customers' product design activity, significantly reducing overall design-through-manufacturing cycle times. For example, if a feature on the part changes, we can automatically change the tool design."

Customer Benefits

Another important point in choosing the system was the improvement it offered in communicating with customers. Unigraphics is used by several Twoson customers, such as Mallory, Delphi, Ford, GM, and others. "We can partner with them by reviewing their designs for manufacturability before they are released for production," says Thornburg. "This lets us share our knowledge with the customer and vice versa. The communication is seamless." The software also reduces engineering and manufacturing costs, which ultimately benefits the customer, according to Twoson President Todd Murray. An example is the software's ability to do "what if" simulations of press stamping layouts, where even a slight rotation of the part orientation on the metal strip could save 15-20% in material costs. "With today's material prices," says Murray, "that's significant for our customers, and for us, as it makes us more competitive." Thornburg also lists features such as the automatic drawing of cross sections (previously done manually) and other drawing features per ISO and ANSI standards as a big plus. "Bottom line - we're saving a lot of time that we're able to devote not only to new projects but also to spending more quality time on existing projects to anticipate problems. Again, the customer is the beneficiary."

More Capabilities Equal More Opportunities

Murray and Thornburg agree that this significant increase in capabilities will benefit both current and prospective Twoson customers. "When customers can directly avail themselves of our extensive metal stamping experience and expertise through direct communication of math data in both directions, it gives them even more reasons to work with Twoson Tool."

If you have an application that you think might benefit from Twoson's extensive design and manufacturing capability, **call Alan Jones at 765-282-2221 (ext. 208) or e-mail him at ajones@twoson.com.**

Twoson Capabilities

CAD/CAE is just one of Twoson's long list of manufacturing and engineering capabilities, all of which are part of the package of services that help us deliver superior, cost-effective components to our customers. To learn about some of Twoson's other capabilities, click on the links below:

- ▶ Prototyping
- ▶ Stamping Precious Metals
- ▶ Robotic Projection Welding
- ▶ Multislide Stamping
- ▶ Precision Machining
- ▶ Post Plating
- ▶ Tooling Capabilities
- ▶ Contact Staking
- ▶ Punch Press Stamping

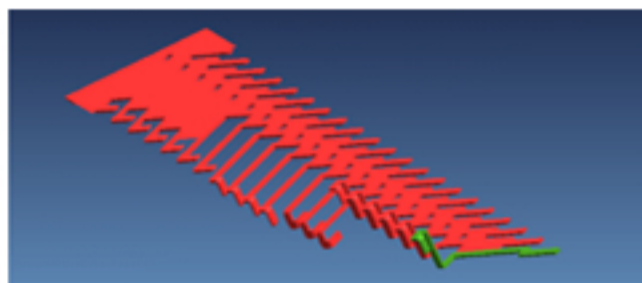
Twoson Tool, Twoson ESP, FX Springman, and Dakota Engineering comprise the Mursix Corporation, an integrated, multi-disciplinary enterprise serving the appliance, automotive, medical, marine, and other industries. Our capabilities include tool design and construction, punch press and multislide stamping of precious metals, CNC and screw machining, in-machine processing, sophisticated multi-part assembly, and silver, tin, & zinc post plating.



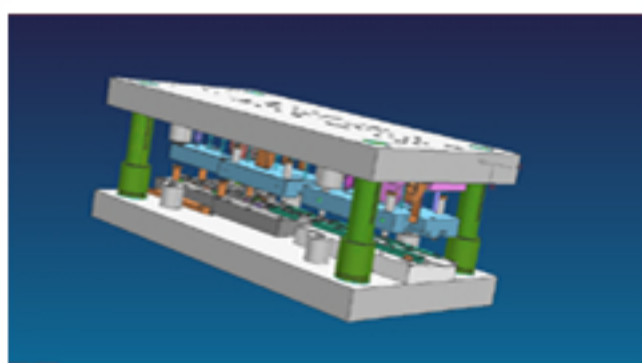
Twoson engineers use the automated design features of NX2 to significantly reduce the time spent on tool design.



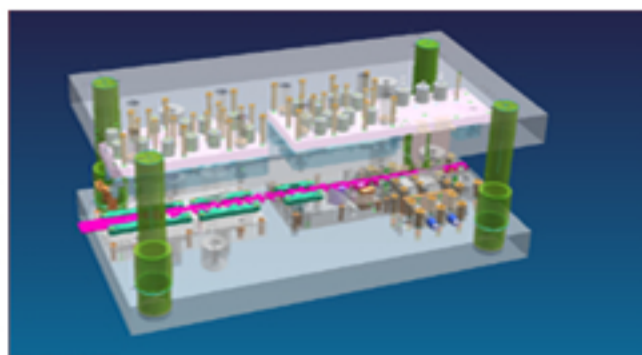
Twoson can partner with customers by reviewing their designs for manufacturability before they are released for production.



"What If" simulations of press stamping layouts can save 15-20% in material costs.



Die tooling is designed in concert with customers' product design activity, reducing time-to-market cycles.



Twoson makes extensive use of features such as the automatic drawing of cross sections (previously done manually) and other drawing features per ISO and ANSI standards.