

## CIMTECH® 610

(Formerly CX-610A)



# Cutting the foam

Mike Brintnall knew he had to try something different. As special projects manager at aerospace parts manufacturer Triumph Structures- Kansas City Inc., Grandview, Mo., Brintnall takes a lead role in fine-tuning the company's machinery to ensure high quality output. Problem solving and improving operations sit atop his agenda.

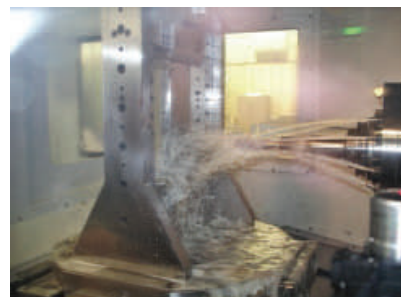
Late last year, those priorities prompted Brintnall's scrutiny of Triumph's cutting fluids. The company had recently purchased two new Doosan horizontal machining centers to make a family of Ti6Al4V titanium parts. But Triumph's fluid was performing poorly. "We were failing," said Brintnall. "We had to increase the fluid concentration significantly—up to three times the recommended concentration rate—just to get any kind of tool life. We also experienced greater tramp collection."

Foaming also was a major issue because Triumph was applying high-pressure coolant. "A lot of the older fluids on the market don't handle the high-pressure coolant very well," Brintnall said. "So I felt at that time that it was a good test bed for some new fluid technologies." At the same time in Cincinnati, chemists at Cimcool Global Industrial Fluids were putting the finishing touches on a new synthetic metalworking fluid called Cimtech 610. "We're in a constant search for more lubricity in a synthetic product, especially one aimed at aerospace applications," said John Sherman, senior application specialist for Cimcool. Cimtech 610, a synthetic concentrate, was devised to feature low foam, near

neutral pH, good part visibility for operators and the ability to extend tool life when cutting difficult to machine metals such as titanium and stainless steel. "We found that Cimtech 610 is especially effective with difficult aerospace materials," said Simon. "We do that by measuring what we call our V-tool rate."

The V-tool test involves plunging a V-shaped insert into a rotating part at Cimcool's test lab. A force gauge measures the amount of force in a cut. As testers introduce different lubricants to the cut, the force drops, depending on how effective the coolant is. "Cimtech 610 has the lowest V-tool number of all our fluids," said Simon.

Shortly after hearing about the new fluid, Brintnall decided to try it. "It was our first foray into a full synthetic coolant," he said. The results were immediate. Where the finishing tool previously lasted three parts, the Cimtech 610 enabled the tool to produce 30 parts before being replaced. "The ten-fold improvement in tool life jumped out at us," said Brintnall. Moreover, he added, "the machines were clean and we had no foaming." Brintnall has no doubt that Triumph Structures will find further uses for Cimtech 610. "Soon, we're going to get a new product to machine here that is a very hard, abrasive material," he said. "In our old processing ways, we would have to run that material without coolant, but we believe we can get some significant tool life using Cimtech 610." **CTE IS #42**



## productive times

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Cimtech 610 was devised to work effectively with high pressure coolants while cutting difficult-to-machine metals such as titanium.

**END USER:** Triumph Structures- Kansas City Inc. (816) 763-8600 [www.triumphstructures.com](http://www.triumphstructures.com)

**CHALLENGE:** Minimize metalworking fluid foaming and extend tool life when machining difficult to cut metals.

**SOLUTION:** A high-pressure coolant that doesn't foam and helps extend tool life.

**SOLUTION PROVIDER:**