

SITUATION

Cast Products, Inc. (CPI) of Athens, Alabama, is the industry-leading producer of cast aluminum warning lights and sirens for emergency vehicles. Sales at the 100-employee company have increased dramatically in recent years. For a time, CPI met that increased demand by having its employees work overtime. But the company's processes and software left too much room for human error, particularly in the area of tooling production where CNC programmers worked from drawings to recreate design geometry in a CAM program. Mistakes in interpreting the drawings led to machining errors that required time-consuming and costly manual rework. To boost productivity and position the company for continued growth and success over the long-term, CPI management knew it had to streamline its development and manufacturing processes and upgrade its current 2D software.

OBJECTIVE

Decrease design time and reduce rework to eliminate the need for overtime.

PROCESS VISION

Migrate from a 2D-based product development process to an integrated, solids-based one without losing any productivity.

ACTIONS

✓ CPI employees researched Windows-based solid modeling software and asked ALACAD, a value-added reseller, for a demonstration of the program they thought they wanted. After seeing this program in action, CPI decided it was too difficult to use. Also, that software was incompatible with CPI's CAM software, SDRC's SmartCAM®.

Cast Products Boosts Productivity Five-Fold

"I-DEAS makes our work fly, and the increase in productivity we achieved with this software has knocked the socks off everyone in the plant."

- Charles Thornton
Director of Engineering
Cast Products, Inc.



Get
There
Faster™

Cast Products Boosts Productivity Five-Fold

- ✓ ALACAD suggested that CPI look at I-DEAS Artisan™ because it provided the 3D modeling capabilities CPI required and was compatible with SmartCAM.
- ✓ After just a 30-minute demonstration of the program, a CPI representative was immediately able to model parts.
- ✓ Now CPI models all new products in I-DEAS® and downloads the geometry directly to the manufacturing software for machining.

RESULTS

- ✓ CPI's new I-DEAS system and an Intergraph TDZ2000 workstation cost 30 percent less than the system the company had originally planned to purchase.
- ✓ Because I-DEAS Artisan was compatible with SmartCAM, CPI was not forced to migrate CAD and CAM operations simultaneously. And I-DEAS' intuitive user interface eased the transition from 2D to 3D, allowing CPI engineers to quickly adapt to solid modeling.
- ✓ Creating one piece of tooling with the previous process usually took about three days. With the new system, it takes only five hours.
- ✓ Previously, CPI needed two days to complete a project from model to manufacturing. Engineers now complete five projects in a single day.
- ✓ Based on the users' initial reactions to the software, CPI management predicted they would double productivity in six months. But within just the first three weeks, productivity had increased five-fold.
- ✓ The new system has also eliminated 95% of the manual rework on tooling. The software produces a reliable, dimensionally stable model that permits the creation of highly accurate toolpaths.
- ✓ The tremendous increase in productivity resulting from solid modeling allows the company to meet the demand for its products with everyone working normal hours. As a result, CPI has almost totally eliminated overtime.

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