

# Gear Expo 2007 Show Preview

October 7-10, 2008 • Cobo Center • Detroit, Michigan USA

## AGMA Fine Tunes Gear Expo Format

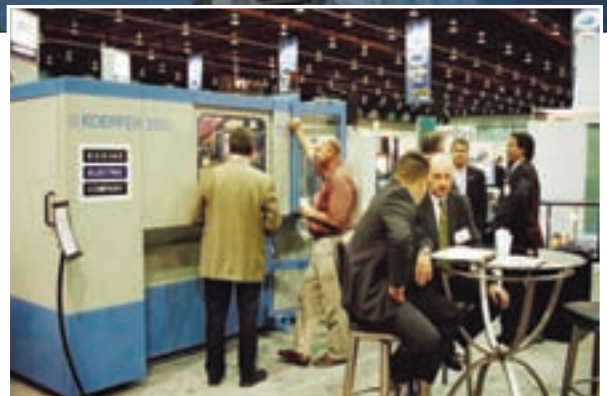
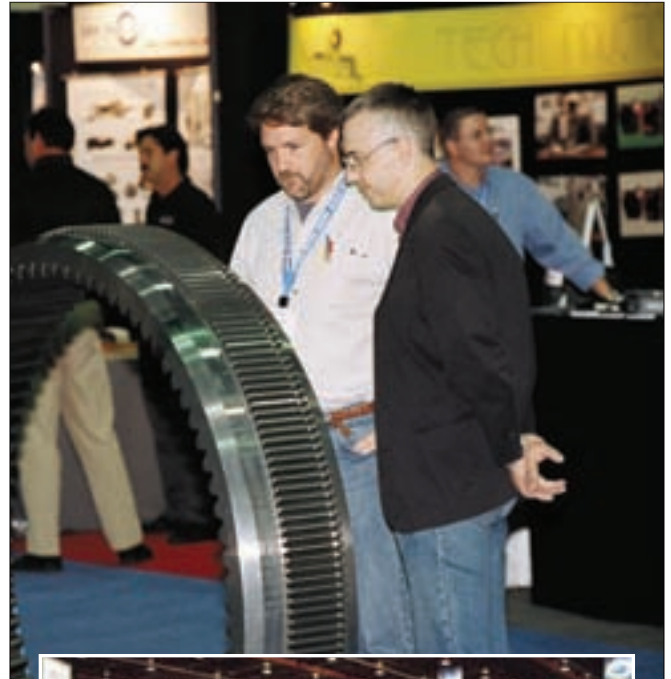
The organizers of Gear Expo 2007 promise to combine the most popular features of shows past with some innovations for this year's attendees. By the time the show closes on October 10, the association hopes its targeted 175 exhibitors walk away with new insights leading to profitability and renewed contacts.



### Cheers to Gears

The American Gear Manufacturers Association is sponsoring a cocktail hour for all attendees on Monday, October 8, after the show closes. While the particulars are still under wraps, AGMA vice president Kurt Medert says the networking opportunity will be invaluable.

"The idea behind the cocktail reception is to give visitors and exhibitors a casual means of interacting with one another and to catch up with old acquaintances after a full day of activity on the show floor," says Medert.



### Back to Gear School

In addition to the socializing opportunities, there is a strong educational component at this year's Gear Expo. The Solutions Center, which Medert says was a hit with audiences in 2005, returns for another run. There are 24 presentations slated for 30-minute time slots, all of which are free to attendees.

In order to better maximize the visitor's time this year, the Solutions Center's programming will be consolidated into two days with Dr. Mike Bradley's "Gear Market Report" as the keynote on Monday and a presentation by Eric Fedewa, an

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automotive industry expert from CSM Worldwide presenting “The Outlook for the Automotive Industry” as Tuesday’s anchor address.

Additional learning opportunities take place in the form of the Fall Technical Meeting. Held concurrently with Gear Expo, this year’s FTM sessions are: Manufacturing and Testing Gears, Hypoid and Bevel Application Design; Innovative Application Solutions; and Making Gears Work for Life. This year’s Fall Technical Meeting includes 18 presentations. More information about the presentations can be found in the sidebar on page 31.

The American Bearing Manufacturers Association and the Society of Manufacturing Engineers are once again setting up shop at Gear Expo with their own education programs.

SME’s “Understanding Gear Metrology and Inspection” is scheduled on October 8 and promises a deeper understanding of technical metrology and inspection issues unique to the gear manufacturing and processing industries. Registration is

\$395 for SME/AGMA members and \$445 for non-members and can be completed at [www.sme.org/gears](http://www.sme.org/gears).

In the middle of the show is SME’s course on “Effective Heat Treating and Hardening of Gears,” a morning dedicated to evaluating alternative heat treating methods, controlling and monitoring processes, controlling distortion and more. Registration is \$395 for SME/AGMA members and \$445 for non-members and can be completed at [www.sme.org/gears](http://www.sme.org/gears).

Also undertaken by the SME is “Advanced Gear Processing and Manufacturing” on Wednesday, October 10. Throughout the six-hour seminar, industry leaders will investigate chronic problems, factors that impact tool life and performance, and compare technologies. Registration is \$395 for SME/AGMA members and \$445 for non-members and can be completed at [www.sme.org/gears](http://www.sme.org/gears).

For the power transmission crowd, the American Bearing Manufacturers Association is sponsoring “Why Bearings Fail,” a four-hour-long primer on the causes of bearing failure in gearboxes and related equipment for OEMs and end users.

One final note on educational offerings in conjunction with Gear Expo. The Basic Gear Manufacturing Course, which will be held September 10–14 at Richard J. Daley College in Chicago, will be repeated in a classroom-only version at the Cobo Center. Presented by Michael Tennutti of Gleason Cutting Tools, the classroom course will train participants on standards nomenclature; gear involute geometry; inspection procedures and interpretation of results; manufacturing processes; hobbing, shaping and shaving; troubleshooting the gear manufacturing process; improvements in productivity and discussion of common problems. Participation is \$395 for AGMA members and \$495 for non-members. For registration, visit AGMA’s website at [www.agma.org](http://www.agma.org).



## 2007 Fall Technical Meeting Schedule of Events

### Sunday, October 7

9 a.m.–5 p.m.

Registration

1 p.m.–5 p.m.

#### Technical Session I: Alternative Materials and Designs

- “Estimation of a Lifetime of Plastic Gears,” by Stefan Beerman of KISSsoft AG
- “Study of the Correlation Between Theoretical and Actual Gear Fatigue Test Data on a Polyamide,” by Steve Wasson of DSM Engineered Plastics
- “Material Integrity in Molded Plastic Gears and Its Dependence on Molding Practices,” by Tim Vale of ABA-PGT
- “Applying Elemental Gear Measurement to Processing of Molded Plastic Gears,” by Glenn Ellis of ABA-PGT
- “Vacuum Carburizing Technology for Powder Metal Gears and Parts,” by Janusz Kowalewski and Karol Kucharski of SECO/Warwick Corp.

7 p.m. – 8:30 p.m.

Welcoming Reception (Held at the Detroit Marriott Renaissance Center. All other events will be at the Cobo Center.)

### Monday, October 8

7:00a.m.–12:00p.m.

Registration

7:00 a.m.–8:00 a.m.

Continental Breakfast

8 a.m.–12 p.m.

#### Technical Session II—Current Updates

- “Using Barkhausen Noise Analysis for Process and Quality Control in the Production of Gears,” by Stephen Kendrish, Theo Rickert and Robert Fix of AmericanStress Technologies
- “Grinding Induced Changes in Residual Stress of Carburized Gears,” by Robert LeMaster, Bryan Boggs, Jeffrey Bunn of the University of Tennessee at Martin and Camden Hubbard and Thomas Wilkins of Oak Ridge National Laboratory
- “Manufacturing Net Shaped Cold Formed Gears,” by Dennis Engelmann of Milwaukee Wire Products
- “The Ikona Clutch and the Differential,” by John Colbourne, Vladimir Scekcic and Sasha Tesic of Ikona Gear

- “The Gear Dynamic Factor: Modern and Historical Perspective,” by Donald Houser and David Talbot of the Ohio State University

12 p.m.

Annual Awards Luncheon

Monday afternoon is open time to visit Gear

Expo. Attendance is free for Fall

Technical Meeting Participants.

### Tuesday, October 9

7 a.m.–12 p.m.

Registration

7 a.m.–8 a.m.

Continental Breakfast

8 a.m.–12 p.m.

#### Technical Session III: Load Capacity and Micropitting

- “Helicopter Accessory Gear Failure Analysis Involving Wear and Bending Fatigue,” by Gregory Blake and Doug Schwerin of Rolls-Royce Corp.
- “The Effect of Start-Up Conditions on Gear Performance and Life—Failure Analysis and Case Study,” by Raymond Drago of Drive Systems Technology
- “The Influence of Grinding Burn on the Load Carrying Capacity of Parts Under Rolling Stress,” by Fritz Klocke, Tobias Schröder, and Christof Gorgels of RWTH Aachen University of Technology
- “Roughness and Lubricant Chemistry Effects in Micropitting,” by A. Olver, D. Dini, E. Laine of Imperial College and D. Hua and T. Beveridge of Caterpillar Inc.
- “Experience with Disc Rig Micropitting Test,” by M. Talks and W. Bennett of QinetiQ Fuels and Lubricant Center

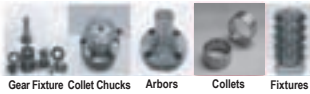
1 p.m.–5 p.m.

#### Technical Session IV: Bevel Gear Design and Manufacture

- “Straight Bevel Gear Cutting and Grinding on CNC Free Form Machines,” by Hermann Stadtfeld of The Gleason Works
- “Simulation Model for the Emulation of the Dynamic Behavior of Bevel Gears,” by Christian Brecher, Tobias Schröder and Adam Gacka of the RWTH Aachen University of Technology
- “Bevel Gear Model,” by Ted Krenzer, Consultant
- “How to Determine the MTBF of Gearboxes,” by Gerhard Antony of Neugart USA LP

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### Hotels

Whether you're walking the show floor or sitting in lectures, the AGMA encourages all Gear Expo participants to book accommodation in one of three hotels with pre-negotiated show rates. Guests must make their own hotel reservations, and the rates are current through September 10, 2007. Online booking is available at [www.gearexpo.com](http://www.gearexpo.com).

- **Detroit Marriott Renaissance Center**

\$164/night

Reservations: (313) 568-8000 or (800) 352-0831

This is considered the Gear Expo 2007 Headquarters and is three blocks from the Cobo Center with indoor access to the People Mover.

- **Detroit Downtown Courtyard by Marriott**

\$154/night

Reservations: (313) 222-7700 or (800) 321-2211

This hotel has indoor access to the People Mover. Guest room renovation is currently underway.

- **Holiday Inn Express Hotel and Suites**

\$109/night

Reservations: (313) 877-7000 or (800) HOLIDAY  
Group code: AGM

This hotel is two blocks from Cobo Center and one-half block from the People Mover.

As of July 24, 2007, the total number of gear and machine tool manufacturers, forging companies and software suppliers was 159. Medert says that by opening day on October 7, they hope to have more than 175 exhibitors and a high quality level of attendees.

"We are looking forward to welcoming everyone to another successful Gear Expo. There are new features to the show this year, but, as always, the real purpose is to match gearing professionals with exhibitors that can help their companies run more effectively and profitably," sums up Medert. ☺

## ONLINE

Additional Gear Expo information

can be found online at

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