



The Indiana Convention Center will bustle with about 30,000 attendees and 175 exhibitors representing 43 states and 36 countries at Gear Expo 2009 (courtesy of the Indiana Convention and Visitors Association).

Gear Expo— The Show of Shows for All Things Gearing

Jack McGuinn, Senior Editor

GEAR EXPO 2009 & FALL TECHNICAL CONFERENCE
INDIANA CONVENTION CENTER
INDIANAPOLIS, IN
EXPO: TUESDAY–THURSDAY, SEPT. 15–17, 10 A.M.–6 P.M.
FTM: SUNDAY–TUESDAY, SEPT. 13–15, 10 A.M.–6 P.M.

As Gear Expo 2009 approaches (Sept. 15–17), the show finds itself in an “It was the best of times, it was the worst of times” mindset. Worst first: everyone is hurting, and ponying up for show exhibiting is painful, to say the least. Best: because of the downturn, attendees may have more time to spend at the show meeting new suppliers or reconnecting with existing ones. More time to talk, more time to spend on checking out machinery and tooling, etc., more time to take in the AGMA Fall Technical Conference (*see sidebar on page 34*) and other educational opportunities. And, this year’s show will be co-located with the ASM Heat Treating Society, presenting a distinctly relevant synergy between industries not seen before at Gear Expo.

There may also be some advantageous timing at play, too. As the show approaches, recent media reports indi-

cate that while we are not out of the woods yet, the “worst of times” may be behind us. But don’t bank on it.

Gear Technology interviewed AGMA president Joe Franklin, as well as a number of show exhibitors, in order to get a pulse of what to expect from Gear Expo 2009.

Perhaps one of the more significant changes in the ’09 show is that it is being held in Indianapolis. For many, that is a distinct upgrade, but it didn’t come easily.

Speaking of Indy, Franklin says, “The special significance is that Indianapolis was an outstanding location—the exhibitors and attendees loved it; the problem has been in getting back there. Indianapolis caters to Indiana-specific events before they cater to out-of-state events. So if you were a local flower club and you were having an orchid show, you got preference over a heavy-machinery or manufacturing show. That was a dominant reason why we weren’t able to go back.”

Returning to the positive, Franklin points out that “All the hotels are directly connected, and if there’s any kind of inclement weather you don’t have to actually go outside. It’s just convenient for being together and networking.”

Others we interviewed are in agreement that the show’s location in Indianapolis will have a positive effect—more or less. The true deciding factor for this year’s show’s success is the E-C-O-N-O-M-Y.

“Only time will tell,” says Al Finegan, Gleason director of marketing. “There are gear markets in (both Indiana and Michigan), and we have had successful Gear Expos at both locations. Given the state of the U.S. and global economies, the specific location of the show is probably less important than usual.”

Says Dennis Richmond, Reishauer vice president, “Indianapolis is a vibrant city full of culture and energy. The downtown area has gone through an extensive transformation over the past two years, with the new stadium



Reishauer RZ 1000 (courtesy of Reishauer).

(RCA Dome) and the renovation of the (Indiana) Convention Center. It’s a downtown area that show attendees will feel safe to explore and warmly invited wherever they go.”

Says Koepfer America’s (and AGMA chairman emeritus) Dennis Gimpert, “In the past, Indianapolis has been a positive location for the AGMA Gear Expo. It offers a great venue, good restaurants and a convenient, drivable Midwest location. However, the state of our global economy will make it a challenge for any location.”

And last, Ray Mackowsky, president of Great Lakes Gear Technologies says, “I think it’s somewhat central to a lot of the automotive industry plants and the aerospace people such as Rolls-Royce, so there is some automotive presence there, which should help the attendance. But you never know. It’s a question of the economy.”

One thing that never changes is exhibitor expectations for a show, and Gear Expo is no exception. Everyone seeks satisfactory bang for their buck, including the AGMA.

“The show has multi objectives and purposes,” says Franklin. “Obviously it is a meeting place for buyers and sellers. It is a place people can come and evaluate tooling or equipment or suppliers who are working in the industry, and they can come and evaluate gear manufacturing. People on the fence can come in and say, ‘Do we want to invest in a factory or do we want to buy the gears from another company?’”

Using the AGMA’s annual meeting last March as an analogy, Franklin offers that, as with the expo, “People felt they needed to be there, particularly in tough times, just to make sure they knew what was going on. And you’re with people who are going through the same pain you are going through. But our annual meeting was extremely upbeat, and business was just as bad then as it is now. So I think there will be some important networking.”

As for Gleason’s goals and objectives, “Gleason expects to reinforce its position as the total gear solutions provider at Gear Expo,” says Finegan. “This means more than just exhibiting the few products that we are able to bring to the show. It also means presenting and promoting the full range

continued



Gleason Sigma 350GMM (courtesy of Gleason).

of solutions that we have to offer to all gear producers for all processes and all applications. The 'goal' is to help our customers improve quality, increase productivity, reduce costs and more effectively compete in their markets."

Says Reishauer's Richmond, "It is our goal to showcase our company and its capabilities and demonstrate how we stand behind the claim that we offer the 'lowest cost-per-piece' hard finishing process on the market today, bar none."

As for Koepfer, says Gimpert, "Our plans are to introduce only new or advanced technology."

And says Great Lakes' Mackowsky, "We have a 20 x 50 booth alongside the Höfler and Fässler booths, so we'll probably have the biggest showing in terms of floor space. And the equipment there, there's probably four million dollars in equipment on the floor. It represents a huge expense for us and is kind of an indication of our com-

mitment to the AGMA, and hopefully we'll have good participation by heavy industry. And we have some really great products, anyway. Hopefully, with the downturn in business, people will have a little more time to commit to the show and send more people and spend some time at the booth and maybe spend more than a day."

Moving on to another show- and industry-related issue, wind power just can't seem to catch a break. Despite the Obama administration's firm support for its place in the alternative energy realm, the state of the global economy has put the skids on most continued development. In contrast to the wind turbine buzz that energized the 2007 show, its impact will be considerably muted this year.

"I think the market reality is as we're hearing—that there is significant difficulty in getting financing for wind power," says Franklin. "If you are a company looking to make a wind power gearbox, you're probably going to have some difficulty in acquiring financing right this minute. The last time I went around and talked to people in the wind turbine business, money was extremely tight; demand is obviously not quite there. All sources of energy dampened down in price right now, and wind turbines are reflecting the same thing as far as I read."

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Monument Circle (courtesy of the Indiana Convention and Visitors Association).



Höfler's machinery line capabilities will be on full display at Gear Expo (courtesy Höfler).

As for Richmond at Reishauer, "I'm not certain; it seems as if the manufacturing capacity and demand at this time are in sync. I've read a little about the issue of 'energy credits' when it comes to the business of alternative energy, and from my narrow understanding, these energy credits (created by Congress in the recent energy legislation as an inducement to begin alternative—wind—energy projects) have become a trading commodity on Wall Street, and their short-term future is unclear at this time."

"I think the level of intensity will be greatly reduced," says Koepfer's Gimpert. "(But) the wind energy business has committed to many programs and has an established focus."

Says Great Lakes' Mackowsky, "Wind power, like just about everything else, is experiencing the same amount of downturn. I don't see the activity level now that we saw two years ago."

Taking the long view, "The wind energy market has not been immune to the economic downturn," says Gleason's Finegan. "In spite of the current lull in the feverish growth of wind energy, the long-term demand and outlook for alternative energy sources remains strong, and we expect a rebound in all energy markets, including wind."

As for the co-location with the heat treaters, says Finegan, "Heat treating is an integral part of gear processing, and, as such, has a role to play at Gear Expo."

"Co-location is a new concept for Gear Expo," says Richmond. "The plan is to meld two common processes

under one roof to broaden the appeal of the show. I think it's a good formula. The attendance numbers will tell the final story, notwithstanding current economic conditions."

"It can't hurt," says Mackowsky. "I would have thought some of them would probably have exhibited at Gear Expo anyway. If this brings more traffic, all the better."

And last, we come to the question that pops up every two years: Is

Gear Expo in its current iteration still relevant? (Ed.'s note: For AGMA's response to this question, please see Joe Franklin's upcoming Voices piece in our September/October show issue.)

"It would be easy to say that Gear Expo is no longer relevant, given the current level of market activity," says Finegan, "but this may be shortsighted. The mission of Gear Expo has always been to bring together the suppliers of gears as well as gear equipment, **continued**

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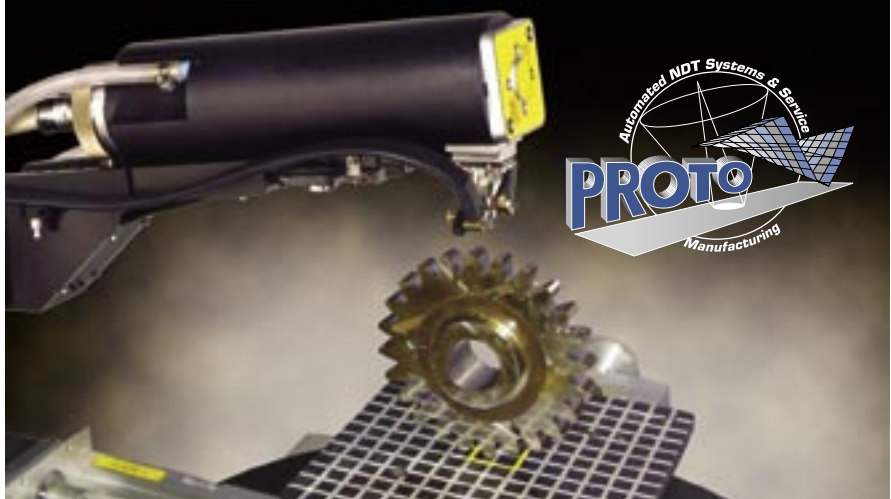
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technologies, tooling and services to promote ourselves to the market as one industry. While the economy, and manufacturing in particular, are in a severe recession, history would indicate that recessions eventually end. Some would argue that now is exactly the time to

promote at events like Gear Expo.”

Relevant?

“Absolutely,” says Richmond. “Not only can attendees shop for gear manufacturers for their products, they can shop for the equipment necessary to make them in-house should they decide

to do so. Gear Expo has broad appeal to people that make gears, buy gears and those that want to understand the gear process better. As a company, we’re sending some of our newest employees to Gear Expo for the excellent educational programs they offer.

Attention Students of All Ages— The Fall Technical Meeting is Back September 13–15, 2009, Indianapolis, Indiana

It is no secret that industry-relevant technical papers are the lifeblood of Gear Technology magazine. Indeed, over the years, scores of you have told us so. And so it was a no-brainer when AGMA asked us to publish the list of presentations taking place just prior to Gear Expo this year. The 2009 Fall Technical Meeting is being held before the show, so that you can take advantage of the technical expertise available at the FTM, and then stay for the latest technology offered at the trade show. The FTM will be held September 13–15, 2009 at the Marriott Indianapolis Downtown. (The editors.)

(To view the full abstracts of these presentations, visit www.agma.org and choose the Events drop down menu.)

Sunday, September 13 Session I—Manufacturing & Inspection

- “Influence of the Residual Stresses Induced by Hard Finishing Processes on the Load Carrying Capacity of Gears,” Fritz Klocke, Christof Gorgels, Vasilios Vasilios, RWTH Aachen University.
- “Implementing ISO 18653, Evaluation of Instruments for the Measurement of Gears,” Rob Frazer and Steve Wilson, UK National Gear Metrology Lab.
- “Producing Profile and Lead

Modifications in Threaded Wheel and Profile Grinding,” Antoine Türich, Gleason Corporation.

- “New Developments in Gear Hobbing,” Oliver Winkel, Liebherr Verzahntechnik GmbH.
- “Hypoloid Gears with Small Shaft Angles and Zero to Large Offsets,” Hermann Stadtfeld, Gleason Corporation.

Monday, September 14 Session II—Design Issues

- “Dependency of the Peak-to-Peak Transmission Error on the Type of Profile Correction and Transverse Contact Ratio of the Gear Pair,” Ulrich Kissling, KISSsoft AG.
- “Optimizing Gear Geometry for Minimum Transmission Error, Mesh Friction Losses and Scuffing Risk,” Rob Frazer, UK National Gear Metrology Lab, Mike Fish and Dave Palmer, Dontyne Systems, Ltd.
- “Load Sharing Analysis of High Contact Ratio Spur Gears in Military Tracked Vehicle Application,” M. Rameshkumar, P. Sivakumar, S. Sundareshm, Combat Vehicles Research and Development Establishment, and K. Gopinath, IIT.
- “Designing for Static and Dynamic Loading of a Gear Reducer Housing with FEA,” M. Davis, Y.S. Mohammed, A.A. Elmustafa, Old Dominion University and C. Ritinski, Sumitomo Machinery Corporation America.
- “The Effect of Flexible Components on the Durability, Whine, Rattle and Efficiency of a Transmission Gear Train System,” Brian Wilson, Romax Technology, Inc.

Monday, September 14 Session III—Materials & Heat Treatment

- “Unique Design Constraints for Molded Plastic Transmissions,”

Rod Kleiss and Eric Wiita, Kleiss Gears, Inc.

- “The Anatomy of a Micropitting-Induced Tooth Fracture Failure—Causation, Initiation, Progression and Prevention,” Raymond J. Drago, Roy J. Cunningham and Steve Cymbala, Drive Systems Technology, Inc.
- “Bending Fatigue, Impact Strength and Pitting Resistance of Ausformed Powder Metal Gears,” Nagesh Sonti and Suren Rao, Pennsylvania State University, and Gary Anderson, Keystone Powdered Metal Company.
- “Design Development and Application of New High-Performance Gear Steels,” Jason Sebastian, Chris Kern, James Wright and Rich Kooy, QuesTek Innovations LLC.


Tuesday, September 15 Session IV—Application Considerations

- “High-Performance Industrial Gear Lubricants for Optimal Reliability,” K.G. McKenna, J. Carey, N.Y. Leon and A.S. Galiano-Roth, ExxonMobil Research and Engineering.
- “Allowable Contact Stresses of Jacking Gear Units Used in the Offshore Industry,” Alfred Montestruc, Friede & Goldman, Ltd.
- “Variation Analysis of Tooth Engagement and Load-Sharing in Involute Splines,” Kenneth Chase, Carl Sorenson and Brian DeCaires, Brigham Young University.
- “Does the Type of Gear Action Affect the Appearance of Micropitting and Gear Life?” Allen Williston, A&J Engineering.
- “The Effect of Gearbox Architecture on Wind Turbine Enclosure Size,” Charles D. Schultz, Beyta Gear Service.

As David Letterman might say—And the No. 1 reason to attend Gear Expo? Networking!”

Says Gimpert, “The AGMA Gear Expo show is still relevant, but the format and content will continue to change.”

And Mackowsky, “I think it is. It’s a question of where it’s at and how the industry looks at it. But Gear Expo gives us our own stage.”

If indeed “all the world is a stage,” Gear Expo will assume its rightful place. 



Indiana State Museum (courtesy of the Indiana Convention and Visitors Association).

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Email inquiries to:
alex@dragon.co.kr

Headquarters

36B-11L, Namdong Industrial Complex, Namdong-Gu, Incheon, Korea

PHONE: +82.32.814.1540

FAX: +82.32.814.5381