



Attendance to Sigma Pool's first gear seminar of 2009 was up, and participants were eager to learn new technologies (courtesy of Sigma Pool).

Sigma Pool Encourages Collaboration at 2009 U.S. Gear Seminar

In the past, the coffee breaks and dinner events at Sigma Pool's gear seminars have often triggered future process development and product improvements. This was still the case during the 2009 installment where customers and suppliers talked shop inside and outside the banquet hall on the new market and technology challenges currently facing the gear industry.

Under the Sigma Pool name, Klingelberg and Liebherr have worked together worldwide to communicate production, application and design know-how about gears and gear

manufacturing processes to their customers since the beginning of the 1990s.

Sigma Pool recently wrapped up its first gear seminar of 2009, a two-day event that took place on June 16–17 at the Four Point Sheraton in Ann Arbor, Michigan with a focus on bevel gear and parallel axis technology.

Jan Klingelberg, CEO of the Klingelberg Group, introduced the event with "cautious optimism" noting that the industry must recover from an economic slowdown that has affected the global gear industry as a whole.

Klingelberg was pleased with the turnout for the first Sigma Pool gear seminar this year, citing the attendance numbers as a "positive sign that the gear industry will soon recover."

This is the 5th time Sigma Pool has offered gear makers in the United States a two-day event that covers all aspects of manufacturing and measuring of cylindrical and bevel gears. Apart from the fundamentals, the seminar focused on current trends and developments in gear manufacturing.

Dr.-Ing. Carsten Hüneck from Klingelberg gave two presentations on

continued

day one focusing on modern production of straight bevel gears and Spirokon, a new manufacturing system for spiral bevel gears. Dr.-Ing. Oliver Winkel at Liebherr spoke twice on day two on the performance and flexibility of modern hobbing machines and the machining of large gears. Other topics included axle gear design, bevel measuring technology, roll testing technology and the generating and profile grinding of larger modules. Dr.-Ing. Hartmuth Müller, CTO of Klingelberg, kept the question/answer sessions moving along after each presentation, allowing extra time for discussion and feedback from the attendees.

Rick Perri, engineering/purchasing at Superabrasives, Inc., felt the seminar was very informative and was interested in the presentation on spiral bevel grinding with Borazon.

"The data that was presented was done with one of our wheels and we wanted to see what the overall response would be. We are very encouraged to get more involved in the gear industry from the amount of questions that were asked."

"Working Together" is the general theme of the 2009 Sigma Pool gear seminars. The events will take place on three different continents and four different locations throughout the year. After the initial stop in Ann Arbor, the tour continues with a July 20–21 event in Chennai, India as well as a July 23–24 event in Pune, India. It continues October 29–30 in Sao Paulo, Brazil.

Keynote themes for future presentations include:

- New methods for bevel gear production—using modified mathematical models, spur-toothed bevel gears and the innovative Spirokon gear that can be dry-machined on Oerlikon milling machines.
- Enhancing productivity with alternative grinding abrasives—the vitrified-bonded CBN abra-

sives which have already proved their worth in external cylindrical grinding are now leading to significantly improved performances in the grinding of bevel gears.

- Grinding large gears cost-effectively—generation grinding, established for decades in the world of automotive gear production, is about to revolutionize the productivity of large module gear grinding.
- Gears for wind turbines—combined with tools using cemented carbide blades, stiff modern machine concepts open up new vistas in terms of high removal rates and minimum process times.
- Gear measuring machines can do more—modern measuring machines go beyond familiar geometry data, testing the complete part, including its surface roughness, and fully quantifying the form and position of all surfaces.

- Quality testing cylindrical gears—new methods enable gear metrology to move forward from pure geometry measurement to functional testing.

Sigma Pool will be on hand at Gear Expo in Indianapolis from September 14–17 and at EMO in Milan from Oct. 5–10. For more information on Sigma Pool's gear seminars, visit www.sigma-pool.com



Jan Klingelberg, CEO of the Klingelberg Group, gives his opening remarks at Sigma Pool's U.S. Gear Seminar (courtesy of Sigma Pool).