General Project 7—Texas Christian University Machinist's Workshop Program

Lathes and mills line the work area in TCU's "Introduction to Fabrication" classroom.

When the Department of Engineering at Texas Christian University in Ft. Worth, Texas decided that students and teachers needed to get some "hands-on" experience to better understand the machining process as it relates to manufacturing engineering, they chose Sherline tools for their shop. SteveWeis, Bob Bittle and Becky Bittle put the program together. They recently held their first "Introduction to Fabrication" workshop for high school students. The students spent a day on the lathe and made a stepped cylinder and a steel center punch. They then spent one day on the mill and made a brass gauge block with six different sized tapped holes. Two days were then devoted to electronics with the design and fabrication of a "touch switch" PC circuit board. Their most recent workshop was for teachers.

The photos that follow show some of the students and teachers learning about how metal is cut by using Sherline tools. In an era when many schools are moving away from actual machine tools and going more with video education, it is good to see a program where students and teachers can actually have a chance to make chips and turn out parts. Compared to the traditional school machine shop and the now popular "tech-ed" video approach, miniature machine tools offer several advantages. The low cost allows a "tool at every bench" approach. The small size makes them safer to use than full size tools, and the advantage of actually being able to participate in the lesson rather than just watching it makes for a much better learning experience. Several aftermarket suppliers also offer CNC educational modules based on Sherline machines that are perfectly suited for the modern tech-ed classroom.

High school students get to try their hand at machining real parts. They get a better understanding of the parts they see in their daily lives and will eventually have to design as future engineers or build as future machinists.

Continued, Page 2

A student inspects his work as a precision gauge block emerges from a chunk of brass.

Teachers get a chance to experience real machining as well.

Photos: Brent Bachim

RETURN TO THE WORKSHOP PAGE