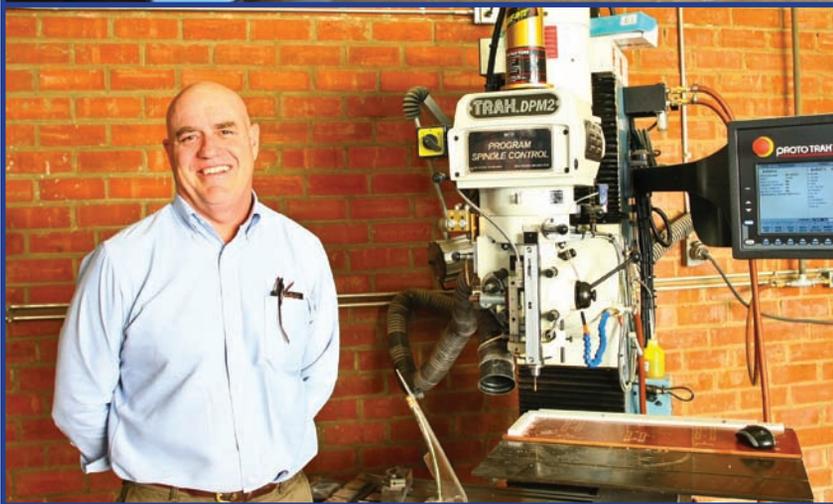


LIVING IN THE PLASTIC AGE

Story & Photos by Sean Buur



Founded in 1926 by his grandfather, Stuart Campbell has been at the helm of Angus Campbell Inc. since 1997

Stuart too has been involved in the family business since he was old enough to sweep floors and package parts. He worked weekends and afternoons through high school and college doing grunt work. He came to work full time in 1984 after graduating from New Mexico State University with a degree in business. "I never spent much time in the shop," explains Stuart. "I can operate the machines, but I can't set them up. My dad was better at it than I am, but neither of us could be constituted as shop guys." When Ken passed away in 1997 Stuart took over the reigns of Angus-Campbell, Inc. and has

led them through the millennium and to where they are now. Angus-Campbell, Inc. is as unique as the come, they don't deal in metals, only in plastics.

Plastic has been a staple part of the Angus-Campbell, Inc. business from the beginning as Angus himself worked with Phenolic plastic. Phenolic plastic was first manufactured under the trade name Bakelite in the early 1900's. It is considered to be the steel of the plastic industry today and is one of the primary raw materials they sell and machine. Setting Angus-Campbell,

Angus-Campbell, Inc. has been in the manufacturing and distribution business since 1926. Incorporated in 1932 by founder, Angus Campbell the company thrives nearly 90 years later under the guidance of his grandson Stuart Campbell. Stuart is a third generation owner of Angus-Campbell, Inc. after being passed from father to son, and father to son again. Stuart's dad Ken, started working for Angus after a stint in the Army and graduating college in 1944-45. Ken wasn't a trained machinist, but a businessman, and worked with Angus until his passing in 1957.

AS Seen in CNC-West April/May 2013



Originally purchased to fulfill the needs of a single long term customer the TRAK 1630 lathe has expanded Angus Campbell's capabilities.

Inc. apart from the herd is that they are a distributor for plastics, thermosets and adhesives and don't just machine them. As an international supplier for Micarta, they stock and sell everything from canvas, canvas electrical, linen, linen electrical, epoxy glass FR-4 and G-10, Glastic, glass polyester and most other laminates in sheets, rods, and tubes up to 7" thick.

Originally Angus had multiple offices up and down the west coast in Southern California, Northern California, Oregon and Washington. With no email, and travel limitations as they were back in the day it was much more difficult then to run a multi-site operation. Within a decade or two operations were condensed into a flagship Los Angeles office. The company bounced around with a few locations in the heart of downtown before purchasing some land in Vernon and setting up shop. The new 7500 sq. ft. building was erected in 1956-57 and is still the base of operations in 2013. The neighborhood has changed over the years. What used to be a large meat-packing and processing area is now just typical big city industrial. "We used to see cows out on the street when they got loose," chuckles owner Stuart Campbell. "There are bullet holes in our walls from weekend escapees. Farmer John is still just up the street and we do some work for them, but most of that industry has moved on. We've been here a long time and seen some crazy things."

Although the plastics that are machined at Angus-Campbell, Inc. haven't changed much over the years, the acceptable tolerances have. "We have a large long

time customer," describes Stuart. "They tightened things up to the point that our tried and true machines could no longer produce what they needed, and we were having to outsource it. The older 1975 lathes we had just couldn't hold the .0005 needed along a 6" part. Looking at outside expenditures we realized that we could buy a new machine and bring it back in house, all for less money." Angus-Campbell, Inc. specializes in quick turnaround short run parts (1 or 2 dozen) so in and out as efficiently as possible is a key ingredient to their success.

"Because of what we do, we don't need super fast machines that run unmanned 24/7," explains Stuart. "We needed something with a quick and easy setup to maintain our aggressive time table and allow us to produce that one big ticket part back



Angus Campbell Inc. is distributor for plastics, thermosets and adhesives.



Angus Campbell Inc. works only with plastics.

metal working brethren. The machine needed some fine-tuning for Angus Campbell's non metal customer base. Plastics are a mystery to most machinist and tool-makers and finding someone knowledgeable enough to help tweak the 1630 into perfection was a bit of a challenge. "Southwestern Ind. was instrumental in helping us figure out any problems we were having," comments Stuart. "Customer service and tech support have been great. We went down there and explained the situation. They thought about the problem and made a suggestion. That improved things for us drastically, but it still wasn't perfect. So then they spoke with a tool supplier who really narrowed down what we needed. We changed out the chuck and once again there was an improvement. You look at the parts we do and you think what's the big deal. The material is G10 glass epoxy, like a printed circuit board, and it is really difficult to machine." Finding the right cutting

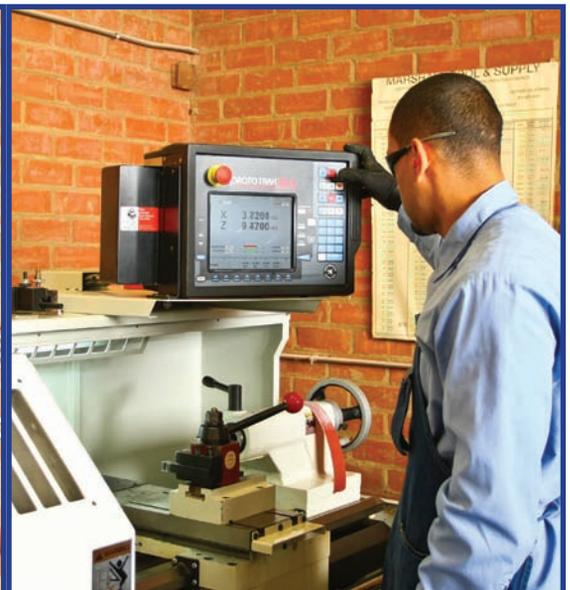
in house." Stuart looked at some larger, faster, more complex machines but the software was not user friendly enough for Angus Campbell's work flow. "My guys are smart," explains Stuart, "but G-Code is an art form and time consuming to master. Practice makes perfect, but we needed something faster and more user friendly to set up." After talking to Pat Fitzsimmons he found himself down the 710 freeway at Southwestern Industries Inc. browsing their TRAK 1630 series lathe with their ProtoTRAK software. ProtoTRAK is geometry based programming that is easy to use with powerful capabilities. Labor is a large part of the pie, especially when dealing with such small batch runs. By improving employee efficiency with quick and easy to use software Angus-Campbell, Inc. could lower the labor cost per unit.

"The ProtoTRAK software is just what we were looking for," reveals Stuart. "Add that to the fact that Southwestern Industries is right down the road from us, and stocks parts locally, we were sold." Angus-Campbell, Inc. took delivery of the TRAK TRL 1630SSH in April 2011 and Stuart quickly found that his plastics yield a different set of parameters than those of his

tools that could perform how they needed was another daunting task, but fortunately Erik Stoveland at Southwestern Ind. knew a guy who knew a guy and Angus-Campbell, Inc. was up and running in full swing.

Going from 1975 manual lathes to the new TRAK system increased productivity and expanded capabilities so much that a year later Angus Campbell purchased a new ProtoTRAK SMX Mill from Southwestern. "The lathe and the software improved our game so much that we added a mill," describes Stuart. "We were using an older piece of equipment that was getting harder and harder to get serviced. The software was out of date and it really wasn't up to the task of handling all our jobs. We repurposed it and now really like having the new mill."

Angus-Campbell, Inc. has come a long way in their short 87 years. Old Angus never could have imagined that the new plastics of his era would still be sold and machined nearly a 100 years later by his grandson. In this day and age tradition is hard to come by, and three generations of anything is more rare than a machine shop only dealing in plastics. Angus-Campbell, Inc. proudly embraces all three.



ProtoTRAK software on the lathe and mill are easy and fast to use, a benefit for the short run/quick turnaround that Angus Campbell Inc. are known for.