

## In Memoriam

AGMA Chairman  
Edwin Ray Haley

1928–2010



**Edwin Ray Haley.**

Former AGMA chairman Edwin Ray Haley passed away on November 3, 2010 in Jackson, Mississippi. Haley was the AGMA chairman of the board in 1993–1994 and an active member of the AGMA Helical Enclosed Drives Marine Units Committee for more than 20 years. Haley started his career after college working with diesel engine companies. The formal start to his long gear industry career was in 1961, taking a job with Western Gear Corporation.

Haley formed Marine Gears, Inc. in 1973, and later expanded his business by forming Haley Clutch and Coupling and Marine Gears International. The company has been an AGMA member since 1976. Haley was well known in the marine gearing sector and was instrumental in the development of standards for this area of the gearing industry. He was the committee's vice-chairman in 1983 and moved to chair the committee in 1984.

Haley was recognized for his committee service and contributions in 1988 when he received the Association's TDEC (Technical Division Executive Committee) Award. When he was AGMA's chairman he spearheaded a technical meeting between AGMA and the gearing industry in Mexico. AGMA and the gearing industry benefited from his integrity, his stamina and his intelligent contributions to the science of the industry and management of the Association.

"Ray was instrumental in getting the Association to focus more on the international market," says Joe Franklin, presi-

dent, AGMA. "He proposed and led the board and membership in changing AGMA's bylaws to expand the definition of full member to include manufacturers in Mexico and Canada in addition to the United States. He helped organize a successful technical meeting in Mexico City attended by several AGMA board members as well as a number of gear manufacturers in and around Mexico City."

Franklin adds, "The strongest impression Ray left with me was his high standards and his unbending integrity. He was a football player in college and when there was a difficult matter to decide, he always set the tone when he said, 'we are going to play this one right down the middle' meaning no spin, no politics, no favorites. He and the board looked at the facts and made decisions on what was in the best interest of the association and the industry."

## In Memoriam

Pamela L. Spoden

1949–2010



**Pamela L. Spoden.**

Pamela L. Spoden, 61, Loves Park, IL, died Sunday December 12, 2010 at SwedishAmerican Hospital following a brief battle with cancer. She was born August 22, 1949 in Rockford, IL to Virginia (Splinter) and Gilbert Spoden, graduating from Boylan Catholic High School in 1967.

In the early 1990s, Spoden began her career in the gear industry working as the corporate travel coordinator for

American Pfauter and Pfauter-Maag Cutting Tools. She worked for Gleason Cutting Tools for a short time after Gleason Corp. acquired Pfauter-Maag, but then followed her boss David Goodfellow to Meritage in 2001 and then to SU America and Star SU in 2003.

Known for a fiery disposition that matched her red hair and a keen sense of humor, Spoden was widely respected for her knowledge of the travel and hotel industries. She often set up entertainment schedules and worked in exhibit booths at IMTS and Gear Expo, booking blocks of rooms and countless dinner reservations, as well as keeping track of booth staff. She will be sorely missed.

Spoden was a member of St. Bridget Catholic Church and an avid Chicago Bears and Cubs fan. Survivors include: mother Virginia Spoden; sisters Nancy (Chuck) Beck and Beth (Carl) Seaberg; brother Mark (Erin) Spoden; nephews Mark Beck, Chris Beck, Greg (Carrie) Beck, Nick Spoden and Sean Spoden; niece Tia Seaberg and special great-nieces Kennedy and Kysa Beck; aunts Joan Rafferty, Marg Spoden and Eileen Bracke; as well as numerous cousins and friends.

## ITAMCO

### CONTINUES TECHNOLOGY, CAPABILITY AND INFRASTRUCTURE INITIATIVE

Indiana Tool and Manufacturing Companies (ITAMCO) recently commissioned a new Niles-Kapp ZP 40 gear grinder after realizing a market need for larger and higher precision gearing. Included in the initiative is a 33,000 square foot climate controlled gear grinding area, with 40 ton lifting capacity, the installation of the ZP 40 gear grinder, distortion control technology for carburizing and hardening of ring gears, near net forming technology and software development.

The ZP 40 grinder, capable of grinding 4,000 mm diameter and 1,750 mm face width gears, employs precision finishing of large internal and external gearing using both plated CBN and dressable vitrified grinding wheels. Features include vibration dampening, hydrostatic guideways, a direct drive rotary table, stock dividing, eccentricity software and onboard inspection. The hydrostatic guideways ensure high accuracy over the lifetime of the machine, high overload



**ITAMCO recently purchased a Niles-Kapp ZP 40 grinder (courtesy of ITAMCO).**



**The ZP 40 is capable of grinding 4,000 mm diameter and 1,750 mm face width gears.**

capacity and extremely accurate and precise movement of the axes within a few microns, according to the company. This is achieved by maintaining a high thermal stability through temperature-controlled hydrostatic oil. Thermal stability is a critical feature necessary to achieving high accuracy performance, especially with a tall extended column like ITAMCO purchased with the ZP 40.

The machine features profile grinding with five-axis interpolation; an advantage when dealing with complicated tooth profile and lead modifications. Niles-Kapp's stock dividing feature performs a multi-point touch probe analysis of every tooth and makes program adjustments prior to grinding, yielding substantial cycle time savings. The eccentricity compensation software assists in faster setups by reducing the time required to indicate large diameter heavy parts. The onboard inspection feature allows for gear inspection immediately after the gear is ground for quick analysis and verification of the grinding results.

**continued**

**LUREN**

<http://www.luren.com.tw>

**Consider Luren  
for Quality Hobs**



**Luren Precision Chicago Co., Ltd.**

1320 Tower Road  
Schaumburg, IL 60173, USA  
TEL : 847-5983555  
FAX : 847-5983552  
E-MAIL : Gerald\_kuo@luren.com.tw

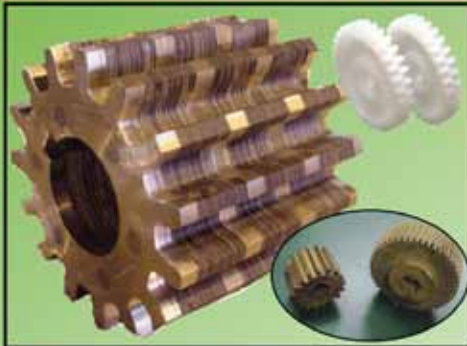
**Luren Precision Co., Ltd.**

No. 1-1, Li-Hsin 1st Rd.  
Hsinchu, Taiwan 30078, R.O.C.  
TEL : +886-3-5786767  
FAX : +886-3-5784933  
E-MAIL : sales@luren.com.tw



**OSBORNE TECHNOLOGIES**

**RAWHIDE & PHENOLIC GEARS**



**WHY USE WATER BUFFALO RAWHIDE GEARS?**

With minimal lubrication required, RAWHIDE GEARS mesh smoothly with the mating gear...eliminating destructive vibrations and wear & tear inherent to metal gear trains.

RAWHIDE GEARS are designed to be the weak link. If an overload occurs, the gears are designed to fail before more costly damage occurs to the larger driven gears. Our RAWHIDE GEARS are specially riveted under hydraulic pressure with durable brass flanges. Tooth strength is extremely strong due to the unique processing of the multiple layers of rawhide which retain virtually all of the original fiber strength.

**RAWHIDE BLANKS:** Also available!

**PHENOLIC:** Made from fabric laminations impregnated with phenolics under high temperature and pressure, gears exhibit superior shear force vs. torque distribution properties.

**POLYMER (PLASTIC):** We engineer gears from delrin, nylon and other composite materials for applications requiring a light-weight quiet gear. All gears are made to order based upon customer specifications.

For pricing and additional information please contact us.

**OSBORNE TECHNOLOGIES**

A division of MOUND TOOL COMPANY

9301 Watson Industrial Park, St. Louis, MO 63126

Phone 314-968-3991 Fax # 314-968-1240

Email: info@moundtool.com Web: www.osborne-tech.com

ITAMCO also recently purchased a Zeiss MMZB CMM that enables offline inspection of the gear to confirm the previous data from the ZP 40.

All of these features are focused toward producing large gears of the highest quality. When making the decision to purchase the grinder, the team from Niles-Kapp was confident in the machines' ability to produce gearing to the quality level of DIN 1 or ANSI/AGMA A2 per the AGMA 2015-1-A01 standard (AGMA class Q15 under the old AGMA 2000-A88 standard). ITAMCO has not been disappointed by the results.

The ZP 40 has been installed in ITAMCO's new 33,000 square foot grinding area. This area is located within their Argos, Indiana facility which has a total of 385,000 square feet. ITAMCO felt that their Argos plant best suited this expansion seeing it has over 125,000 square feet of 60 foot high bay areas with up to 80 ton lifting capability. These areas are suitable for large gear drive and complex machine assembly. The ZP 40 is the first of eight CNC gear grinding machines being installed in the new grinding area.

While the economy was stalling in 2008, ITAMCO felt the timing was right to begin these initiatives, which would help to further enhance their ability to work with their customers on complex projects. According David Neidig, vice president of business development, "The company has always operated with the philosophy of investing during depressed markets in preparation of the next upturn."

ITAMCO was started in 1955 and has provided contract manufacturing services for OEMs since its inception. The company services nearly all heavy duty markets from its two ISO 9001:2008 certified facilities in northern Indiana. In an effort to add more value to its customers, ITAMCO has diversified into many areas of manufacturing integration. Joel Neidig, systems engineer at ITAMCO recently gave one of the keynote addresses at the 2010 Autodesk University in Las Vegas. Neidig spoke regarding ITAMCO's beta testing of the *Autodesk Factory Suite*, which ITAMCO used to simulate the construction of the foundation and installation process of the new ZP 40 grinder.

# MAG

## EXPANDS MACHINE TOOL RANGE



MAG IAS, LLC, a machine tool and factory automation company, is developing a range of larger and more versatile machine tools which will be added to the product lines already produced at its facility in Fond du Lac, Wisconsin. MAG has secured contracts and is in production of a new family of vertical turning centers (VTCs) with table sizes from five to eight meters and facing capacity up to nine meters in diameter. These dual-column machines can handle workpiece loads up to 250,000 kg and feature fixed or adjustable rail styles. In addition, a new model of the large, ram-type horizontal boring machine (HBM) family is under construction in Fond du Lac. The company also recently introduced a new-concept machining system for high-volume production of wind turbine hubs.

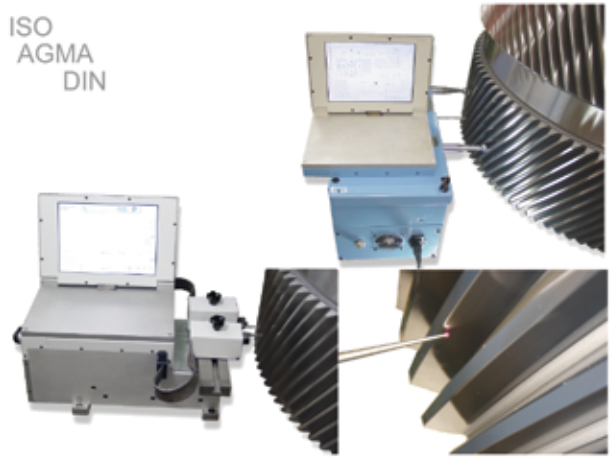
"These machines will bring new dimensions in large part production to MAG customers around the world and will be joined by many additional variations in the coming months," says Bill Horwarth, president MAG Americas. "I'm very pleased that we are able to continue aggressive investments in expanding our product portfolio and range of manufacturing solutions for these important industries. We are confident that our business will continue to improve and delighted that customers have put their trust in us with significant new orders from all global regions, including the United States, Europe, Middle East, India and China."

MAG's new machines offer new multi-functional features and green design elements focused on the lowest total

**continued**

## Large gear CNC inspection solutions

ISO  
AGMA  
DIN



Cost effective & portable CNC inspection, independent of the production machine for profile & pitch inspection with our ES4300 & ES4100 instruments. A high degree of operational convenience is possible by the built in processing of the measured data and the tilt and Swivel display touch-screen. ISO, DIN or AGMA standards evaluation software. The measurements can be stored and printed out directly or on an external PC.

**Donner + Pfister AG**  
Switzerland

Tel: +41554402032  
info@dpag.ch  
www.dpag.ch

## GEAR CUTTING TOOLS MADE IN SWITZERLAND



**SCHNYDER**  **US Distributor**  
**HANIK CORPORATION**  
PHONE 630-595-7333  
FAX 630-595-7343  
www.hanikcorp.com  
email: hanikcorp@aol.com

ph: 011-41-32-344-0400 • fax: 011-41-32-344-0404 • www.schnyder.com • mail@schnyder.com

## Innovative Machine Tool Solutions



**New O.E.M. Machines**  
**BOURN & KOCH** Gear Hobbers & Gear Grinders  
**FELLOWS** Gear Shapers  
**ROTO-CHECK** Gear Inspection Systems  
**BOURN & KOCH** Hob & Shaper Cutter Inspection Systems  
**FELLOWS** Lead & Involute Masters  
**ROTO-GRIND** Precision Rotary Inspection Tables

**Remanufacturing / Retrofitting**  
**BOURN & KOCH, FELLOWS, BARBER COLMAN, GLEASON, LIEBHERR & PFAUTER**  
 Gear Hobbers, Gear Shapers & Gear Grinders  
**M&M, KLINGELBERG, HOEFLER, ROTO-TECHNOLOGY & ITW** Gear Inspection Systems  
**Recalibration of your Lead & Involute Masters**

**O.E.M. Parts / Service / Attachments / Field Retrofits / CNC Enhancements**

**Parts:**  
 Bourn & Koch/Barber Colman 800/860-4013  
 Fellows 802/674-6500  
 Roto-Check/Roto-Grind 937/859-8503

**Service:** 800/860-4013



**Your True Machine Tool Source**

2500 Kishwaukee St. Rockford, IL 61104  
 tel 815/965-4013 fax 815/965-0019  
 www.bourn-koch.com bournkoch@worldnet.att.net

 Sales Enterprise Partner www.star-us.com  
 Machines proposed & sold through the Star US direct selling group

BOURNSK  
 KOCH  
 INC






cost of ownership. The company recently demonstrated at the IMTS in Chicago and AMB show in Stuttgart turning machines with grinding and gear hobbing capability, along with mill-turn and turn-mill machines, honing capability and cryogenic machining. MAG designs also make extensive use of environmentally friendly features, including minimal hydraulics and oil systems, reduced need for chillers and ancillary equipment, as well as energy monitoring and conservation capabilities.

Ground up, modular designs allow for economical customization of these machines along with the industry's fastest build and delivery, a hallmark of the Fond du Lac plant's operation, according to Horwarth. This allows manufacturers of extremely large workpieces to have a machine configured to match their exact needs using families of pre-engineered and optimized components such as columns, tables, heads, tool changers, controls, etc. MAG Fond du Lac is currently ramping up production and will begin shipping these new machine tools during the first half of 2011.

# Spiral Bevel Gears

- Spiral & straight bevel gear manufacturing.
- Commercial to aircraft quality gearing.
- Spur, helical, splined shafts, internal & external, shaved & ground gears.
- Spiral bevel grinding.
- Midwest Transmissions & Reducers.
- ISO compliant.



Midwest Gear & Tool, Inc.  
 15700 Common Rd., Roseville, MI 48066  
 Tel: 586.779.1300 midwestgear@sbcglobal.net



## Gleason

ESTABLISHES NEWS SALES AND SERVICE OPERATION IN BRAZIL

## Gleason do Brasil

**Comércio de Máquinas Ltda.**

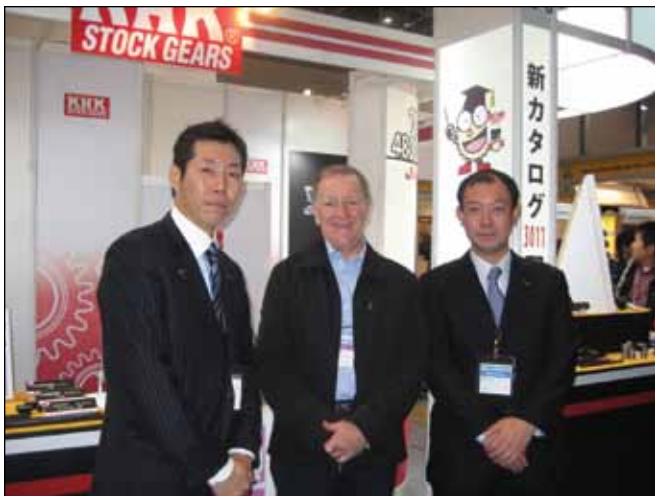
To meet the needs of gear manufacturers in the Brazilian market, Gleason Corporation has expanded its global presence with the formation of Gleason do Brasil Comércio de Máquinas Ltda. based in Sao Paulo, Brazil. Previously, Gleason's activities in Brazil were conducted through its representative "ARBUS" Armando Busseti Máquinas Ltda. While Gleason and ARBUS enjoyed a successful relationship for many years, both companies have decided it is in their mutual best interests to end their relationship. This now creates the opportunity for Gleason to more directly and actively serve the Brazilian market. Both Gleason and ARBUS are committed to a smooth transition of sales and service responsibilities to Gleason do Brasil, and Gleason

thanks ARBUS for its many years of dedicated service.

John J. Perrotti, president and CEO, commented, "Experienced expertise in this market has been retained for the sales and service of all Gleason products and technologies, allowing us to continue seamlessly in the support of customer needs. We are enthusiastic about the new organization in Brazil and look forward to serving our loyal customers in this key market."

## Ronson

APPOINTED SOLE  
AUSTRALIAN AGENT FOR KHK



From left to right: Naoji Kohara, general manager KHK Co. Ltd. Gordon New, general manager at Ronson Gears and Toshi Kohara, president Kohara Gear Industry Co., Ltd. during New's recent visit to Japan (courtesy of Ronson).

Ronson Gears recently announced it has been appointed sole Australian agent for KHK Co. Japan. This partnership will see Ronson Gears increase its 250 stock gear configurations to 7,000, bringing customers faster delivery times and more competitively priced gears, while maintaining its core services and long established standards of quality. Gordon New, managing director at Ronson, said the new relationship with KHK means Ronson Gears' customers can access a much wider range of gears at much faster turnaround times than previously possible.

"Customers will be able to order the more popular line items for next day delivery, with virtually the full range

continued

  
capital  
TOOL INDUSTRIES

Precision  
Gear Cutting  
Tools

CTI is a long established company producing quality Gear Cutting Tools since 1966. We specialize in the manufacture of Gear Hobs up to 40 Module in Class AA, A and B, Spline and Worm Gear Hobs, Gear Shaper Cutters, Gear Shaving Cutters, Broaches and Milling Cutters for various application.

### Capital Tool Industries

#### USA Office

513 Cherokee Drive  
Temple, TX 76504  
Ph: (254) 742-1979  
Cell: (408) 828-0024

#### Headquarters

7-a, Industrial Estate  
Patiala 147004, INDIA  
Ph:+91-175-2351089, 2352326  
Fax:+91-175-2217102  
e-mail: capitaltool@usa.net

[www.capital-tool.com](http://www.capital-tool.com)

ISO 9001:2008 Company



YOUR COMPLETE SOURCE FOR  
**GEARS**

Now Offering 130,000 Inch & Metric  
Precision & Commercial Quality Drive Components

Off-The-Shelf to Customized Applications

Large & Small Quantities Available

Buy Online Or Call For A Quote

Request Your Free Catalog

Download 3D Models



[www.sdp-si.com](http://www.sdp-si.com)

P: 800.819.8900 F: 516.326.8827

SDP/SI: ISO 9001 • SI: AS9100 Registered

**SDP/SI** Setting Ideas into Motion



**KISSsoft 2010 IS AVAILABLE!**

Includes:

- Parasolid CAD core for generation of 3D-models in KISSsoft.
- Export gearing in dxf, 3D STEP Parasolid format or directly into CAD Programs.
- ISO/TR 13989 is implemented for determining the risk of scuffing, and ISO/CD TR 15144-1:2009 calculates the safety against micropitting.
- Full tooth contact analysis with three-dimensional representation of the results.
- AGMA 6014-A06 for open gears and AGMA 6011-I03 for high speed helical gear units
- The newest draft of the ISO/CD TR 15144, allows now the determination of the permissible specific lubricant film thickness  $\lambda_{opt}$  if the load level for micropitting of the oil is known.
- Enhanced full-tooth contact analysis with three dimensional graphics to illustrate the results.

Download your free evaluation copy from [www.KISSsoft.com](http://www.KISSsoft.com)

KISSsoft USA, LLC  
3719 N. Spring Grove Road  
Johnsburg, Illinois 60051  
Phone (815) 363 8823  
[dan.kondritz@KISSsoft.com](mailto:dan.kondritz@KISSsoft.com)

**KISSSOFT**  
Calculation programs for machine design

being accessible for delivery within a week depending on the size of the order,” New said. “At the same time, all our traditional custom made gear cutting services will continue as before. We are always looking at ways to improve our offering and we see the new partnership as a significant step in Ronson Gears’ growth.”

KHK’s export manager, Naoji Kohara, says the arrangement with Ronson Gears is very exciting for his company because it expands KHK’s market into a key Asia Pacific region and gives Australian consumers access to a vast range of gears at much faster turn-around times. “Some of the stock items now available to customers include ground spurs and helicals, spiral bevel gears, straight cut mitre and bevel gears, ground racks, helical racks, worms and wheels, bevel gear boxes, plastic gears,” Kohara said. “We are looking forward to a long and successful association with Ronson Gears.”

**CORRECTION**

In the November/December of *Gear Technology*, the name of AGMA Technical Editor Amy Lane was misspelled.

*Gear Technology* regrets the error.

—The Editors

**Sandvik Coromant**

**NAMES VERKAMP  
DIRECTOR, BUSINESS SERVICES**

Sandvik Coromant recently announced that Mike Verkamp has been named the company’s new director, business services. In this position, Verkamp will track manufacturers’ changing needs for services and establish processes, projects and programs that address these needs. “The challenges facing today’s manufacturers are constantly evolving and Sandvik Coromant works constantly to address them,” says John Israelsson, president of Sandvik Coromant USA. “As director, business services, Mike Verkamp will be applying his expertise and years of experience to better understanding customer needs and creating the programs that meet them.”



**Mike Verkamp**

“The challenges facing today’s manufacturers are constantly evolving and Sandvik Coromant works constantly to address them,” says John Israelsson, president of Sandvik Coromant USA. “As director, business services, Mike Verkamp will be applying his expertise and years of experience to better understanding customer needs and creating the programs that meet them.”

Verkamp earned a bachelor's degree in industrial management from Purdue University and an MBA from Indiana University. He has been a part of the Sandvik Coromant team for 13 years and held a variety of positions, the most recent of which was director of sales.

## Erasteel

### INCREASES PRICES ON HSS AND PM STEEL GRADES IN NORTH AMERICA

Erasteel Inc. recently announced a five-percent price raise on all conventional high-speed steel and ASP grades in North America, effective immediately for new inquiries and orders, and effective January 1, 2011 for deliveries of existing orders. All raw material surcharges will remain in effect. The price adjustment is intended to help offset increasing manufacturing costs related to steeply rising production demand and to permit Erasteel to continue to offer the full range of products through their North American distribution system.

## Moventas

### EXPANDS OPERATIONS IN CHINA

Moventas recently announced it is expanding the company's operations closer to customers. Western customers operating in China, as well as Chinese customers, have long wished for the company to start local manufacturing of industrial gears in China. The Asia Pacific area is a growing market for the industrial gears business. The Suzhou unit, presently a service center, will start manufacturing components and industrial gears and, when needed, customer-specific volume products, all fulfilling Western quality requirements. During 2011, the Suzhou unit will recruit 40–50 new

continued

## New to shot peening?

GET HELP FROM THE SHOT PEENING EXPERTS

### Training

#### On-site training and proficiency exams

The Electronics Inc. shot peening training program is two days of classroom instruction and shop practice. Our professional instructors will review your organization's ability to meet your particular procedure or specification with special emphasis on equipment capability. Certificates of Proficiency are awarded to those demonstrating shop practice competence and passing a written exam.

Ideal for machine operators, engineers, designers and supervisors, our shot peening training programs can be customized to meet your facility's applications, machinery, and experience level of participants.



About Electronics Inc.

- Training providers since 1991
- Over 2,700 students trained worldwide
- Qualified, professional instructors
- FAA accredited



Learn more at [www.electronics-inc.com/on\\_site\\_training.html](http://www.electronics-inc.com/on_site_training.html) or call 1-800-832-5653 and ask for the Education Division.

### Information

#### Free quarterly magazine

Since 1986, The Shot Peener magazine has been dedicated to sharing information and expanding markets for the shot peening industry. Magazine topics include:

- Case studies and applications
- New products and processes
- Industry news
- Scientific research



Download past issues and request your free subscription at [www.shotpeener.com/tspmagazine/index.php](http://www.shotpeener.com/tspmagazine/index.php)



**Electronics Inc.**  
Education Division

56790 Magnetic Drive, Mishawaka, Indiana 46545  
(574) 256-5001 or 1-800-832-5653 • [www.electronics-inc.com](http://www.electronics-inc.com)



A uniquely global publication focusing on on peening, blasting, cleaning and vibratory finishing!  
Also offering training courses!



Ask for free sample issue!

MFN (Metal Finishing News) is distributed in 67 countries and published 6 times a year.

[www.mfn.li](http://www.mfn.li)

**MFN offers training courses for:**  
*shot peening, flap peening and mass finishing*



[www.mfn.li/training](http://www.mfn.li/training)



employees in addition to the current 20 on staff. The recruitment has no effect on employment in Finland.

“Our industrial gears division grows as demand is recovering, hence the Karkkila factory that serves our Western clientele is also currently recruiting,” says Moventas CEO & president Jukka Jäämaa.

Manufacturing operations in Suzhou will kick off in the summer of 2011.

## Elecon

### ACQUIRES BENZLERS-RADICON GROUP

Elecon Engineering Company Limited, a material handling, industrial gears and transmission products manufacturer in India, recently announced the acquisition of the Benzlers-Radicon Group (BR Group). This acquisition will now strengthen Elecon’s product development and engineering capabilities and widen its customer base in European, North American and Scandinavian countries. Two of Elecon’s group companies have combined to make the acquisition—i.e., Elecon Engineering Co. Ltd. and Power Build Limited (PBL) wherein Elecon Engineering has acquired the European, North American & Swedish business and PBL has acquired the Asian business.

The BR Group is headquartered in the U.K. and based out of primary sites in the U.K., Sweden and Thailand, providing a gateway for the Elecon group to enter the European and Asian markets. In addition, the BR Group also has a presence in the United States through the David Brown Group subsidiary, Cone Drive. With this acquisition Elecon will get a platform to grow its exports to a larger international base.

“This is our first international acquisition and yet another milestone in our company’s long-term growth strategy. The combination of strong brands, clear growth plans and a world class supply chain will enhance compelling value-added growth potential for Elecon. The BR Group’s business complements our product portfolio and will strengthen our presence in the global market,” says Prayasvin Patel, chairman and managing director, Elecon Engineering Group.

# Wenzel/Xspect Solutions

RETROFITS CMMS



Wenzel/Xspect Solutions has one of the largest used CMM machine shops in North America for rebuilding and remanufacturing all makes of CMMs. Bryn Edwards, vice president of aftermarket for Wenzel/Xspect Solutions, says, "The introduction of the new Renishaw PH20 5-axis touch-trigger system is providing us with new market opportunities for our aftermarket business because the PH20 has the effect of prolonging the life of many older CMMs by improving their throughput by two to three times."

Edwards explains, "Xspect Solutions' broad experience with the Renishaw REVO system ideally positions us to apply the benefits of the PH20 to all sizes of CMMs, giving the user more throughput because of increased capability and flexibility. The PH20 has a compact design and provides faster calibration, improved metrology and infinite positioning. The unique PH20 head allows measurement points to be taken using only the head and not the CMM structure. The five-axis controlled motion between features eliminates indexing time, thus improving the throughput and allowing larger parts to be measured on the same CMM by minimizing the space required around the part for head rotation. Because the PH20 automatically aligns itself with the part coordinate system, stylus collisions are avoided. The ultimate accuracy of measurement is improved with the PH20 because it uses feature orientation-based calibration and head touches."

## GEAR MACHINERY EXPERT GLEASON MACHINERY SPECIALIST

**KNOWLEDGE, INTEGRITY, TRUST & SERVICE**

Get the Cadillac Machinery Experience and Knowledge from Cadillac Machinery's former President.

European Association of Machine Tool Merchants (EAMTM) has relied on Michael Goldstein for leadership, knowledge and responsibility for 21 years – shouldn't you?

Extensive experience with organizing gear machinery auctions and gear department liquidations.

**Don't accept Fool's GOLD – get the real thing, call Michael GOLDstein at GOLDstein Gear Machinery.**



Michael Goldstein

**GOLDSTEIN  
GEAR MACHINERY LLC**



See our inventory at: [www.gearmachineryexchange.com](http://www.gearmachineryexchange.com)  
Phone: 847-437-6605 • Fax: 847-437-6618

## GEAR TOOLING and ACCESSORIES

**Excellent gear equipment  
at attractive prices**

Sell your surplus gear machines, tooling & accessories direct to end user. To list your machines on this website contact: [michael@goldsteingearmachinery.com](mailto:michael@goldsteingearmachinery.com)



Sponsored by:

Michael Goldstein,  
GOLDSTEIN GEAR MACHINERY LLC  
[michael@goldsteingearmachinery.com](mailto:michael@goldsteingearmachinery.com)

Visit:

[www.gearmachineryexchange.com](http://www.gearmachineryexchange.com)

