

## ***Manufacturing Spotlight*** **TNC2**

TNC 2 is owned and operated by Jason Cockrell & Cynthia McCool. Cynthia is the wife of the late Tom McCool Jason's original partner. They operate a shop in Weippe, Cynthia provides bookkeeping support for the partnership and Jason provides the mechanical/engineering capabilities.

Jason has developed the Cool Crawler a remote controlled firefighting machine. Jason received an SBIR grant to assist him in building the prototypes. He sees the primary market for this machine as the Forest Service and private contract fire fighting companies

The Cool Crawler has a diesel powered hydrostatic track machine with a 7 foot blade on the front and a 4 foot wide hydrostatic tiller on the back. It is used to make fire breaks. The machine is also designed to hold a 100 gallon water tank with a reversible water pump, which they are looking at adapting to foam. It has two 5x5 luggage racks that hold chains, extra fuel, chainsaws, and gear. It also has a 16,000 lb wench with variable line speed. The Cool Crawler can travel up to 4 miles per hour. The remote control can maneuver the machine from as far as 150 yards.

The Cool Crawler has all the latest technology a Cummins engine, Bonfiglioli gear box and Berco tracks. This is all built on what Jason calls a super structure. The uniqueness is that 8 bolts removes the engine, all mechanics and the drive motor which lift out and can be put on a work bench to repair.

They have made 6 prototypes, one small enough to fit in the back of a pickup. The Crawler that they are currently working on is 6 foot wide 18 feet long and 8'3" high that makes it easy to haul. Jason is also working on a strapping system that will allow it to be moved by helicopter into back country areas that are not easily accessed by road.

These machines can clear 200 feet per minute of 4' wide fire break this is under perfect conditions. The average for the machine is one-half mile per hour or 21,120 feet per day. A man can only clear 60' of 18" wide firebreak per day.

### ***MANUFACTURERS OFFER HIGH-SKILL, HIGH-WAGE JOBS***

These jobs pay an average of 23 % more than the average wage earner in other sectors of the economy and 50% more than retail salaries. A recent survey by the NAM, The Manufacturing Institute and Deloitte Consult LLP shows that manufacturers value a high-performance workforce as the most important factor in their firm's future success, followed by new production innovation and lower costs. The higher wages and benefits offered by manufacturers, when clearly understood by younger Americans, remain strong employment attractions.

Manufacturing is responsible for two-thirds of all U.S. exports of goods and services. That's about \$50 billion a month exported, compared to agriculture, which exports that much in a year. Small manufacturers play a vital role in exports. Ninety-five percent of exporting firms have less than 500 employees, and those firms are responsible for 15 percent of the nation's goods exports, according to Department of Commerce and Small Business Administration data. The NAM's annual Small and Medium Manufacturers Operating Survey shows that in 2005, exporting resumed its growth for SMMs after a fall off after 2000. Nearly 10 percent of SMMs report that their exports are more than 25 percent of sales, up from only 4 percent of companies reporting that level of exporting six years ago.

### ***SKILL SHORTAGES AND EDUCATION DEFICIENCIES***

In the NAM/Manufacturing Institute/Deloitte 2005 Skills Gap Report, manufacturers responded that having a high-performance workforce is the most important driver of future business success

for the next several years. The study also shows a broadening gap between the availability of skilled workers and the employee-performance requirements of modern manufacturing. These skill shortages are affecting manufacturers' abilities to maintain production levels to meet customer demand achieve productivity targets and achieve or maintain target levels of customer satisfaction.

Employment projections by the Department of Labor indicate the types of jobs the manufacturing community will need to fill over the next few years. Between 2002 and 2012, the Labor Department has projected 2 million job openings in computer science, mathematics, engineering and physical sciences; and 2.4 million skilled production jobs available for machinists, machine assemblers and operators and technicians. Yet these job openings will not be easy to fill, given the finds of the 2005 Skills Gap Report and the problems we face with aligning educational priorities with business's workforce needs.

In response to a recent survey the Census Bureau, 20 percent of American companies said their workers needed to run their new technologically enhanced facilities. While there continue to be unemployed people in the United States, there is a scarce supply of people with the skills manufacturers need in the 21st century working environment. The problem is not one of bodies, but rather of appropriate skills. While low-skilled, labor-intensive jobs often move offshore, many jobs remain in this country that are rewarding and offer opportunities for career development. However, those high-skill jobs require more than just a high school education – they demand the education and skills acquired through post-secondary education. Most of today's jobs on the factory floor require some analytical and reasoning skills, for example.

Thirty years ago, less than half of manufacturing workers had a high school degree and less than 10 percent had an associate, bachelor, or engineering degree. By 2001, 80 percent of factory workers had a high school degree and 30 percent had post-secondary education. If current trends continue, more than 80 percent of factory jobs will require post-secondary education by 2012.

The growing talent shortage is evident beyond the need for more-high skill entry-level workers. To remain the world's leading innovator, the United States will need a more robust supply of scientists and engineers. (more to come on this subject in your next news letter)

## **NOTICES**

Do you have a new innovative product? You may be eligible for grant funding, for more information about the overall SBIR program and the Idaho SBIR assistance program, please go to [www.technology.idaho.gov/sbir](http://www.technology.idaho.gov/sbir). It is good to first read through the overview of the program and its requirements to determine if pursuing SBIR funding is the right business strategy.

Are you a small emerging business; if you are needing assistance you may be eligible for and RBEG, RBOG or other grant. These grants provide technical assistance (providing assistance for marketing studies, feasibility studies, business plans, training etc., purchasing machinery and equipment to lease to a small and emerging business; creating a revolving loan fund (providing partial funding as a loan to a small and emerging business for the purchase of equipment, working capital, or real estate); or construct a building for a business incubator for small and emerging businesses. For more information please contact: Dave Bonfield @ [dvbonfield@cablone.net](mailto:dvbonfield@cablone.net) or call 208-746-0015 or cell 208-790-4948.

The NIMA Board will be meeting with an insurance representative on February 13th in an effort to provide access to good cost reasonable price medical insurance for manufacturers and their employees. We'll keep you up to date on the results.