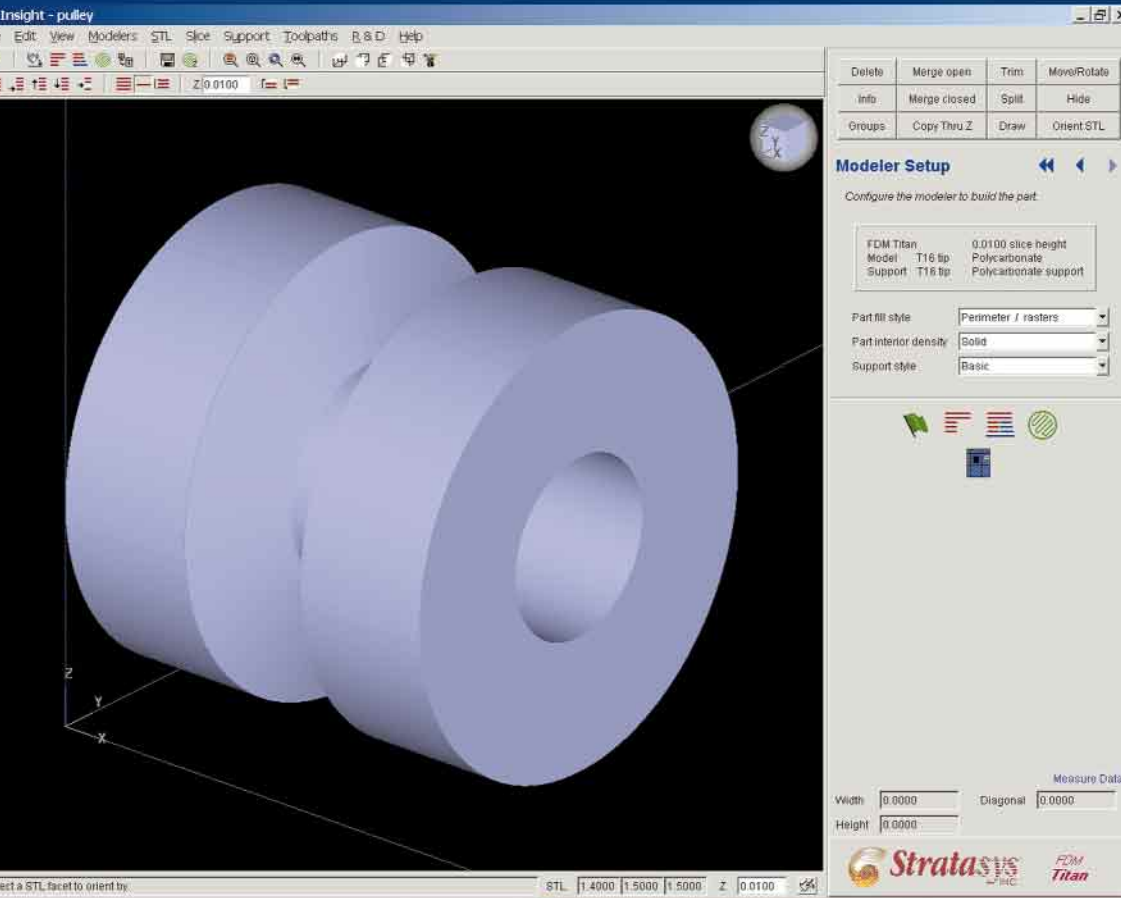




STRATASYS®

# CASE STUDY



*When a manufacturer's production was halted due to a pulley failure, a quick-thinking manager whipped up a polycarbonate replacement on an FDM Titan rapid prototyping system. Production went on, and one month later, when the manufacturer told us its story, the polycarbonate pulley was still doing the job.*

**POLYCARBONATE  
PULLEY KEEPS  
PRODUCTION  
ROLLING**



# Polycarbonate Pulley Keeps Production Rolling

As part of R & D for the Stratasys FDM Titan rapid prototyping system, several Beta sites were commissioned to test the equipment in their process. One industrial product manufacturer ended up using the Titan in a way it never anticipated. The Beta site was busy building various polycarbonate prototypes when a belt sander on its production line went down.

The 3-year-old table-top sander was being used to remove burrs from steel parts in the finishing step of production items. The sander's belt runs along a series of pulleys, which are constructed of cast aluminum. One of these pulleys had developed a crack, which idled the sander as well as production.

"I thought this would be a good opportunity to see how the polycarbonate material would hold up in a demanding application," says the Beta site fabrication manager Kirk Moswen. "I had a CAD model of the pulley drawn up, and we built it from polycarbonate

on the Titan. It took only 2 or 3 hours to run the part. We bolted the pulley on and continued with production.

"Although we have many sanders throughout the shop, most of them are continuously used. I didn't have to make the decision to pull a sander away from a less-critical production line. I was able to keep right on going. If we would have had to wait for a new part, that production line would have been down for a few days. It's been a month now, and the belt sander is still going strong.

"Now if anyone asks me about the durability of the rapid prototype parts that come off the Titan, I take them over to the sanding station and tell them the story. You can see the sparks flying off the sander and hear it grinding away – it really opens some eyes. I have an aluminum replacement pulley now, but I'm in no hurry to install it. With the way this one has performed, I want to see how long it lasts!"



**STRATASYS®**

**Stratasys, Inc.**

**+ 1.952.937.3000 (tel)**

**+ 1.952.937.0070 (fax)**

**www.stratasys.com**

**14950 Martin Drive**

**Eden Prairie, Minnesota**

**55344-2020 USA**

FDM and Stratasys are registered trademarks of Stratasys, Incorporated.  
©2001 Stratasys, Inc. All rights reserved. Printed in the U.S.A. APO25 04/04