

In Memoriam

Brenda Sudzum

1960-2009



Brenda L. Sudzum.

Brenda L. Sudzum of B&R Machine and Gear Corporation, passed away November 26, 2009 at the age of 49. Born September 20, 1960 in Elgin, IL, Brenda was the youngest daughter of the late Bennie L. Boxx and Doretta Boxx.

Bennie and Doretta founded B&R Machine and Gear Corporation in Addison, IL in 1974. By

1980, Brenda moved with her family to Tennessee where she played a key role and was a driving force behind B&R's accomplishments. Throughout her career, she continually strived to advance B&R's achievements and success.

"Everyone who was involved with the AGMA or attended industry events knew that Brenda was a beacon of energy and enthusiasm both for B&R and for the gear industry," says Michael Goldstein, publisher of *Gear Technology*. "She will be missed for her contribution to the company and the industry. More importantly, I've known Brenda and her family for most of my professional career, and I'm sure I'm not alone in saying that I'll miss Brenda most as a friend."

Brenda is survived by her mother, Doretta Boxx; her husband, Nick Sudzum; two sons, Niko Sudzum and Ben Michael Sudzum; her daughter and son-in-law, Michelle and David Maddox; her brother, Terry Boxx; and her sister, Suzette Kelly.

She was preceded in death by her father, Bennie L. Boxx; one brother, Bennie R. Boxx; and one sister, Doretta Denise Boxx.

QuesTek

AWARDS PRODUCTION LICENSES FOR GEAR ALLOYS



This ring and pinion set manufactured from the Ferrium C61 alloy has been employed in many off-road racing vehicles.

Latrobe Specialty Steel Company was awarded licenses to produce and sell Ferrium C61 and C64 alloys from QuesTek Innovations LLC. Both high-quality, carburizing steels were developed specifically for gear applica-

tions as Phase I and Phase II Small Business Technology Transfer (STTR) projects awarded by the U.S. Navy Naval Air Systems Command (NAVAIR).

Ferrium C61 and C64 exhibit high core strength, high fatigue strength, high temperature resistance and high surface (case) hardenability. These licenses are the first QuesTek has granted to commercially produce and market the two alloys using QuesTek's compositions, processing knowledge and intellectual property. Terms of the agreement were not disclosed.

"We're pleased to award these licenses to Latrobe," says Charlie Kuehmann, president and CEO of QuesTek. "These licenses build upon our earlier license to Latrobe of Ferrium S53, our ultra-high strength, corrosion resistant steel used for aircraft landing gear and other applications. We look forward to working further with Latrobe, their customers and design engineers worldwide to identify valuable product applications of Ferrium C61, C64 and S53."

"We sell these premium-quality, high-hardness carburizing steels to customers worldwide to boost the performance

continued

and durability of their products,” comments Scott A. Balliet, Latrobe Specialty Steel director of technology and quality. “These alloys are produced in our state-of-the-art vacuum melting (VIM) and vacuum re-melting (VAR) facilities, which include the recently completed VIM and VAR expansion to our Latrobe, PA facility. Working with QuesTek, we accelerate introducing premium alloys to customers for vital defense and commercial applications.”

The Ferrium C61 design objective was to develop a high performance, secondary-hardening gear and bearing steel with surface properties similar to conventional gear steels, like AISI 9310 and EC36C; however, the goal was for an ultra high-strength core and fracture toughness. While Ferrium C61 can reach case hardness of 60–62 Rockwell “C” hardness (HRC), Ferrium C64 achieves 62–64 HRC.

The Ferrium alloys have 900–950 degrees Fahrenheit tempering temperature, which is an increase in thermal stability of 400–600 degrees Fahrenheit from that of conventional gear steels. This quality results in improved oil-out survivability. They were designed to allow gas quenching and use conventional low-pressure carburization technology to minimize distortion, lower manufacturing times and pro-

vide “dial-in” carburized case hardness profiles.

Typical applications include demanding power transmission shaft and gear applications in aerospace; energy; and racing, off-road and mission-critical vehicles; also, other industries where weight savings, compactness, high temperature resistance and high surface fatigue resistance are important, according to QuesTek’s press release.

“Certain product applications benefit from the harder surface that C64 offers over C61, when for example the product design life is limited by contact surface fatigue,” explains Rich Kooy, director of sales and marketing for QuesTek. “Other product applications may be limited by the strength and fracture toughness of the core material, where the increased ultimate tensile strength and fracture toughness of C61 over C64 will make it the superior choice.

“These differences may seem small, but the fact that NAVAIR is funding an STTR program for QuesTek to design and develop Ferrium C64 for Navy rotorcraft applications illustrates that they are not.”

QuesTek, originally a research arm of Northwestern University, became an independent company separate from the university in 1997. The company recently announced a



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Phase II Small Business Innovation Research (SBIR) project from the U.S. Army, and three Phase I SBIR projects were awarded by the U.S. Department of Energy and the Office of Naval Research.

For more information about QuesTek Innovations' gear technology, see the technical paper on pages 46–53.

Mori Seiki

OPENS EXPANDED HEADQUARTERS



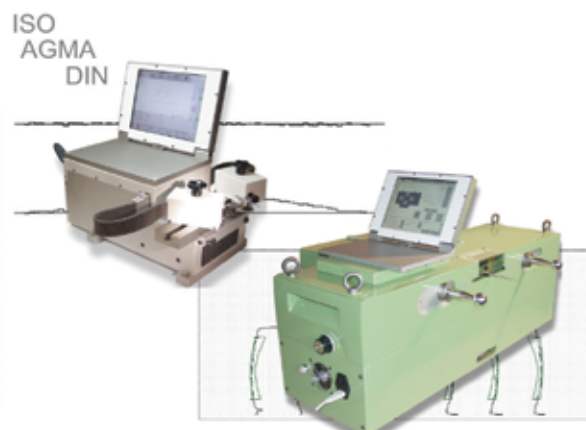
Celebrating the completion of its 102,000-square-foot North American corporate headquarters in Hoffman Estates, IL, Mori Seiki hosted a grand opening ceremony and open house in November.

The open house was a three-day event with more than 25 machine and cutting demonstrations, and information about developing technology presented by guest speakers. There were 19 different seminar topics, and guest speakers represented the automotive, medical and energy industries. Five new machines were introduced as well as the latest version of Mori Seiki's CNC software, *MAPPS IV*.

The new facility consists of a 14,000 square-foot showroom, Mori Seiki University and office space. The entire facility is twice the size of the previous headquarters, and it didn't include the university, which has three classrooms and a state-of-the-art learning lab for traditional and hands-on machine instruction. The showroom features two 25-ton cranes to help position and operate the extensive product line housed at the facility.

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The ribbon cutting ceremony was attended by Dr. Masahiko Mori, president of Mori Seiki; George Hiseada, consul general for Japan; and William McLeod, mayor of Hoffman Estates. A senior economist from the Chicago Federal Reserve provided a regional outlook for manufacturing in the Midwest while Mori Seiki VP of engineering, Greg Hyatt, gave an overview of new technology in development at the company.

"Our goal is to be a resource that brings a difference to the machine tool end user," says Thomas R. Dillon, president of Mori Seiki U.S.A. "Mori Seiki's commitment to this goal can be seen in our emphasis on education, research and development in the design of the new headquarters facility."

Manufacturers that missed the grand opening event are invited to check the facility out at the next major event, Innovation Days, which is being planned for the second week of May 2010.

Sandvik

APPOINTS NEW PRESIDENT

Tom Erixon was promoted from president of Sandvik Hard Materials to president of Sandvik Coromant. He replaces Kenneth Sundh, who was appointed executive vice president of Sandvik Tooling, where he is responsible for global strategic projects.



Tom Erixon.

Prior to his position with Sandvik Hard Materials, Erixon held various positions within Sandvik Group and Boston Consulting Group.

Delta/Tifco

PURCHASES FORMER NEWSPAPER FACILITY

Delta Gear is setting up shop in the former Observer Newspapers facility in Livonia, MI. The 61,000 square-foot

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facility will be torn down, and a 75,000 square-foot, leading edge, state-of-the-art gear facility will take its place.

Three different companies will be housed at the facility. Delta Gear, the parent company of Tifco Gage and Gear, will now handle the Aerospace Gear Operations. Tifco Gage and Gear will remain and continue producing master gears and gages. Delta Testing and Inspection (DTI) will be a 17025 certified and NADCAP certified inspection facility for gear inspection, nitral etch, magnetic particle inspection, hydrogen embrittlement x-ray and fluorescent penetrant inspection. Gear roll testing, single-flank roll testing and full service transmission dynamometer testing will be provided.

"This is the next step in our plan to becoming the leading aerospace and gear and gearbox provider in the industry," says Bob Sakuta, owner of Delta Gear.

Construction is slated to begin in April 2010 with planned completion and move-in anticipated for November 2010. The property was deemed a "functionally obsolete" brownfield site by the city earlier this year.

Hainbuch

OPENS MANUFACTURING FACILITY



Mequon, WI is the new home to Hainbuch America. The German workholding company moved into the facility in November, and manufacturing is scheduled to commence in the first quarter 2010.

"With implementing a job shop here we will be able to provide better and quicker service to our customers," says Sylvia Rall, Hainbuch co-owner. "For example, we will offer a next-day-shipping service for all grind-outs of

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Rall came to the United States from Germany earlier in the year to aid the transition. She anticipates they will hire 10–12 new employees when full operation is achieved in early 2010.

Jurgen Bettray, president of Hainbuch America, commented, "It was a good time to invest in our future here. Our workholding products have long been known for their exceptional precision. Now our U.S. customers will enjoy almost instantaneous access to them."

QC American

WELCOMES DIVISION MANAGER



Ross Wegrzyn-Jones.

Ross Wegrzyn-Jones was appointed vice president and division manager for QC American, a division of American Broach and Machine Company based in Ypsilanti, MI. He has over 17 years of experience in the machine tool, tooling and workholding fields in sales, marketing and project management capacities.

Wegrzyn-Jones previously was the owner of RJR Machine Tools, LLC, which served as a machine tool dealer, agent and cutting tool distributor in Michigan, primarily in the high production automotive and truck components manufacturing industry.

Starting in 2004, he maintained his position with RJR Machine Tools while simultaneously serving as national sales and marketing manager of Advent Tool and Manufacturing of Lake Bluff, IL. "I was integral to the formation of a new division wholly owned by Advent Tool named TMFM, LLC, which earned a patent and essentially created a process of spline milling on a vertical machining center," Wegrzyn-Jones says. "I quite literally wrote the book (as prescribed by engineers of course)."

December 1, 2009, he left both RJR Machine Tools and Advent Tool to work with QC American.

Prior to 2001, he worked for two other companies since 1991. These were in the independent industrial manufacturer's representative field, handling multiple product lines, including machine tools, workholding, cutting tools, metrology and toolholders.

Wegryn-Jones has a bachelor's degree from Michigan State University and a master's in business administration from Western Michigan University.

QC American, LLC, based in Ypsilanti, MI, sells CNC form and generation gear grinders, CNC and manual OD grinders and gear chamfering/deburring machines. Industries served include aerospace, defense, automotive, power transmission and wind power generation.

Solar Manufacturing

ADDS SALES SUPPORT IN SOUTH

David Gangle, president of Ganco Heat Processing Systems, Inc. (GHPS), formed an agreement with Solar Manufacturing, Inc. to provide sales representation in Alabama, Florida, Georgia and Mississippi.

GHPS is a manufacturer's representative company focused on thermal processing equipment and services for OEMs and end users of primary and secondary metals, ceramics, food, aggregate drying, mineral processing, petro-chemical and heat treating.

Gangle has 17 years of experience in process heating applications. He has held positions in application engineering as well as sales and commissioning for several leading domestic industrial burner and controls equipment manufacturers. He is involved with several industry associations, including the Association for Iron and Steel Technology, ASM Heat Treating Society, Minerals Metals and Materials Society, MTI, American Ceramic Society, Brick Industry Association, Globe Trotters, American Foundry Society and Industrial Heating Equipment Association. He earned a bachelor's degree at the University of Akron. He currently resides in Birmingham, AL.



David Gangle.

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