

On the Move with Circle Gear

PERSONNEL CHANGES AND EXPANSION HIGHLIGHT CICERO, ILLINOIS GEAR MANUFACTURER

Michael McKernin was recently appointed president of Circle Gear and Machine Company in Cicero, Illinois. He follows in the footsteps of Albert Knez Sr. the company's current CEO and former president of over 30 years. McKernin has held various positions within the company across engineering and sales disciplines during his 25+ years.



McKernin's efforts have been recognized by Charlotte Knez Schmidt and Albert Knez Jr, third generation members of the founding family and current company executives. "Mike has certainly been busy in his new position. Since his appointment, we have relocated our Quality Reducer Division, re-tooled our manufacturing capability and purchased the building directly adjacent to the main works, increasing our total manufacturing space to over 121,000 square feet" said Mrs. Schmidt.

"Acquiring the 77,000 square foot building located next door to Circle Gear earlier this year, allowed us to better utilize manufacturing and engineering resources, while improving overall service to our customer base. Quality Reducer Service (QRS) formerly of LaGrange, Illinois, moved to the Cicero location in March of 2014. QRS and Circle Gear will now be together under one roof," said McKernin.

QRS specializes in the inspection, overhaul and rebuilding of industrial gearboxes. They have long been supported by the manufacturing and engineering expertise of Circle Gear. In addition to QRS, the expanded facility will house two recent machine purchases, a Gleason Model 463 with aircraft quality hypoid/spiral bevel gear tooth capabilities and the Luren LFG-8040 vertical profile gear grinder.

"Much of our sustained growth over the past two years has been in spiral bevel/hypoid product line," McKernin added. "Bevel gear tooth grinding is a logical extension of that product line."

"The addition of **Paul Campion** as general manager of operations opened the door to significant growth in our bevel department. Paul's reputation and expertise are well known in the gear industry. His leadership and 30+ years of experience have been catalysts for growth not only in bevels but across the full range of our product offering," stated McKernin.

McKernin also noted that the versatility, increased production and consistent quality achieved from the new Luren Tooth Grinder



were cause to obsolete other machines. "The timing couldn't have been better," McKernin said, "given our recent growth, this machine has allowed Circle Gear to remap our manufacturing footprint and reclaim much needed floor space, while helping to expand throughput in our plant."

A key component for McKernin is to make these changes as seamless as possible for their customers. "The cornerstone of our business model has always included shortened lead-times and breakdown service. The productivity gains and improved workflow from our increased machine capacity and floor space have allowed us to keep customers happy and coming back for more," McKernin said.

Circle Gear, a family owned and operated company since 1951, is an ISO 9001:2008 registered company and a proud member of AGMA (www.circlegear.com).

Matthew Cane

RECEIVES AGMA FOUNDATION SCHOLARSHIP

Born and raised in the Chicago area, **Matthew Cane** made the decision to return to school after some trying times during the recession. "I graduated with honors from McHenry County College with my Associates degree in Applied Science – Manufacturing Management, and several certificates including Manufacturing Design Technology," Cane said.



He's currently attending Southern Illinois University (SIU) on the weekends to obtain his Bachelor's degree in Industrial Technology, and working full time as a quality coordinator and tool design engineer at Star SU, LLC.

Cane said a healthy dose of curiosity regarding how things work and how they're made helped him become interested in manufacturing and engineering. "I can't tell you how many broken appliances I took apart as a kid just to see how they worked, but I can tell you I'm a lot better at putting them back together—and there are a lot less parts left over."

Before going to school, Cane took some online certification courses through AGMA. He read in a newsletter about the AGMA Foundation Scholarship and applied once he transferred to SIU. Recipients of the 2014 AGMA Foundation Scholarship included Cane, Ryan Hall and Tyler O'Brien.

"The scholarship is helping to bring advanced education within reach. Everything I've learned, I've been able to directly apply to what I do on a daily basis. While I've had a fairly broad range of experiences within Star SU, my academic pursuits have given me broad experiences in manufacturing. For example, I've been able to go on tours to local heat treat facilities and get to know their process beyond what I would be exposed to in my day to day professional capacity," Cane said.

Cane has been able to draw on all these experiences to further his career in manufacturing. "I've had exposure to so much of the value chain having worked my way up, whether it's ship-

ping and receiving, resharpening tools on a CNC machine, designing cutting tools, or visiting customers and seeing and troubleshooting the application side. Each experience is another piece of the puzzle, and so much of manufacturing is just trying to see the whole picture, to improve a process or product, remove waste, or fix a defect. Learning the upstream and downstream operations is what provides the perspective to be able to solve those challenges,” Cane said.

In the future, Cane would like to become more involved with some of Star SU’s major automotive projects. “I look forward to continuing to grow in that direction and I’d also like to pursue a graduate degree down the line as well. I’m interested in learning the business management aspects in addition to the technical information I’m learning and applying now,” Cane said.

He also has this advice for students interested in pursuing a career in the gear industry: “Take the time to understand the whole process. I understand a lot more about hobbing or shaving a gear because I resharpened and designed those tools. Rake, lead, indexing, etc. are more than just values on an inspection chart, and there are a variety of variables that come together to produce a gear. Understanding as much as you can about those variables is what leads you to control the process and get consistent results.”

Getting involved in AGMA is also a good idea. “There are several reasons for my involvement,” Cane adds. “I’ve learned valuable information as a student in AGMA courses, and now they are supporting my degree in Industrial Technology. They also set quality standards I reference in my designs, host technical and networking meetings, and while I love attending IMTS, the AGMA Gear Expo is specific to the gear industry.”

The AGMA Foundation offers \$5,000 scholarships to assist undergraduate and graduate level engineering students whose programs focus on gear technology and gear research. For additional information, visit www.agma.org.

ITAMCO




DONATES CMM TO PLYMOUTH HIGH SCHOOL


ITAMCO (Indiana Technology and Manufacturing Companies) has donated a Zeiss Coordinate Measuring Machine (CMM) to the Precision Tool Manufacturing Training Program for high school students. The donation was announced at IMTS 2014. The new machine is evidence



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of ITAMCO's continuing support for the program that Mark Neidig, purchasing manager at ITAMCO, proposed to the Plymouth School Corporation superintendent in 2013.

The new machine will be added to the inventory of precision machining tools housed in the ITAMCO Manufacturing Center on the Plymouth High School's campus in north central Indiana. In addition to ITAMCO's \$100,000 initial donation and ongoing technical assistance, the North Central Area Vocational Cooperative (NCAVC) and Ivy Tech are active contributors. NCAVC contributed funds to purchase equipment and the program's trainer is an Ivy Tech employee. Students receive high school credits and Ivy Tech college credits.

ITAMCO provides open gearing and precision machining services and, like many manufacturers, needs highly skilled employees to operate their technologically advanced CNC equipment. Neidig said that he initiated the program because the ITAMCO team wants to encourage high school students to enter rewarding careers in manufacturing. "We need to keep the USA at the forefront of innovative manufacturing, but we obviously have selfish motivations as well. We need skilled workers in our own facilities," said Neidig.

The ITAMCO staff donated a Zeiss DuraMax CMM because it's a world-class machine like the Zeiss CMM machines they use on their own shop floor. The DuraMax replaces the limitations of manual measuring tools with CNC accuracy and flexibility. "Our facility is better equipped than a typical machine shop and we want participants in the training program to be prepared to work on a plant floor like ours," said Neidig. Zeiss generously discounted the price of the machine, contributed 12 educational licenses for their *Calypso* software for the DuraMax, and provided training for the manufacturing center's instructor. The *Calypso* software enables users to create a measuring plan without programming code or text editing.

After only one year of operation, the training program has success stories. Thirteen students have taken Precision Machining I and four were seniors. Three of these seniors are now working at ITAMCO after graduation and one of the ITAMCO employees is continuing his education at Ivy Tech. The fourth student is also working for a local manufacturer. "The companies were pleased with our students' training because they were prepared to work on the shop floor," said Scott Kaser, the instructor for the Precision Tool Manufacturing Training Program and a certified CNC Machinist. "I was just like these kids. I didn't want to go to college but I wanted a good paying job. I like working with them and I enjoy our partnerships with local companies that want to hire them," he added.

LiuGong

WINS DISTINGUISHED AWARD AT BEI ASIA

Creative Group Pte Ltd. held the BEI Asia Awards for the second year running – the first award for enterprises in the Built Environment Industry (BEI) in the Ritz-Carlton Millenia Singapore, Grand Ballroom. With the highest financial turnover and number of years in the industry, LiuGong was awarded the Distinguished Award of the BEI Asia Awards. Dr. Vivian Balakrishnan, minister for environment and water resources,

attended the awards event as the guest of honor. Joseph Wong, vice president of LiuGong, was invited to attend the event.

BEI is a pioneer in the industry and the first of its kind in Singapore, the BEI Asia Awards recognize, reward, and honor the achievements of leading enterprises across Singapore's Built Environment Industry. The awards acknowledge both local and locally-based companies who have demonstrated excellence in establishing successful businesses while engaging in best business practices such as corporate social responsibility through sustainable efforts.



"As one of the leading construction equipment manufacturers in the world, LiuGong has been honored with quite a few notable Chinese awards, such as the national quality award, but this is our first such award outside of China. To be awarded this honor from BEI is very special to LiuGong," said Wong. "This recognition will spur us on to continue our pursuit of excellence in the manufacturing of construction equipment placing technology, quality and environmental performance in the forefront of our global pursuits."

Hexagon Metrology

ACQUIRES VERO SOFTWARE

Vero Software is a UK-based software company with a strong brand and proven customer satisfaction track record. Their software aids the design and manufacturing process with solutions for programming and controlling machine tools, addressing the rising challenge of achieving manufacturing efficiencies with high-quality output.

Several well-known brands in Vero Software's portfolio include Alphacam, Cabinet Vision, Edgecam, Radan, SURFCAM, VISI, and WorkNC. The company has large market coverage with offices in the U.K., Germany, Italy, France, Japan, USA, Brazil, Netherlands, China, Korea, Spain and India supplying products to more than 45 countries through its wholly owned subsidiaries and reseller network.

The acquisition strengthens Hexagon's software offerings, providing the means to close the gap of making quality data



fully actionable by extending the reach of the newly developed MMS (metrology planning software) to include CAM (manufacturing planning software).

“Together with its unique suite of manufacturing software solutions, Vero Software has the expertise, knowledge and resources to deliver even higher levels of productivity to our customers,” said Hexagon President and CEO Ola Rollén. “Leveraging our global footprint, the synergies from our combined technologies will advance our strategy, supporting the growing need to integrate all data and processes across the manufacturing lifecycle.”

Vero Software will be fully consolidated as of August 2014 (closing being subject to regulatory approval) and will positively contribute to Hexagon’s earnings. The company’s turnover for 2013 amounted to approximately 80 million EUR.

TorqTek

EXPANDS NORTH CHARLESTON FACILITY

TorqTek Design and Manufacturing, LLC, a supplier of timing gears to automotive manufacturers, is expanding its North Charleston facility. The \$12 million investment is expected to create 50 new jobs.

Founded in 1995 as a joint venture of Getrag Gears of North America and Cummins Inc., the company was renamed TorqTek in January 2012 as part of a management buyout. The company is currently expanding to meet motorbike contract demands for industry leaders Harley Davidson and BMW. After exploring options in neighboring states, TorqTek chose to expand its facility in North Charleston for proximate access to its existing and prospective customer base.

Governor Nikki Haley said, “TorqTek’s decision to expand in North Charleston further strengthens their longstanding commitment to South Carolina as part of our vibrant automotive industry. We applaud their \$12 million investment and the creation of 50 new jobs in Charleston County.”

TorqTek currently produces primarily timing gears for the automotive market but has been currently awarded with contracts for transmission components and complete transmission assemblies.

At launch, the new operations will be housed in approximately 100,000 square feet located at 4500 Leeds Avenue in North Charleston with no additional space required. TorqTek employs approximately 138 workers and anticipates hiring 50 associates in the coming months.

ASME

ANNOUNCES POWER TRANSMISSION AND GEARING CONFERENCE

The ASME 2015 Power Transmission and Gearing Conference is an integral part of the ASME International Design Engineering Technical Conferences and Computers and Information in Engineering Conferences (2015 IDETC/CIE). This event will take place in Boston, Massachusetts, August, 2-5 2015 (www.asmeconferences.org).

The 2015 IDETC/CIE conference is the flagship international meeting for design engineering. The Power Transmission and Gearing Committee organizes an international conference every four years. This event is a premier meeting for the power transmission and gearing technologists. This meeting provides a forum to exchange ideas and become familiar with the latest research findings, new concepts, and applications that address critical design engineering issues.

Authors, presenters, and attendees are invited to participate in this event to expand cooperation, understanding, and promotion of research, development, and application of knowledge in the many disciplines having influence on power transmission and gearing performance. Dissemination of knowledge by presenting research results, new developments, and novel concepts at the ASME Power Transmission and Gearing Conference will serve as the foundation upon which the conference program will be developed. Topics sought include but are not limited to:

- Gear Geometry
- Gear Analysis, Materials, Fatigue
- Gear Dynamics and Noise
- Gearbox Design, Reliability, and Diagnostics
- Gear Manufacturing
- Lubrication and Efficiency
- Engineered Surfaces and Wear
- Bearings, Clutches, Couplings, and Splines
- Transmission Systems Including Novel Concepts

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Charles D. Schultz
chuck@beytagear.com
[630] 209-1652

www.beytagear.com