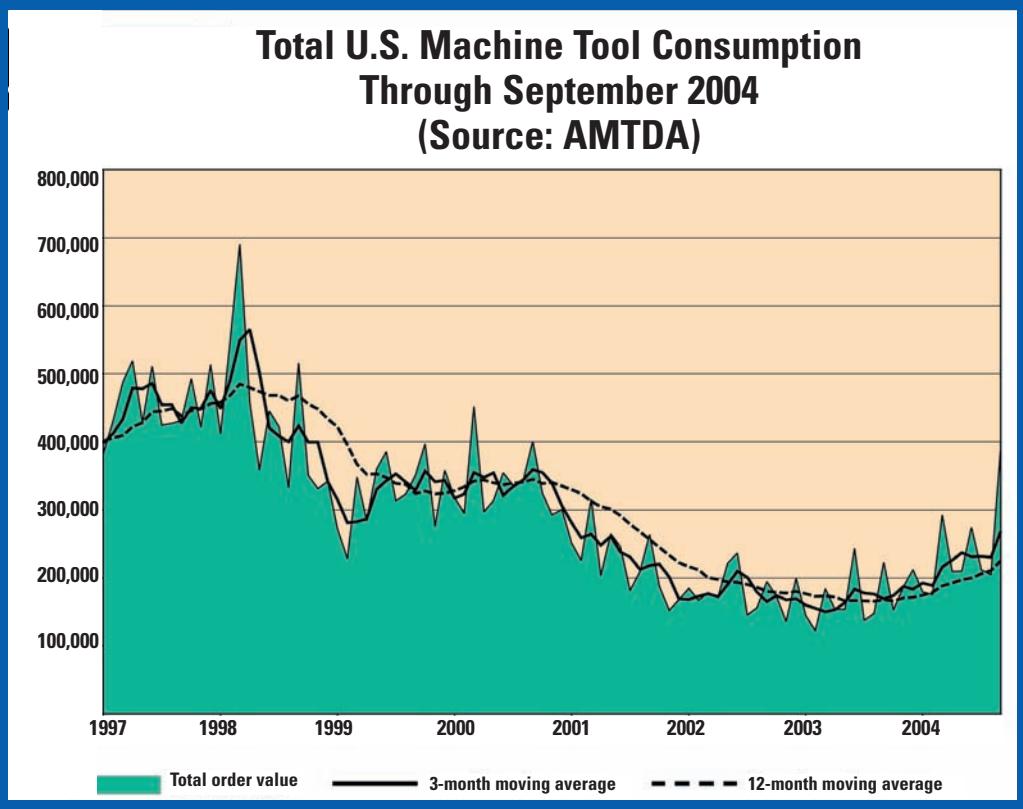


Machine Tool Consumption at the Highest Level Since 2000

"Manufacturing in the U.S. continues to show signs of a strong comeback."
—Ralph J. Nappi, AMTDA president.



The American Machine Tool Distributor's Association (AMTDA) released a report stating that September's machine tool consumption was up 89.8% from August.

According to the association's press release, this year-to-date total of \$2,146.95 million is up 42.2% from 2003's total.

"Manufacturing in the U.S. continues to show signs of a strong comeback," says Ralph J. Nappi, in an AMTDA press release. "Machine tool orders in September hit their highest levels in four years with all the regions in the country showing growth. The re-election of President Bush will further solidify the comfort of manufacturing with continued capital investments."

This data comes from a joint report by the AMTDA and the Association for Manufacturing Technology (AMT).

When broken down by region, the Midwest showed the great-

est improvement and surpassed August consumption by 157%.

Gary Schiffres, membership director for the AMTDA, credited the upswing to a number of factors.

"The combination of IMTS, pent-up buying, and a need for new equipment account for this news. Also, it's the end of the year and many companies have to get machinery off the floor by Dec. 31 for tax incentive purposes," he says.

As far as the outlook for 2005, Schiffres predicts an initial drop, followed by an upswing.

"Personally, I think there will be a dip in the first quarter because of all the activity at the end of 2004. However, big turnkey products and systems will go regardless, and I think we'll see an increase of about 15.3% for 2005," he says.

Ikona and Magna Advanced Technologies Partner for Gear Tooth Profile



Ikona Gear International and Magna Advanced Technologies have jointly introduced a patented gear technology that utilizes a newly designed, patented tooth profile for use in planetary systems.

Together, Dr. John R. Colbourne, author of *Geometry of Involute Gears*, and Laith Nosh, president of Ikona Gear, developed a non-involute system that can be made smaller and lighter than conventional planetary gears. In applications with ratios from 8:1 to 5,000:1, the Ikona gear has fewer moving parts and the highest single-stage reduction ratio with zero backlash, says Nosh.

"Ikona's design is a technological breakthrough—it's a revolution," says Colbourne.

"Pinion teeth have convex profiles that are derived mathematically from a path of contact shaped as in the Archimedean Spiral. The internal gear teeth are conjugate to the pinion teeth. The Ikona gear pair has high contact ratio, no tip interference and minimal backlash," Colbourne says.

Magna Advanced Technologies is working to develop the commercial applications for the Ikona gear. Since April 2003, Magna has been conducting extensive prototyping and testing in its Canadian and Austrian facilities. Magna pinpointed five automotive markets most suitable for the Ikona gear: steering systems, braking systems, closure systems, seating systems, and microactuators.

Servo gearing seemed to be a fit for the Ikona gear system because, according to its developers, this profile is currently the only form that is completely conjugate with many teeth in contact, sharing the load. Other types of servo gearing employ the orbital gear method to achieve their ratios and stiffness, but often struggle with load shar-

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ing and conjugating issues, Nosh says.

Aside from servo gearing, the Ikona gear is suitable for many industries. Its most recent utilization is in conjunction with AirCast Inc., which is marketing the Mayo Clinic Armbrace with the plastic Ikona Gear in the elbow joint.

"The Ikona Gear was the only technology that could enable the arm brace to be mechanically operated to provide patients a self-exercise option in post-operative care situations," says Barrie Freeke, chief engineer at Ikona. "The elbow gear provides a three-fold torque increase over the original AirCast."

The use of plastic gearing can lead to a reduction in noise, vibration and harshness in the final product, and the load sharing characteristic of the Ikona system enables it to carry higher loads, making plastic a viable option in applications that were previously thought impossible.

For more information:

Ikona Gear International, Inc.

1850 Hartley Avenue, Unit #1

Coquitlam, BC V3K 7A1

Canada

Phone: (604) 523-5500

Fax: (604) 520-5965

Internet: www.ikonagear.com

Star SU Reaches Sales Agreement with Hainbuch Welge

Star SU LLC and Hainbuch Welge Corp. of Milwaukee, WI, have reached an agreement for the sales and distribution of Hainbuch workholding tools that are used in gear manufacturing operations.

According to a joint press release, Star SU will market, sell and distribute Hainbuch Welge's chucking, feed finger systems, and expanding mandrels worldwide. The Hainbuch product brochures are now downloadable as PDF files from the Star SU website.

Hainbuch Welge is an 80% holding of Hainbuch GmbH of Marbach, Germany.

Honda Plans Expansion of Transmission Facilities in Ohio, Georgia

Honda announced a \$100 million plan for construction of a plant in Tallapoosa, GA, and a plan for the expansion of its existing Ohio plant that will also total \$100 million.

According to the company's press release, the Ohio expansion will create 100 new jobs to expand Honda Transmission Mfg. of America and will result in the transfer of production of high precision gears from Japan to Ohio. As the new Georgia plant begins operations, Honda Transmission Mfg. will begin shifting transmission production responsibility there from the Alabama plant. The Georgia plant, located 40 miles west of Atlanta, will also be a hub for gear production.

Honda currently has an annual production capacity of 1 million automatic transmissions in the U.S.

Genstar Acquires Colfax Power Transmission Group

Colfax Power Transmission Group was recently acquired by Genstar Capital L.P., a private equity firm. In a related move, Colfax PT has merged with Kilian Manufacturing Co., another Genstar portfolio company, to form an entity called Altra Industrial Motion Inc.

According to Genstar's press release, the combined purchase price for the two companies was approximately \$200 million before taxes. Michael Hurt, formerly president of TB Woods, has been appointed as CEO of Altra Industrial Motion.

Existing management personnel of both companies will take leadership positions.

Colfax Power Transmission Group is headquartered in Quincy, MA, and encompasses Boston Gear, Warner Electric Industrial Products, Nuttall Gear and Delroyd Worm Gear, Wichita Clutch, Industrial Clutch, Marland Clutch, Formsprag, Stieber, Warner Electric Europe and Ameridrives Couplings.



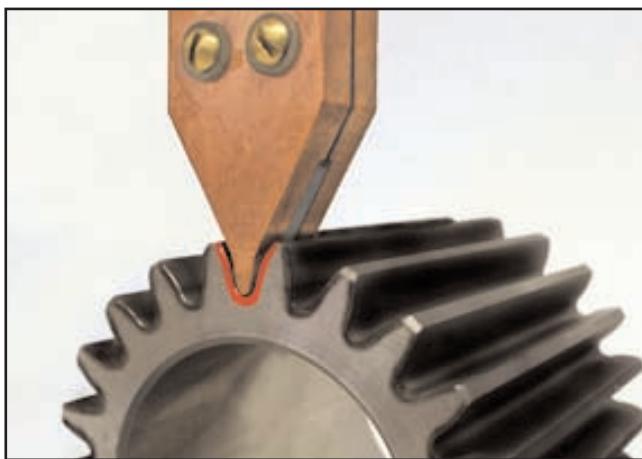
mG miniGears Officially Opens in China

mG miniGears in Suzhou, China, is now operating at full capacity.

According to the company's press release, the Chinese operation is solely devoted to mass supplying of powder metal and machined steel parts to power tool customers.

By early 2005, the company plans to increase production volume and begin to assemble products for lawn and garden equipment.

New Gear Hardening Capability for Penna Flame



Penna Flame Industries of Zelienople, PA, a surface hardening specialist, now has the capability for induction hardening and single-tooth contour gear hardening.

Boston Gear Wins Military Contract

Boston Gear's facility in Charlotte, NC, is under contract to supply gearboxes for the U.S. military operations in Iraq and throughout the Middle East.

The RA 1022 gearbox line will be mounted on Humvees deployed in Iraq and in other locations to help the war effort. According to the company's press release, Boston Gear was awarded the contract by O'Gara-Hess & Eisenhardt of Fairfield, OH, which was hired to equip 350+ Humvees a month for the war.

Jim Miller, operations manager for Boston Gear, is in

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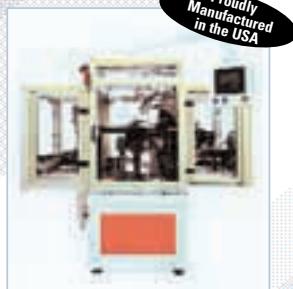
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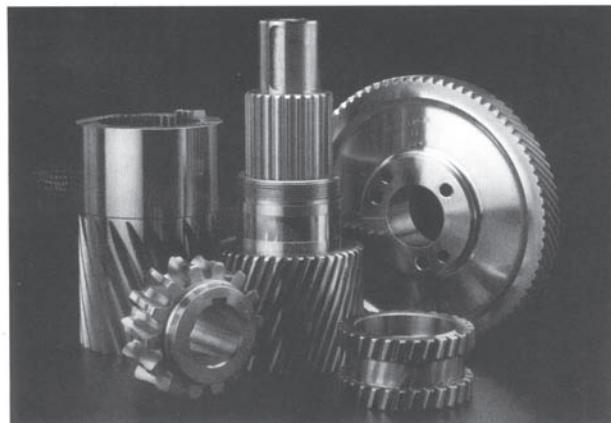
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charge of the gearbox project.

"We're excited and proud to do our part to improve the safety of U.S. military personnel serving overseas," he says.

Manufacturing Association Elects New Board of Directors

The Association for Manufacturing Technology has its elected new officers at its 2004 conference in Bonita Springs, FL.

David J. Burns of Gleason Corp. was elected chairman, Douglas K. Woods will be the new vice chairman, Bradley L. Lawton of Star Cutter was elected second vice chairman and treasurer. J. Patrick Erwin was elected secretary.

David J. Burns

In addition, Doug Currie was elected to a three-year term as a board member, and Richard Bodine Jr., Robert T. Smith and Lawton were all re-elected.



Bradley L. Lawton

Rossi Motoriduttori and Habasit Form Partnership

Rossi Motoriduttori, a manufacturer of geared motors and gear drives located in Modena, Italy, has formed a cooperative partnership with Habasit, a Reinach, Switzerland-based belting company.



According to the company's press release, the board of directors will include various members of the Greco, Habegger and Volpi families.

David de Palma will

be general manager of the North American facility in West Chicago.

Philadelphia Gear Hires Canadian Rep

Gaetan Perron was hired as the sales representative for established Philadelphia Gear customers in Canada and for prospects in eastern Ontario, Quebec and the Maritimes.

Perron's specific responsibilities include selling in gas-fired and hydroelectric power plants, the pipeline industry, petrochemical sector, hydrocarbon processing plants and wind power generation industries in areas from Cobourg, Ontario, through St. John's, Newfoundland.

Most recently, Perron worked as a sales representative for Omega Machine Shop, developing customers in western Quebec and eastern Ontario. He has also held field rep. positions with PYG Equipment and Castle Metals.

INDUSTRY NEWS

Vermont Machine Tools Achieves Retrofit Certification

Vermont Machine Tools announced its certification in GE Fanuc's Five Star Machine Tool Retrofit program.

The certification guarantees a retrofit provider's technical and project management capabilities, matches retrofit projects with qualified best-in-class providers and helps to ensure that machine tool users can maximize the productivity of existing equipment retrofits.

Vermont Machine Tool delivers CNC retrofits and remanufactured machine tools.

Niagara Gear Adds Gleason TWG to its Line

Niagara Gear has purchased the Gleason 245TWG high speed threaded wheel grinder.

According to its press release, the company hopes this new machine will reduce process-related deviations and subsequent heat treat distortion with a hard finishing solution.

The 245TWG enables hard finishing using metal removal rates. It can also improve tooth profiles by eliminating undulated form error by utilizing the latest drive technology.

In addition, this equipment incorporates form grinding methods and components into a water-cooled base. Thermal compensation via sensors throughout the process facilitates accuracy and parts consistency.

Niagara Gear also recently acquired the Reishauer RZ300E precision gear grinder, which can grind gear segments, gears with intermittent teeth and pump gears with few teeth.

New Facility, Markets for Kleiss Gears



Kleiss Gears has traded in its 3,000-square-foot facility in Centerville, MN, for a 14,000-square-foot building in Grantsburg, WI.

According to president Rod Kleiss, the plan is to add both staff and new capabilities for gear molding.

The company plans to develop more automated production capabilities as well. Currently, the company designs and prototypes gears with the aim of eventually getting into gear production work.

"We're also playing with some pretty remarkable materi-

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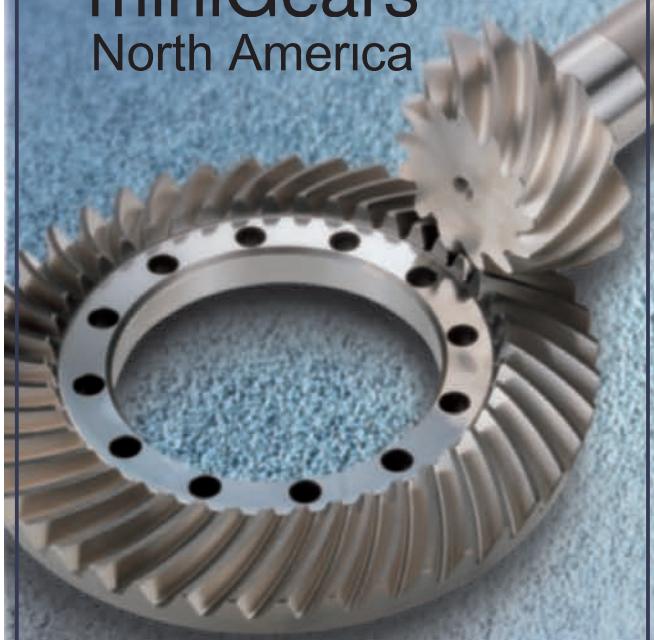
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als," Kleiss says. "We're using PEEK (polyetherether ketone), which can replace lighter duty metal gears. You can never really replace metal when it's fully recognized, but you can modify gear shapes. We're continuing to evolve in the field of plastic gearing, too."

Hamilton Sundstrand Awarded Contract for Trent 1000 Engine

The Rolls-Royce Co. selected Hamilton Sundstrand to design and manufacture the gearbox system for the Trent 1000 engine that is being developed by The Boeing Co.

Hamilton Sundstrand's press release estimated that, over the lifetime of the engine program, the work is potentially worth more than \$350 million to the company.

The environmental control system, electric power generation and start system, remote power distribution system, auxiliary power unit, primary power distribution system, nitrogen generation system, emergency power and electric pump subsystems are all among the components Hamilton Sundstrand is supplying.

This is the second time in 2004 that Hamilton Sundstrand and Boeing will work together on 7E7-related projects. The first time, Boeing selected Hamilton Sundstrand for eight aircraft systems on the 7E7 Dreamliner.

Promotions at American Axle & Manufacturing

American Axle & Manufacturing of Detroit, MI, has made numerous appointments at its executive level.

Yogendra N. Rahangdale was named chairman of the operating committee. According to the company's press release, he will supervise vice presidents of the driveline and metal products division, the program management and launch divisions, quality assurance and customer satisfaction initiatives, materials management and logistics, as well as the directors of industrial engineering and productivity, and capital and capacity planning.



Yogendra N. Rahangdale



John Sofia

Thomas O. Delanoy was appointed to the position of vice president of quality assurance and management. Previously, he was the company's executive director of material and production control.

John Sofia was named vice president of quality assurance and customer satisfaction.

Charles B. Comeau was appointed general manager of U.S. operations at the driveline division.

Other promotions include: Kenneth Koncilja to the position of executive director of internal audits, Gerald Costner to production control and materials management, Michael Dorah to

INDUSTRY NEWS

director of global supply base management, Dr. Robert Karban Jr. to director of advanced quality planning, Donald L. Joseph as plant manager of Detroit Gear & Axle, and Lawrence Oliver as plant manager at Three Rivers Driveline.

Getrag Announces Plans for Slovakian Plant

The Getrag corporate group affiliates Getrag Getriebe- und Zahnradfabrik Hermann Hagenmeyer GmbH & Cie KG, headquartered in Untergruppenbach, Germany, and Getrag Ford Transmissions GmbH of Cologne, Germany, will establish a joint manufacturing site in the Kosice region in eastern Slovakia.

Getrag Ford will build a transmission plant at this site. Getrag GmbH & Cie KG will relocate its motorbike facilities to this location.

According to the company's press release, overall investment will total \$300 million and employ 750 people.

GE Energy Announces \$1.3 Billion in Wind Turbine Projects

GE Energy announced that it has secured contracts and order projections for wind turbine projects in 2004–2005 that are valued at more than \$1.3 billion.

In the company's press release, GE Energy's wind energy division CEO Steve Zwolinski says, "The federal government's recent extension of the renewable energy production tax credit has, again, provided a tremendous impetus for the wind industry in the U.S."

The tax credit provides \$0.018 per kilowatt hour credit for electricity produced during the first 20 years of a wind project's operation and will remain in place through December 2005.

GE's new contracts include projects throughout the U.S. that utilize the company's 1.5-megawatt wind turbines.

In addition to the U.S. projects, GE Energy announced in October its contract to supply 660 wind turbines for eight projects in Quebec.

Regal Beloit Acquires GE Motor and Capacitor Operations

Regal Beloit Corp. announced a definitive agreement with GE Consumer and Industrial for its HVAC/refrigeration motor and capacitor operations.

According to the company's press release, the \$379 million transaction includes a full line of motors for HVAC refrigeration operations and high intensity lighting operations.

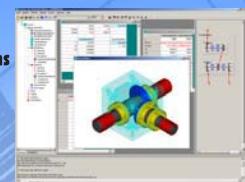
HVAC operations are currently based in Fort Wayne, IN, and are included in the sale as are motor manufacturing operations in Springfield, MI, Reynosa, Mexico, and Faridabad, India; a capacitor manufacturing facility in Juaraxc, Mexico; and a call center in India.

As a result of this transaction, Regal Beloit expects an additional \$520 million in sales.

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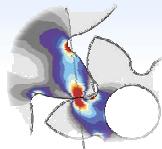
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Headquartered in Beloit, WI, Regal Beloit manufactures mechanical and electrical motion control and power generation products.

Danfoss CEO Wins National Leadership Awards



Jørgen M. Clausen

Jørgen M. Clausen was named "Leader of the Year" by the Danish Association of Managers and Executives at Denmark's largest management conference.

The presentation was attended by more than 800 private and public leaders throughout Denmark.

In October, Clausen was awarded the Order of Merit for the German Federal Republic by the ambassador of the German Federal Republic in Denmark.

Mahr Partners with OKM Jena



Mahr Goettingen has recently acquired 56% of Optische Koordinatenmesstechnik Jena (OKM).

According to Mahr's press release, this partnership will increase their market share for 1-D length measurement machines by 25%. Both companies manufacture the 1-D length measurement machine. New capacities will include horizontal length measurements and optical measurement of tools.

OKM Jena is a manufacturer of the ULM optical coordinate measurement machine, which can supplement Mahr's multisensor program.

Holger Hage, Petra Bogdanski and Karl Joachim-Bode will jointly manage the new operation.

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