

**CHALLENGE:**

Deliver high quality automation to the shop floor faster and more reliably.

SOLUTION:

Stratasys 3D printing solutions from GoEngineer.

RESULTS:

Prototype parts that formerly required up to 10 days to produce now completed in 2 to 3 days. Design issues potentially causing months of delay now caught within the first week of product development.

LAITRAM MACHINE SHOP INVESTS IN GAME-CHANGING 3D PRINTING SOLUTIONS FROM GOENGINEER

Laitram Corporation is a global manufacturing company that has been part of the Louisiana business landscape for more than 50 years. Today, it is comprised of four operating divisions: Intralox, Laitram Machinery, Lapeyre Stair, and Laitram Machine Shop. The company employs over 1,700 people worldwide.

Innovation is not a buzzword at Laitram—it has been business as usual since 1947 when they invented the automated shrimp-peeling machine. That was followed with a modular conveyer system, and then the alternating tread Lapeyre Stair. More than 700 patents later, the company is still looking for people with great ideas.

Laitram's success springs from an intense commitment to innovation, integrity, and continuous improvement, so when prototypes became a bottleneck that seriously impacted the manufacturing engineering group, it was simply unacceptable. There had to be a better way. "I would say 80 to 90% of the parts we 3D print are for the manufacturing engineering group," says Mike Martin, Project Manager at the Laitram Machine Shop, which services all Laitram divisions. A solution was needed—and fast.

Martin spoke to his manager, did research, and eventually attended a tradeshow devoted to 3D

printing. He ruled out stereolithography (SLA) machines, since the company had been using one for over ten years, and they needed a technology that could produce stronger parts. Laitram decided on fused-deposition modeling (FDM) technology from Stratasys, which uses production-grade thermoplastics. They purchased the Fortus 360MC and the Fortus 400MC, both Stratasys Production Series printers with larger build envelopes.

GoEngineer, a local reseller of Stratasys 3D printers, provided training and support, which enabled Laitram to get up and running quickly. "I received very good training from GoEngineer," says Martin. "And I could just email them when I had issues, which was an easy way to get my problems resolved."

The very first part Martin printed on the FDM machine was a powerful experience: "In a couple hours, I pulled the part off the machine—amazed! I could not help think that this technology would be game-changing for some areas of our company." That definitely included the manufacturing engineering group, which primarily builds automation for Laitram to expedite internal manufacturing processes.

Before having reliable and fast 3D printing capabilities, getting machined prototypes was a time-consuming process taking up to ten days—or more. "We need to

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—ROBERT GUTTENBERG, Senior Design Engineer

design and build equipment then get it on the floor as quickly as possible,” says Robert Guttenberg, Senior Design Engineer at Laitram. “Before we got the 3D printers in the machine shop, it might take an entire week or more to get prototype parts. Now, I can typically get parts in a day.”

What’s more, the manufacturing engineering group is able to design its automation more efficiently and accurately by incorporating 3D printed parts into the design process. Parts can be printed for fit—before committing to ordering machined parts for final production. “I will use 3D printing to get a basic part and then I can dial in the actual geometry,” says Guttenberg. “I can print another part to verify accuracy.”

Being able to catch errors on the front end saves Laitram both time and money. “We have been able to find design issues early in the process, because we 3D print parts early in the process,” says Guttenberg. “Compared to our traditional process [without 3D printing], it might be several months

before we discovered those same issues rather than just four days into the project.”

The manufacturing engineering group has even discovered design flaws that they were neither looking for nor conducting tests to find. Guttenberg continues: “Some issues are just easier to identify when you have a part in your hand.”

Now that Laitram has its 3D printing process down to a science, Mike Martin is amazed by another aspect of 3D printing—its simplicity. “I almost hate to say it but it has been a simple operation. We get the files from the engineers, run their parts, and deliver them in a timely fashion. It’s really that easy.”

Innovation is not a slogan at Laitram, it’s a way of doing business, the culture and fabric of the company. And, GoEngineer is excited to continue helping Laitram shape its future by providing solutions that are innovative and have real payback for its customers.



3D printing this mill fixture allows Laitram to go from concept to testing in 2 to 3 days versus up to 10 days using traditional methods.



This fixture, used to hold & properly locate parts for secondary operations, was 3D printed as a single piece from four individual part files.



3D printed parts enable Laitram a quick way to validate how parts will actually interact before building the final version.



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GoEngineer is a provider of powerful product design and engineering tools including support and training for SOLIDWORKS, Stratasys, CAMWorks, Altium, and PLM with over 30 years of customer experience in high tech, medical, machine design, energy, and other industries.

Laitram Machine Shop, L.L.C.

Laitram Machine Shop, provides high-value machining and related services to the Laitram divisions and select outside customers.

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