

AGMA

ANNOUNCES TWO NEW COMMITTEES

The American Gear Manufacturers Association (AGMA) recently announced two new member driven committees: Emerging Technology and Industry Voice. The Emerging Technology Committee will be led by Chair Brian Schultz, president of Great Lakes Industry. The focus of the Emerging Technology Committee is to determine what technologies are expected to impact the industry, and develop AGMA as a platform for delivering action-oriented information, communications and speakers.

“The Emerging Technology will be one of AGMA’s most critically important committees because they will challenge industry by alerting industry to disruptive technologies and market opportunities that they believe will have a considerable impact on industry,” notes Matthew E. Croson, AGMA president. “The information they share will come from both a technical and business perspective, allowing companies to understand, and take action on, the opportunities as we see them develop.”

The Emerging Technology committee will be tracking four major technologies, as they start efforts to add value to AGMA membership, including; additive manufacturing, industrial Internet of Things (IoT), robotics and new alloys.

“Members should expect to see provocative speakers, white papers, communications and outreach that can be considered internally as AGMA members wrestle with response strategies,” notes Croson. “We see the association as serving as a change agent platform where members can get a handle on the emerging technologies from both a technical and business perspective, then do the work they need to respond.”

The Industry Voice Committee will be led by Shawn O’Brien, vice president, marketing at McInnes Rolled Ring. The focus of the Industry Voice Committee is to bring the mechanical power transmission supply chain together, and to share how AGMA’s members and the association provide innovation to the larger power transmission industry.

Additionally, the Industry Voice Committee is tasked with exploring collaborations with organizations along the power transmission supply chain, and to effectively communicate what our industry is all about to the downstream customer.

“AGMA’s strategic plan asks for the association to develop what we’re calling the Power Transmission Alliance, and figure out how we can best discuss who we are, what value we deliver, and how best to access the collective knowledge of the supply chain,” notes Croson. “This strategy came from the acknowledgement of the customer trend for needing information that covers the full power transmission system, not just the components. We have an opportunity to unite elements of our industry under an Alliance umbrella in order to communicate what we are all about at events such as Gear Expo, or the Fall Technical Meeting, where we bring industry together.”



Committee Members for Emerging Technology include:

Committee Chair: Brian Schultz, president - Great Lakes Industry

Committee Members:

- Bill Bennett, metallurgical engineer – Corry Forge Company (Division of Ellwood City Forge)
- Teresa Conlan, assistant manager Spare Parts – Klingelberg America, Inc.
- Nitin Chaphalkar, product manager – DMG/Mori Seiki USA, Inc.
- Joe Goral, Sr., technical support engineer – Bourn & Koch, Inc.
- David Harroun, sales manager – Koepfer America, LLC
- David Hegenbarth, president – Federal Gear
- Will Li, vice president – Li Gear
- Thomas “Buzz” Maiuri, senior product manager – The Gleason Works
- Jack Masseth, director, Advanced Gear Design and Manufacturing – Meritor Heavy Vehicle Systems, LLC

Committee Members for Industry Voice include:

Committee Chair: Shawn O’Brien, vice president, sales and marketing – McInnes Rolled Rings

Committee Members:

- Darian Ditzler, sales manager – Luren Precision Chicago Co., Ltd
- William Gornicki, vice president, sales and marketing – ALD Vacuum Systems, Inc.
- Matthew Johnston, vice president – Croix Gear & Machining
- Anne Miner, sales manager – Machine Tool Builders, Inc.
- Gregory Moreland, global manager, markets and products – Fairfield Manufacturing Co., Inc.

“AGMA looks forward to working with these industry leaders as we drive new value for AGMA members by bringing thought provoking insight about emerging technologies, and take a leadership position by bringing the industry together to talk about what we are all about,” adds Croson. “AGMA is 100 percent focused on creating a bright future for members, and we encourage non-members to join us and be part of the next 100 years of AGMA.” (www.agma.org)

Star Cutter Company

CELEBRATES 90TH ANNIVERSARY IN 2017

Star Cutter Company is celebrating its 90th Anniversary throughout 2017 by reflecting on its past and looking towards the future.

Founded in 1927 by Howard B. Lawton and Frank Burgess, Star Cutter Company is a fourth generation family owned business and one of the oldest Michigan based manufacturing companies. Star Cutter started its cutting tool operations in Detroit before moving the main facility to Farmington in 1951. In the late 1960's, the company made an extreme change to their operation by splitting up its growing manufacturing offerings into several smaller towns throughout Northern Michigan. The Star Cutter Company headquarters remains in Farmington Hills along with its solid carbide tool manufacturing (Northern Tool), with additional manufacturing taking place in East Tawas (Tawas Tool; Gear Cutting Tools), Ossineke (Ossineke Industries; Gendrills), Lewiston (H.B. Carbide Company; Carbide Blanks and Preforms), Elk Rapids (Elk Rapids Engineering; CNC Tool & Cutter Grinding Machines), and Traverse City (Grand Traverse Construction; Commercial Construction).



In addition to having grown to 500 statewide employees, the company has long been committed to the future of manufacturing through education and training.

“We believe in Michigan manufacturing and it's future and have forged relationships with local colleges including: Alpena Community College, Northwestern Michigan College (Traverse City), Kirkland Community College (Roscommon), MTEC (Gaylord), Delta College (University Center), and Schoolcraft College (Livonia). As a result of these partnerships, we have made access available to hands-on training and apprenticeship programs for students interested in a career in manufacturing.”

(www.star-su.com)



Bradley Lawton, chairman of Star Cutter Company, believes a large amount of the company's success is due to the culture created as the result of directing the business “up north” beginning around 1967. “The family has always had a fond attraction to the northern lower peninsula and wanted to invest in the local communities. We set out to develop a skilled workforce and over time have created viable operations that have supported these communities.”

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Mazak

APPOINTS NEW SOUTHWEST REGIONAL GENERAL MANAGER

Mazak Corporation drew from the ranks of its highly capable and experienced management team and promoted **Christopher Papke** to the position of Southwest Regional General Manager. Papke will take over for Dana Scott who is set to retire after 19 years as the head of Mazak's Southwest Technology Center in Houston, Texas.



Papke brings 18 years of Mazak experience to his new position. He started in the company's sales training program after graduating from Indiana University with a bachelor's degree in Liberal Arts and from Cincinnati State Technical College with an associate degree in Engineering Technology. As part of his training, he spent nine months at Mazak's Florence, Kentucky, North American Manufacturing Headquarters where he was submersed in the art of metal cutting and in the production of machine tools.

After six months in Mazak's Field Service Department helping install new machines, 18 months in the Application Engineering Department and another 18 months as a Product Specialist, Papke was promoted in 2004 to the position of Distributor Sales Manager for the Midwest Region. He served in that position for seven years before his promotion to Direct Sales Manager for the Southwest Region in 2011.

"We are extremely confident in Chris's ability to lead the Southwest Region as its new Regional General Manager," said Dan Janka, president of Mazak. "With his extensive Mazak training and sales experience, Chris was the perfect candidate for the position, and we know he'll continue to uphold Mazak's stellar reputation for outstanding customer service and support."

Mazak's Southwest Technology Center and its Technical Center in Dallas, Texas, are part of the company's network of nationwide regional Technology Centers. As a key component of Mazak's comprehensive customer support, the Technology and Technical Centers offer advanced application support, education and training, new technology and manufacturing systems along with on-site training and technology seminars.

(www.mazakusa.com)

Sandvik Coromant

APPOINTS NEW PRESIDENT

Nadine Crauwels has been appointed as the new president of Sandvik Coromant, and will be responsible for continuing to develop the company as the leading supplier of tools, tooling solutions, and know-how to the manufacturing industry.



Crauwels has a solid background with Sandvik Coromant, having previously worked as vice president and head of customized solutions and strategic relations. She has had roles within sales, product management and production introduction, and also worked as Sandvik Coromant manager for Switzerland. Crauwels joined the company in 2000, and has more than 22 years' experience in the manufacturing industry.

"I am very pleased that Nadine will take on this new role since she is a solid and modern leader with extensive knowledge and experience from our industry. Her leadership, along with the strong team in Sandvik Coromant, makes me feel highly optimistic for the future development of Sandvik Coromant," says Klas Forsström, president of Sandvik Machining Solutions, who previously held the position as president of Sandvik Coromant.

"This is very exciting, and I am looking forward to this new opportunity to continue to develop this fantastic company. Sandvik Coromant is in a great position already today with leading products and solutions that deliver value to our customers around the world. Sandvik Coromant is driven by highly skilled and committed employees dedicated to supporting our customers. With the Sandvik Coromant Management team, I will make sure we will execute our strategy to lead the industry forward and together shape the future of manufacturing," says Crauwels, "My focus will lie on securing the continuity of Sandvik Coromant's success and strengthening our role as market leader."

Crauwels will report to the president of Sandvik Machining Solutions Forsström and be a member of the Sandvik Machining Solutions Management Team. Born in Belgium, Crauwels has a master of science in mechanical engineering from Catholic University of Leuven, Belgium. (www.sandvik.coromant.com)

International Conference on Gears 2017

Highlights



Panel discussion on
"The Future of Gears – a high-tech product?"



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Oerlikon

PRESENTS PAPER AT CTI SYMPOSIUM USA 2017

High-performance transmission specialist Oerlikon Graziano, brand of Oerlikon Drive Systems Segment, presented its range of hybrid transmission systems at the 2017 CTI Symposium and Transmission Expo USA, in Novi, Michigan. The focus was on the hybrid transmission concept, which promises a step forward on the path to electrification, with a compact and elegant package and full hybrid capabilities.



Oerlikon Graziano presented a paper entitled “Modular P2-P3 Dedicated Hybrid Transmission for 48V and HV Applications.” The company has designed and patented an elegant DHT concept, starting from the know-how cumulated in the last years from the concept of the OGeco transmission. This has been achieved by continuous improvement activities ongoing on the demo vehicle and focusing on the market needs. The transmission is a modular concept which starts from a traditional 2-shaft single-clutch transmission. Thanks to a link between two main gears of the gearbox and the direct gearing between the electric machine and this linked gear arrangement, free-mounted on the primary shaft, the concept allows to have a very efficient electric path of the transmission, which presents two different gear ratios between the electric machine and the secondary shaft.

The solution is particularly innovative, because keeping a very simple and well known architecture (so cost effective), it allows the connections to be made with standard transmission components, selectively coupling the electric machine to either the primary or the secondary shaft. This feature, then, represents a mixed P2-P3 hybrid architecture and therefore takes the advantages of both (e.g. powershifting-P3, recuperation-P3, cranking-P2, standstill charging-P2). It allows a performance increase of up to 40 percent on 0–100 kph and up to 25 percent benefit on CO₂ emission with the installed electric power being 30 percent of the total. Thanks to its scalability and to the possibility of having different power-split configurations the system can be used both as a mild-hybrid or as a plug-in hybrid solution, within a 48V or HV system.

Between the products on display the new entry in the electric

range products is EMR3, a single speed transmission for battery electric vehicle, designed for a maximum input torque of 270 Nm and max input speed of 14,000 rpm. The lubrication concept is developed to guarantee maximum flexibility in term of installation angle to allow the highest level of compatibility with different vehicle layout. Another remarkable factor is represented by the compact design (150 mm center distance input shaft), for weight optimization.

The 4SED Twin-Drive 4-Speed Electric Drive is a powershifting gearbox with low-cost design that includes two small motors and four ratios to provide a wider range of operation at higher efficiency. (www.oerlikon.com/drivesystems)

Cal Poly

EXCELS AT SAE BAJA COMPETITION WITH SMTCL

The California Polytechnic Institute in Pomona, CA competed in the Collegiate Baja Off-Road Competition in Pittsburg, Kansas on May 25–28 and finished in 4th Place. The event sponsored by the Society of Automotive Engineers (SAE) saw over 100 teams competing from Universities all over the world. Students from the United States, Canada, Mexico, India, China, South Korea all participated in the competition. In addition to the Baja Off-Road Competition the SAE also holds Collegiate Design Events for formula cars, aircraft, supermileage vehicles and autonomous driving vehicles.



To compete in the SAE Competition, students must design and build an off-road vehicle and then take part in a variety of events with scoring based on overall design, cost, acceleration, and maneuverability and endurance. The event was won by the University of Michigan who finished first in five of the individual competitions. Cal Poly finished 4th with a new vehicle designed and built in their Engineering Lab. Parts on the Cal Poly Pomona vehicle were machined on the SMTCL VMC1000B and VivaTurn Lathe. These machines were provided by SMTCL-Americas to the Cal Poly Pomona Mechanical Engineering Lab.

Clifford Stover MSE PE, professor, engineering director of California State Polytechnic University – Pomona said, “Through the state-of-the-art CNC machines and the ingenu-

ity of our students, we put a great car on the track, but more importantly we are preparing our students for the real world of manufacturing.”

Jerry McCarty, chief operating officer of SMTCL, explained that SMTCL. “The CNC Machining Centers we put in the Cal Poly Engineering Lab have Fanuc Controls, which is the CNC Control that these students will likely see when they go out in the workforce.” The students use the machine to manufacture engine and powertrain and suspension components. McCarty added, “SMTCL is proud to be a part of the learning experience for these students and the skills they are obtaining will benefit them and their future employers for years to come.”

SMTCL produces 80,000 machine tools each year with revenues of \$2.9 Billion. SMTCL has over 300 products including CNC (computer numerical control) boring mills, vertical turning centers, vertical machining centers, horizontal turning centers, horizontal machining centers, gantry-type machining centers, pipe threading machines and tapping centers. SMTCL also makes conventional lathes, boring mills, and radial drills. The SMTCL Technology Center is located in the City of Industry, California and stocks machines, replacement parts, and accessories. (www.smtcl-americas.com)

Hexagon Manufacturing Intelligence

ACQUIRES VIRES



Hexagon recently announced the acquisition of VIRES, a German-based, leading provider of simulation software solutions that support the development, testing and validation of driver-assisted and fully autonomous driving technology. VIRES’s proven simulation solutions have been recognized for their robustness, performance and ease of building simulation environments for over 20 years. Their worldwide customer list spans prominent automotive OEMs and suppliers as well as recent entrants to the automotive market to companies in the railway and aerospace industries and elite universities involved in shaping the future of mobility. “The VIRES acquisition strengthens our CAE (simulation) platform with an industry-proven solution,” says Hexagon President and CEO Ola Rollén. “It also supports our overall autonomous X vision to deliver a software-driven, intelligent ecosystem that leverages our expertise in 3D mapping and other essential sensor technologies to make safe, autonomous vehicles a reality.” The company’s core product VIRES Virtual Test

Drive (VTD) supports a wide range of additional tools and services. As a main contributor to the industrial consortia behind interoperability standards, VIRES is a driving force in automotive simulator technology. (www.hexagonmi.com)

GF Machining Solutions

OPEN HOUSE TOUTS LATEST WIRE EDM TECHNOLOGY

Gf Machining Solutions introduced seven brand new machines during its recent Solution Days event in Lincolnshire, Illinois. Highlights included the heavy-duty AgieCharmilles Cut P 350/550/850 wire EDMs and the highly precise Mikron Mill P 900 vertical mill. The event also featured the new Mikron high-speed machining center and two new AgieCharmilles die-sinking EDMs. Attendees experienced live part-processing demonstrations as well as a variety of presentations to learn the latest manufacturing strategies.

The Cut P series of wire EDMs handles large, heavy part production for job shops, moldmakers, and manufacturers in the stamping, aerospace and medical industries. The machines provide ample axis travels and cut large, steep tapers and thread wire quickly and efficiently. The Mikron Mill P 900 features a polymer concrete machine base that delivers high dynamic stiffness, while its symmetrical portal design, thermal management, contour accuracy and precise positioning contribute to superior part surface finishes. To reduce cycle times, the machine sports an aggressive high-speed 20,000-rpm StepTec spindle.

The Solutions Days event also showcased a System 3R Transformer cell featuring a high-speed machining center, die-sinking EDM and a coordinate measuring machine.

GF Machining Solutions’ open house event celebrated System 3Rs’ 50- year anniversary and welcomed students selected to participate in the newly-created 3-year apprenticeship program. This program combines traditional college academic and technical courses with extensive practical experience to create a special opportunity for participants to earn a salary while they learn skills and gain knowledge. (www.gfms.com)



Gehring

HOLDS SUCCESSFUL 2017 HONING CONFERENCE

Gehring held its 2017 Honing Conference and Workshops event on May 10–11, 2017 at the Inn of St. John's in Plymouth, Michigan. The conference and workshops brought together experts from the global industry to discuss and propose solutions to advanced manufacturing challenges in surface finish technology applications. A total of 80 attendees, most from the automotive primes and Tier One suppliers, were treated to two days of learning, networking and fun.

President of Gehring in the United States, Roger Cope, gave the opening remarks to kick off the event. He noted this was the 91-year anniversary of Gehring in Germany and that the company has had a manufacturing footprint in the U.S. for 41 years. An R&D facility in Livonia, Michigan was established several years ago to meet the demand for specialized honing process development, consulting and the rapid rise in demand for Gehring contract and prototype honing services. He further mentioned that Gehring has diversified its market focus in the last several years to include the defense sector and, in that arena, Livonia serves as an ITAR-compliant facility. The “One Gehring” theme codifies the global focus of the company, as it seeks to serve a global customer base, Cope said.

Dr. Wolfram Lohse, CTO of the Gehring Group then took the floor and observed, “Part of our new business mission and focus globally is our desire to enhance customer and industry knowledge through the Gehring Academy for honing education, training, consulting and support in helping manufacturers implement and use our advanced honing technologies to their advantage, specifically to meet impending CAFE emissions regulations. We seek a partnership focus with key clients while retaining the highest level of integrity in handling con-



fidential projects.” He discussed the drive to sustainability – another Gehring focus for the future. Partnerships with other key market specialists at this event, such as Oerlikon Metco AG, Nanofocus and Siemens, have been developed to produce a comprehensive resource for the market, with multiple sources of expertise relevant to surface finish technology.

Cope concluded his remarks by noting that Gehring is now a “one-stop shop” for all elements of the honing process – machines, tools, gauging, automation, rework, abrasives, R&D – with global support for global production platforms.

Gehring’s Director of R&D, Michael Schaefer, commented, “Gehring was honored to host this first unique conference, dedicated to Advanced Honing and Surface Finish technology, in the USA and to provide a high level technical and networking platform for professionals in this field with the leading manufacturers in the automotive and other industry sectors.” (www.gehring.de)

Solar Atmospheres

ANNOUNCES PERSONNEL CHANGES

William and Myrtle Jones, primary owners of the Solar Atmospheres family of companies, have announced a few organization changes within the Solar companies. Roger Jones has been appointed CEO for Solar Atmospheres’ four vacuum heat treating locations: Solar Atmospheres Souderton, PA; Solar Atmospheres Hermitage, PA; Solar Atmospheres Fontana, CA; Solar Atmospheres Greenville, SC. Roger previously held the position of Corporate President of Solar Atmospheres. Roger started the Solar Atmospheres vacuum heat treating business with his father, William Jones, back in 1983.

Also, Jamie Jones has been promoted to president for the Solar Atmospheres Souderton location. Jamie previously served as the vice president of operations at the Souderton location, and has been with the company for over 20 years.

Similarly, Trevor Jones has been promoted to CEO for Solar Manufacturing, Magnetic Specialties, and the newly developed Vacuum Pump Services Corp. Trevor has been active in the furnace operations and R&D department at Solar since 2004, and he previously held the position of principal engineer at Solar Atmospheres. (www.solaratm.com)

Exact Metrology

OFFERS PRODUCTS AND SERVICES AT CINCINNATI AND BROOKFIELD LOCATIONS

Exact Metrology held an open house at its facility in Cincinnati and the event was attended by over 100 local area companies, comprising quality assessment, design engineering and management personnel from many of the leading manufacturers in the region. Hosted by company co-president Steve Young, the day included ongoing product demonstrations of the various metrology equipment brands offered for sale, lease and rental by Exact, as well as the testing procedures provided as a service by this unique metrology supplier. Highlight of the event was the company's new partner, EnvisionTEC, a builder of 3D printing equipment for myriad industries, for whom Exact was recently named Midwest dealer. Also on display were a number of the other equipment lines represented by Exact, including Romer arms, GE CT scanning, Leica 3D imaging scanners and a variety of point cloud software advancements for the quality world.

Services on display at the Cincinnati open house included 3D scanning, reverse engineering, quality inspection, instant scan-to-CAD comparison and a full suite of PolyWorks software solutions. Equipment shown at the event included Aicon 3D systems, Breuckmann 3D scanners, Leica Geosystems, Romer and Hexagon brands of scanning devices and related hardware, all of which were available for hands-on use by event attendees. Company representatives from the various equipment lines, as well as Exact Metrology's team of application engineering and testing specialists, were present for demonstrations and technical presentations, throughout the event.

The EnvisionTEC line drew particular attention and Steve Young commented, "This new partner was a natural extension of our service work. We do 3D scanning and were using a 3D printer, so we had that light bulb moment and decided to connect with a 3D printer builder to expand our equipment offerings." Exact represents EnvisionTEC throughout the Midwest. EnvisionTEC is a Detroit-based builder of various 3D printers for the medical, dental, jewelry and various

industrial sectors, offering machines to produce parts up to 18" cube.

In addition, the Brookfield, Wisconsin location hosted its open house. Attended by 70 companies in the area, the event was hosted by Exact Metrology co-president Dean Solberg in conjunction with Exact partners EnvisionTEC, Hexagon Metrology, PolyWorks, 3DSystems and ETI.

A variety of scanning equipment was demonstrated throughout two rooms in the facility. One highlight of the open house was the new Leica BLK360 Imaging Laser Scanner, a 360-degree scanner that allows high resolution scans for a full-dome in less than three minutes. Other devices showcased included the Hexagon Metrology Romer Absolute Arm, several Artec3D scanners, the Surphaser 100HSX, several Leica long



range scanners and the ProCon CT scanner. While demonstration pieces were available to scan, attendees were able to bring in their own parts to show live 3D scanning on the screen.

(www.exactmetrology.com)

Okuma

COMPLETES SECOND SMART FACTORY IN JAPAN

Okuma Corporation recently announced the completion of the company's new Dream Site 2 (DS2) parts factory in Oguchi, Japan. This facility improves the company's ability to respond to customer needs by shortening lead times and adding value through high-efficiency production. Parts produced will be used for machine tool production and also to stock service inventory. The DS2 commenced production in March, 2017.

DS2 is a self-contained start-to-finish production facility for small and medium lathes, and grinders. This is the second smart factory built at Okuma's headquarters, following the Dream Site 1 (DS1), which was completed in May 2013. The

DS1 was one of the first self-contained start-to-finish smart factories.

Okuma is building its smart factories based on the goal of building futuristic factories that interweave automation with skilled techniques. These smart factories combine cutting-edge automation, technologies for unmanned operation, advanced IIoT (Industrial Internet of Things), and workplace know-how to achieve high-mix low-volume production while maintaining production efficiency equivalent to that of mass production. DS2 highlights include more advanced automation and robotics, accurate and quick work instructions and enhanced operation monitoring. (www.okuma.com)