ENTERPRENEURS

RCBI lends a hand to two innovative manufacturers in the region.

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BIG PACKAGE FOR BRIDGEPORT

Workmen are shown easing a huge new autoclave into the Bridgeport Manufacturing Technology Center on April 15. The 33,000-pound Bondtech Composite Autoclave will be used to cure composite materials and process other materials that require elevated temperature and pressure, according to Mushabbar Karimi, senior manufacturing engineer at RCBI. Karimi added that the autoclave is “a top-rated piece of equipment” that will serve aerospace composite bonding needs across the region. The 6-foot by 10-foot working envelope in this system replaces a smaller version and will result in increased productivity and accommodate larger components to serve commercial and military markets.

TOP GUNS

Lloyd Arnold, Xiaoping Wang
selected for April, May awards.

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The Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI) has worked with all types of manufacturers since its inception in 1990. We never thought we’d be helping build Civil War cannons, however.

But that’s just what we’ve been doing for the past few years.

The Steen Cannon & Ordnance Works of Ashland, Ky., undoubtedly is RCBI’s most unusual client, leasing time on some of the world’s most technologically sophisticated manufacturing equipment to produce weapons from an earlier time.

Marshall Steen went into the 19th Century field artillery business in 1993. Seems he wanted a cannon to decorate the yard of a historic home he had acquired in Ashland. He soon found that original Civil War cannons were far too expensive. He couldn’t find reproductions of the quality he wanted, so he decided to build his own. Thus was born in his garage what has become a thriving small industry. Steen Cannon & Ordnance Works now is considered the country’s top manufacturer of full-scale, fully-functional reproduction field artillery.

Steen’s grandest achievement to date is a 30-pounder Parrott cannon, the largest fully functional Civil War reproduction cannon in the United States. The 4,200-pound weapon was fired for the first time in April, 2007, at its new home, Fort Pulaski National Monument, Georgia. Steen’s cannon easily eclipsed the next largest functional reproduction cannon in the U.S., a 1,750-pound Parrott. Using visitor fees, Fort Pulaski paid $50,000 for the big gun, and has a demonstration firing every Saturday.

The National Park Service, which has original and reproduction cannons at its sites throughout the country, has become Steen’s best customer, particularly for gun carriages. An integral part of the cannon, the Civil War gun carriages were made of wood, which has deteriorated over the years. Steen uses iron or aluminum, made to look like wood, to build replacements for sites throughout the National Park Service system.

Steen uses RCBI equipment to make parts for his gun carriages. With only manual machining capability in-house, he employed a 2005 graduate of RCBI’s Machinist Technology Program, Jason Clagg, to operate the computer-controlled equipment he was leasing from RCBI. The advanced equipment produces parts much more quickly and with greater efficiency than manually-operated machinery.

In a radio interview last year, Steen said the average price for one of his iron cannons, including carriage, ranged from $16,000 to $18,000. Bronze versions were priced up to $45,000. Of course, the skyrocketing prices for metal are pushing costs ever higher.

The Steen company is only one example of the hundreds of small- and medium-sized manufacturing entrepreneurs across the region who have taken advantage of RCBI’s resources. Access to sophisticated, high technology equipment is important for many who, like Steen, cannot immediately make the large investment required to begin their own American dream. RCBI makes that dream possible by providing access to the advanced technology. Further, when firms do make the investment their employees can be trained to operate the equipment at RCBI. In addition, our Machinist Technology Program graduates nationally-certified CNC-trained machinists ready to move immediately into industry and help alleviate a countrywide shortage.

Access to equipment and training are available through all four RCBI manufacturing technology centers in Huntington, South Charleston, Bridgeport and Rocket Center (near Keyser in West Virginia’s Eastern Panhandle), as well as extensive workforce development, quality certification and hands-on and online business development services.

If you’re looking for the most unique manufacturing technical assistance center in the region, look no more. Just give us a call or visit us at www.rcbi.org.

Charlotte Weber is director and CEO of the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI).
Bo Keller was just trying to make a little metal cutout to show students in his daughter’s third-grade class the kind of work a mechanical engineer can do when he hit upon an idea for a new business.

Keller used a bandsaw to cut a piece of steel in the shape of the state of West Virginia and he liked how it turned out, figuring it might have applications as a desk knickknack or possibly a decoration to adhere to a car.

He started showing it to friends and co-workers at West Virginia Tech’s Community and Technical College, where he teaches mechanical engineering.

“What do you think?” he asked.

“Everybody said, ‘Go, go, go,’” recalled Keller. As a mechanical engineer, he had plenty of know-how for producing cutouts using polymer-coated steel.

What he didn’t have was the expensive equipment necessary.

Enter the Robert C. Byrd Institute at Marshall University’s Graduate College in South Charleston, one of several facilities around West Virginia funded by the U.S. Department of Defense and designed to encourage small manufacturers.

“It is one of the best-kept secrets in the state,” Keller said. “I never would have been able to do this without them.”

Keller began leasing space by the hour and tinkering with his cutouts. The first were state cutouts or coal miners mounted to stands.

He decided to try his luck with jurors at Tamarack last summer and was surprised to be accepted on his first attempt.

“I wasn’t cocky, I was just that naive,” he said. He dubbed his business Rocket Gifts (a name he came up with out of the blue after doodling a rocket one day) and was off.

Keller also got the idea to latch on to West Virginia sports fans and create some Marshall and West Virginia University logo items. That required jumping through licensing hoops, a process Keller describes as simple — but not simple.

Marshall uses an outside agency to deal with its licensing arrangements. Other schools, such as WVU and Virginia Tech have their own departments. He now has arrangements with all three.

Besides winding his way through the paperwork, Keller had to create prototypes of what he wanted to sell and prove they were true to the schools’ colors — computer matching helps him achieve the exact Marshall green or Virginia Tech red — called Marine Red, by the way.

He agrees to pay royalties ranging from 8 percent to 12 percent on his sales.

“But it goes into their scholarship funds,” he said, adding he has no beef with the arrangements.

Keller has been surprised at how his simple idea is taking off.

“I have what I like to call the Loose Confederation of Pirates business model,” he said. His wife, Doris, is his No. 1 helper and friends with expertise in sales and the like have stepped in to help peddle his wares.

Already, besides Tamarack, his pieces are sold at the Art Emporium in downtown Charleston, after gallery manager Traci Higginbotham saw his wares at the Capital City Art and Craft Fair at the Civic Center last fall.

He also has them in Fruth Pharmacies, Thomas Memorial Hospital’s gift shop, SportMart, Charleston Department Store, Cabell-Huntington Hospital’s gift shop and Adams Hallmark.

The items have appeal because most are priced under $20. Besides college-specific ideas, he’s also made car stickers with South Carolina’s logo and knickknacks with inspirational sayings or shapes like apples along with custom corporate gifts.

Keller is producing enough now that he has bought his own computerized cutting equipment and space in North Charleston. He has more ideas than he can handle, including some that are more artistic.

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A new round of classes in the Machinist Technology Program (MTP) provided by the Robert C. Byrd Institute for Advanced Flexible Manufacturing will be launched Aug. 25.

The classes will be offered at three RCBI sites in West Virginia: Huntington, Bridgeport and Rocket Center (near Keyser).

The program, which has been under way since 1998, has graduated more than 180.

According to veteran MTP instructor Ed Black, the latest set of classes will provide students a chance to pursue a career in the machining field. Although the program has changed over the past 10 years, Black said there has been little change in the students. “They have been receptive and motivated,” he noted.

The MTP students undergo a technical training program featuring rigorous, specialized hands-on instruction that prepares them for immediate employment and lifelong professional advancement.

Certified by the National Institute for Metalworking Skills (NIMS), the program also prepares students to earn individual NIMS credentials.

RCBI offers technical machinist training through a full-time, 12-month program of intensive study. Black noted that the MTP curriculum “has changed some” over the years. He cites the addition of the Auto Cad class and use of computer-numerical-control (CNC) machining as among the biggest changes in the curriculum over the past decade of the instructional program’s close-up look at the world of a machinist.

Instruction covers highly focused manual machine operation and technical support, introductory CNC machining, mathematics for machinists, computer training safety issues, and communication and organizational skills.

The program’s core technical components are designed to meet the manufacturing sector’s needs.

According to Charlotte Weber, RCBI Director and CEO, manufacturers across the state have expressed a serious need for technical training and development for their employees. “The continuing shift in industry’s needs in the state toward high technology skills and technically capable workers prompts the need for additional training,” Weber said.

Classes are open to high school graduates, dislocated workers, welfare-to-work participants, employed individuals, participants in state or privately funded education or training programs, and employers who are expanding the technical capabilities of their present workforce.

Applicants must have a high school diploma or equivalent.
Opening new markets is one sure way for companies to compete more successfully in today's global economy. With assistance from the Robert C. Byrd Institute (RCBI)—and the commitment of its own talented work force — Star Technologies LLC of Huntington is primed to take this step and enter new markets.

The Cabell County company, which manufactures precision clamping devices, brackets and metal stampings for the aerospace and transportation sectors, has a longstanding commitment to manufacturing excellence. With its recent certification to ISO 14001: 2004, its commitment to meet rigorous environmental management standards is reaffirmed.

As leader of one of the first companies in the Tri-state area to achieve the 14001 environmental standard, Managing Partner Rick Houvouras said he credits not only his committed employees’ efforts and their continuous support of management practices in place at Star, but also RCBI. “The training services provided by RCBI have been outstanding,” Houvouras said. “Their assistance in our efforts to become certified has been invaluable.”

The goal at RCBI, according to Charlotte Weber, director and CEO, is to ensure that West Virginia manufacturers such as Star Technologies have the manufacturing expertise and support they need to maximize their effectiveness as suppliers in the global community, maintain or expand their market base and, ultimately, grow their businesses.

“We recognize their ability to produce quality products and succeed when given the opportunity,” Weber said. “By having access to assistance in implementing and relying on essential management practices, our state’s manufacturers can expect increased contracting opportunities and continued success while meeting their customers’ requirements.”

The latest registration for Star Technologies will enable the manufacturer to look to lucrative new markets in the aerospace and transportation sectors, Houvouras said. And just as importantly, it will help ensure that the skilled men and women there will continue producing quality products for both military and commercial markets.

RCBI regularly assists manufacturers with development and implementation of documented quality and environmental systems to ensure that they become or remain effective suppliers. For assistance with quality management systems or standards, contact RCBI 800-469-RCBI (7224) or e-mail mfg@rcbi.org.
Barry R. Morlachetta of Scott Depot, W.Va., has joined the staff of the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI) as a manufacturing sales representative, working out of the Huntington Manufacturing Technology Center.

Announcement of his appointment was made by Charlotte Weber, RCBI director and CEO.

"Mr. Morlachetta has extensive experience in sales and marketing and will enhance our ability to inform manufacturers of the wide range of services RCBI makes available," Ms. Weber said. "Although he will be headquartered in Huntington, he will be traveling extensively throughout the region to meet with manufacturers and explain how RCBI can help them succeed and grow. We're pleased to have him aboard."

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When CSX Transportation held a news conference to announce its plans to open a new dispatching center in Huntington, it called on “Collis P. Huntington” – otherwise known as RCBI’s Jim Casto – to be master of ceremonies for the event. Here “Collis P.” and Gov. Joe Manchin talk things over at the April 1 event. Casto frequently portrays rail tycoon Huntington in appearances at schools, civic groups and public events. CSX said the new dispatching center will bring as many as 80 jobs to the state.
Lloyd Arnold, Xiaoping Wang earn RCBI awards

Lloyd Arnold of Cumberland, Md., is the April employee of the month for the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI).

Announcement of his selection was made by RCBI Director and CEO Charlotte Weber.

Arnold, who joined the RCBI staff in 2001, is site manager and machinist technology instructor at the RCBI Rocket Center facility, located near Keyser in West Virginia’s Eastern Panhandle.

A 1970 graduate of Fort Hill High School in Cumberland, Arnold earned an applied science degree in technical studies from Potomac State College in Keyser. He served as a combat engineer in the U.S. Army, attached to the 101st Airborne Division, from 1972 to 1975.

He joined Allegany Technology in Cumberland in 1977 as a manual machinist. As the firm purchased CNC (computer numerically controlled) machinery starting in 1981, he learned to operate the new equipment, programming and setting up each machine. He served as shop supervisor from 1989 to 1994 and as production manager from 1994 to 2001.

“Lloyd Arnold is a vastly experienced and versatile manager,” Ms. Weber noted. “He wears many hats as site manager, CNC machinist and instructor. We’re fortunate to have an individual possessing his abilities in charge of our Rocket Center operations.”

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Before joining RCBI, Morlachetta served as director of marketing and sales for Kanawha Scales and Systems of Poca, W.Va. for three years. He also spent three years as vice president of sales for Syscan Corp. of Charleston, W.Va. and 10 years as an executive with Danka Office Imaging Co., also in Charleston. He began his career in 1972 with Quorum Corp. and later became president of AB Dick Products Co. in Springfield, Ill. from 1989 to 1991.

Morlachetta worked his way through Marshall University, earning his B.B.A. degree in marketing and retailing in 1970. He then served two years as a military policeman with the U.S. Army. He has been a member of the Board of Directors of the Putnam County Chamber of Commerce and a member of Tri-County YMCA and the Rotary Club.

RCBI offers a wide range of services to manufacturers through its manufacturing technology centers in Huntington, South Charleston, Bridgeport and Rocket Center (near Keyser in West Virginia’s Eastern Panhandle). Included are access to state-of-the-art manufacturing equipment, extensive workforce development and technical training opportunities, quality certification and online business development services.
School counselors get a look at RCBI operations in March tour

Larry Cartmill, technical program recruiter, addressed a group of school counselors from the region visiting RCBI's Huntington center in early March. The counselors were briefed on the opportunities available to their students through the Machinist Technology Program and were given a tour of the Huntington facilities. Cartmill, a veteran Cabell County educator, joined RCBI last November to take over and develop statewide recruiting activities for the Institute's machinist programs.

Manufacturing award presented

Hank Cox, vice president of media relations at the National Association of Manufacturers and a 1968 graduate of Marshall University, was honored with RCBI's 2008 Distinguished Alumnus in Manufacturing Award at this year's Marshall Alumni Association Awards Banquet. Presenting Cox his award was Nancy Campbell, national president of the Alumni Association.

RCBI adds veteran machinist to its Bridgeport facility

Steven A. Davis of Pleasant Valley, W.Va., near Fairmont, has joined the staff of the Robert C. Byrd Institute for Advanced Flexible Manufacturing (RCBI) as a CNC machinist at the Bridgeport Manufacturing Technology Center. His appointment was announced today by RCBI Director and CEO Charlotte Weber.

"With more than a dozen years of experience with computer-numerical-controlled (CNC) equipment, Steve Davis will be a valuable asset, particularly in proficient operation and maintenance of the CNC router, waterjet and 6-axis machining center," Ms. Weber said. "We're looking forward to working with him in providing services to the region's small- and medium-sized manufacturers."

Davis, who attended Fairmont State College, has worked with Shuck Steel Fabricators in Pleasant Valley for the past six years. He began his career as a machinist in 1994 with CNC Industries, also in Pleasant Valley. He has also worked with J&S Machine in Pleasant Valley and Pratt & Whitney Engine Services in Bridgeport.

He is married to the former Rebecca Garner and they are the parents of three children, daughter Hunter and sons Connor and Zack.

In addition to Bridgeport, RCBI operates manufacturing technology centers in Huntington, South Charleston and Rocket Center (near Keyser in West Virginia's Eastern Panhandle). It offers a wide range of services to manufacturers including access to high tech manufacturing equipment, extensive workforce development and technical training opportunities, quality certification and online business development services.