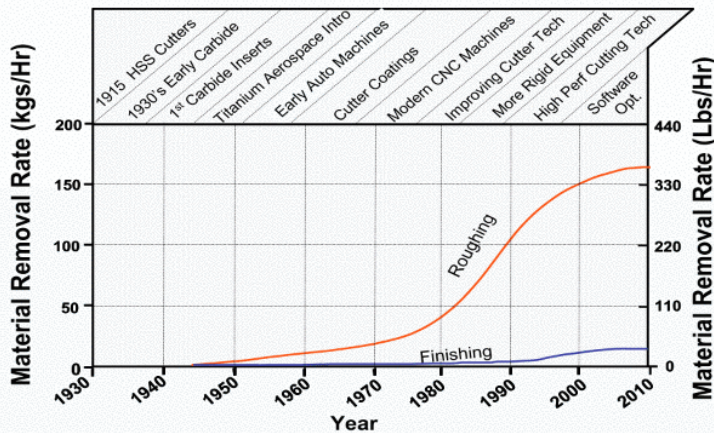


LEADING INDICATORS

TITANIUM CUTTING CAPACITY AT A PLATEAU

The accompanying chart illustrates the progress of cutting tool technologies, beginning with the development of high-speed steel cutting tools in the early part of the last century, through the use of computer software to optimize cutting programs. Titanium machining, which began in aerospace in the 1940s, is graphed as having a modest-but-steady growth in removal rate per hour through the 1970s, then rapidly advancing from the late 1970s through 2000. However, since 2000, titanium cutting capacity has leveled out, restricted by advances in materials that have made titanium alloys nearly as hard as the tools that are used to cut them, and by slower advances in cutting tool technologies. This plateau in cutting technology is presenting a serious problem as Boeing Company and other aircraft manufacturers increase their use of these advanced titanium alloys, and require more titanium products to be machined. ■

Chart courtesy of Boeing Company



GIBBS AND CGTTECH ENHANCING SIMULATION CAPABILITIES

Gibbs and Associates (www.GibbsCAM.com), the developer of GibbsCAM software for programming CNC machines, and CGTech (www.CGTech.com), the developer of VERICUT software for simulating

CNC machine tools, announced a collaborative agreement that will allow integration between GibbsCAM and Vericut programs. In addition, GibbsCAM users will be able to use Vericut's existing library of CNC machine models and controls that the companies said is the largest collection available in industry today.

Bill Gibbs, founder and president of Gibbs and Associates, said he expects the collaboration to have a significant impact on both his and CGTech's customers.

"Today's machine tools have reached a level of complexity and cost that necessitates accurate simulation. This is especially true with advanced multi-tasking machining centers and 5-axis simultaneous milling machines," he said. Users who have the Vericut software in use in their facility will be able to take advantage of the integration to validate their CNC programs.

Gibbs said the CNC simulation programs will help users to cut machine cycle time, improve work quality and maximize throughput by identifying potential programming errors sooner and without putting the actual machine tool at risk. ■

Chips-n-burrs



"Remember when sweeping meant we WEREN'T making any money?"