

April 8–12—Hannover Messe 2013. Hannover Fairgrounds, Hannover, Germany. The world's leading trade show for industrial technology returns in 2013 with a full lineup of trade shows under the banner "Integrated Industry." The 11 co-located shows include Industrial Automation; Motion, Drive and Automation; Energy; Wind; MobiliTec; Digital Factory; ComVac; Industrial Supply; Surface Technology; IndustrialGreen Tec and Research and Technology. Russia is the official partner country in 2013. Discover new perspectives on energy, automation and industrial supply and engineering topics as well as a broad range of events and displays affecting the global industrial market today. Other Hannover highlights include Metropolitan Solutions, TectoYou, Job and Career Market and Energy Efficiency in Industrial Processes. For more information, visit www.hannovermesse.de.

April 9–10—AmCon Design and Contract Manufacturing Expo 2013. Seattle, Washington. AmCon is a contract manufacturing expo for all job shops and contract manufacturers that provides custom metal, plastic, rubber or electronic parts and related manufacturing services to OEMs. Attendees include top level purchasing, engineering and production managers who are directly involved in buying custom contract manufacturing services. Representatives from companies of all sizes attend from a range of industries, often with blueprints in hand. The AmCon shows occur regionally throughout the year. Past attendees include ABB, General Electric, Honeywell, Johnson Controls, Parker Hannifin, Rockwell Automation, Saint-Gobain, Siemens and more. For more information, visit www.amconshows.com.

April 15–18—Gear Design and Theory. Gleason Cutting Tools Gear School, Loves Park, Illinois. This comprehensive three-and-a-half-day program is a blend of shop time and classroom study. A coordinated series of lectures is presented by engineering, production, inspection and sales staff members. It is recommended for those seeking to understand the fundamentals of gear geometry, nomenclature, manufacturing and inspection. Training groups are kept small so that individual concerns may be fully addressed. Shop tours and demonstrations are conducted to visually enhance the understanding of classroom discussions. The fee of \$895 includes handbook and all materials, one group dinner and all lunches. For more information, visit www.gleason.com.

April 24—Intensive Water Quenching Workshop. IQ Technologies Inc. hosts an all-day workshop to provide attendees with an overview of IntensiQuench (IQ) processes, examine the data from actual part studies, and give attendees a forum to discuss the application of intensive quenching to enhance the performance properties of their heat treated products. The workshop will help answer questions such as: How can my heat-treated products benefit from intensive water quenching and save costs? How does the IQ process provide both enhanced strength and better ductility at the same time? How does intensive quenching equipment differ from traditional water, oil, salt or gas quenching systems? Manufacturing engineers, experienced heat treat metallurgists, steel product design engineers should attend this workshop. For more information, visit www.intensivequench.com.

April 25–27—AGMA/ABMA Annual Meeting. Park Hyatt Aviara, Carlsbad, California. Featured presenters include Jay Timmons (National Association of Manufacturers), Jim Meil (Eaton Corporation) and Dan Campion (Solar Turbines). Former

MLB pitcher Jim Abbott will also give a presentation on overcoming adversity. There's also a scheduled visit to the United States Marine Corps Air Station in Miramar and a night of entertainment celebrating the iconic music of the 1960s. The event includes general sessions, presentations, receptions and the AGMA/ABMA Golf Tournament taking place at the Park Hyatt Aviara Golf Course. For more information, visit www.agma.org.

April 29–May 2—Gear Dynamics and Gear Noise Short Course. Gear Dynamics and Gear Noise Research Laboratory. The Ohio State University, Columbus, Ohio. For more than 33 years, this course has been offered as a tool to engineers and technicians involved in the analysis, manufacture, design, specification or utilization of simple and complex gear systems. Industries that find this course helpful include the automotive, transportation, wind-energy, process machinery, aircraft, appliance, general manufacturing and all gear manufacturers. The course material is covered in such a way that the fundamentals of gearing, gear dynamics, noise analysis and measurements are covered. This makes the course appropriate to the gear designer with little knowledge of noise analysis, as well as to the noise specialist with little prior knowledge of gears. Course attendees are asked to present a brief synopsis of problems they have encountered or of a procedure they have used for gear noise analysis and reduction. Possible approaches to solve each problem are discussed. For more information, visit www.gearlab.org.

May 7–May 9—Gear Manufacturing and Inspection. Crowne Plaza O'Hare, Rosemont, Illinois. In this seminar, Gear Manufacturing and Inspection: Methods, Practices, Application and Interpretation for the Design Engineer, attendees will gain a broad understanding of the methods used to manufacture and inspect gears—and much more. First, attendees will learn about methods behind a variety of gears, including external and internal spur, single and double helical gears, as well as bevel and worm gears. A description of each basic manufacturing and inspection method is provided. Both the methodology and underlying theory are explained. The "features" associated with each manufacturing method are discussed with regard to their impact upon and their ability to refine, guide and optimize the design process. Similarly, attendees will walk through interpretations of the results of all inspections. Instructor Ray Drago, chief engineer-gear technologist, Drive Systems Technology, Inc., will provide gear engineers with a good foundation in both manufacturing and inspection processes and procedures. For registration information, visit www.agma.org.

May 22–May 23—AGMA Marketing and Forecasting Conference 2013. Crowne Plaza, Chicago O'Hare Hotel and Conference Center, Rosemont, Illinois. What's going on in the gear market? What is happening in the end user market that will affect next year? How can you better prepare your company for the ups and downs of the current economic climate? The Marketing and Forecasting Conference will present a comprehensive report on the U.S. Economic Conditions, Industry Conditions for Gears, Gear Market Bookings and Gear Market Shipments. This will be broken down into a series of end user markets including total gears, industrial machinery gears, construction machinery gears, farm machinery gears, power transmission equipment, mining, ship and offshore, railroad and aerospace gears. IHS Global Insight has developed news reports that will forecast these various markets. This AGMA member-only event includes a reception and dinner for networking opportunities. For more information, visit www.agma.org.