Celebrating its 15th anniversary, BesTech Tool Corp. and its 30 employees design and build progressive and transfer tooling at a 42,000-sq.-ft. plant in West Bend, WI. Once producing tooling for computer, appliance and lawn and garden stampers, the company in recent years has gravitated toward more demanding and complex automotive work.

It does that through a host of inhouse capabilities including design, heat-treating, machining, waterjet cutting, prototyping and press tryout, with constant technology upgrades.

“You have to stay as current as possible,” says Mike Korneli, BesTech president. “Many tool and die shops have gone by the wayside and staying current is how we’ve managed to survive. Opportunities in China are decreasing, costs are rising there and the Chinese currency is being adjusted in our favor, which means that U.S. tool and die shops can become more competitive. So we have to be leaner and smarter to take advantage of opportunities like this.”

One way BesTech works smarter is by fully adopting 3D die-design software, which helps the company meet increasingly stringent lead times demanded by customers.

“A number of years ago we looked at switching from 2D to 3D die design but at that time the technology was too slow to fully implement,” Korneli recalls.

Two years ago, Korneli felt that 3D technology had developed enough, and the company selected Logopress3 3D die-design software, from Logopress provider Accurate Die Design, Inc., New Berlin, WI. At BesTech, progressive dies range from 10 to 15 stages carrying out...
Located in West Bend, WI, the Applied Manufacturing Technology Center at Moraine Park Technical College (MPTC) focuses on retraining and building a worldclass, skilled workforce. Its Tool Design Engineering Technology program, the only one in the state, is available as part of a two-year associate’s degree program, but also enrolls students strictly for the die-design portion.

During its first nine years, the program taught AutoCAD along with a couple of add-on die-design programs. 2D die design ended as a class subject in 2004, replaced by 3D design via SolidWorks with Logopress3 die-design software added in 2005. John Cawley, tool-design instructor at MPTC since the program’s start, notes that 3D design software allows him to teach students more about die design in a shorter amount of time. One reason: It automates the mundane tasks of die designing which speeds the overall process. In addition, the process is much more visual than with 2D design.

One example relates to strip-layout creation. The software speeds strip creation, along with design of the cutting and forming punches, says Cawley. And because everything is created as a solid the students can easily click and drag a section view through any part of the strip or tool almost instantly.

Another example relates to subassemblies. Logopress3 automatically creates four different subassemblies representing the strip, die half, punch half and stripper. The students then click an icon to display a specific subassembly or combination of subassemblies. And students can quickly choose from different styles and brands of die components found in the software’s component library, allowing them to learn about various components available in the tool and die industry.

Once the students complete their design—or at any point during design—they can click an icon to display the strip, die design, punch design, and stripper design. This includes the ability to change the strip and die design, punch design, and stripper design, allowing the students to learn about various components available in the tool and die industry.

For more information on the program, visit www.morainepark.edu.

The die-design software includes a library of die components with multiple brands available for every component. The software automatically creates holes upon the insertion of the component, saving design time.

3D Die Design in the Classroom

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Once the students complete their design—or at any point during design—they can click an icon and, using the software’s built-in animation function, watch the die operating as if it were in the press. This includes the strip lifting and progressing through the die. This same tool enables instruction on clearance issues and other interference that often will not be discovered until the die is built.

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