

# TECHNICAL CALENDAR

**NOVEMBER 1-3. SME Gear Processing and Manufacturing Clinic, Sheraton Meridian, Indianapolis, IN.** The technical conference will include papers on "Design and Selection of Hobs," "Selection of High-Speed Steel for Gear Cutting Tools," "Special Design Deburring Equipment" and other gear-related subjects. Attendees will have an opportunity to meet with presenters to discuss papers and ask questions on a one-on-one basis. Tuesday evening will feature a reception and tabletop exhibits from major manufacturers. For further information, call Dominic Ahearn at SME Headquarters, (313) 271-1500 x384.

**NOVEMBER 5-10. International Conference on Gearing, Zhengzhou, China.** ASME-GRI and several international gear organizations are sponsoring this meeting. For more information contact: Inter-Gear '88 Secretariat, Zhengzhou Research Institute of Mechanical Engineering, Zhongyuan Rd, Zhengzhou, Henan, China. Tel: 47102. Cable 3000. Telex 46033 HSTEC CN.

**NOVEMBER 8-10. American Society for Metals Near Net Shape Manufacturing Conference, Hyatt Regency,**

**Columbus, OH.** Program will cover precision casting, powder metallurgy, design of dies and molds, forging technology and inspection of precision parts. For further information contact: Technical Department Marketing, ASM International, Metals Park, OH 44073.

**NOV. 30-DEC. 2. Gear Seminar, Milwaukee, WI.** The Center for Continuing Engineering, University of Wisconsin-Milwaukee, is offering a three-day seminar on "Fundamentals of Gear Design." It will cover the basic design considerations in the development of properly functioning gear systems. The course is aimed at the designer, user and beginning gear technologist. For more information, contact: John Leaman, Center for Continuing Engineering Ed., UW-M, 929 North Sixth St., Milwaukee, WI 53203. (414) 227-3110.

**APRIL 25-27, 1989. ASME 5th Annual Power Transmission & Gearing Conference, Chicago, IL.** Presentations on emerging technologies for gears, couplings and other power transmission devices, gear geometry, noise, manufacturing and other gear-related subjects. For more information, contact Donald Borden, P.O. Box

502, Elm Grove, WI 53122.

**AGMA TECHNICAL EDUCATION SEMINARS.** AGMA is offering a new series of technical education seminars, each one focusing on a different aspect of gear manufacturing and taught by industry experts.

**Nov. 9,** Cincinnati, OH. "Controlling the Carburizing Process."

**Dec. 7,** AGMA Headquarters, Alexandria, VA. "Rational Loose Gear Quality Requirements for the Specifier and Purchaser. (Using The Gear Standard AGMA 2000 Properly.)"

**Jan. 11,** Cincinnati, OH. "Specifying and Controlling the Quality of Shot Peening."

**March 7/8,** Rochester, NY. "Source Inspection of Loose Gears from the Customer's Standpoint."

**May 2,** Cincinnati, OH. "Gear Math at the Shop Level for the Gear Shop Foreman."

**June 6,** AGMA Headquarters. "Specifying and Verifying Material Quality per AGMA Material Grades."

For more information, contact: Bill Daniels, AGMA, 1500 King St., Suite 201, Alexandria, VA 22314. (703) 684-0211.

## VIEWPOINT

**Letters for this column should be addressed to Letters to the Editor, GEAR TECHNOLOGY, P.O. Box 1426, Elk Grove Village, IL 60009. Letters submitted to this column**

Dear Editor:

I was particularly happy to have Bill Janinck's article on worm gear contact ("Contact Surface Topology of Worm Gear Teeth," Mar/Apr, 1988) as we have had many an exchange on this over the years.

I would like to point out that material on Wire Measurements of Helical Gears and Worms is found on pp 40-42 of my *Revised Manual of Gear Design*. The calculation of MOWs for helical gears is not immediately obvious from the spur gear calculations, and while it is covered in Earle Buckingham's *Analytical Mechanics of Gears* in

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inverse form, I receive many calls from engineers wanting to know how to do this particular calculation.

The wire measurement on worms is generally not known. The most common method is to use the Vogel equations, which were designed for screw threads, and are very complex and cumbersome. The equations treating the worm as an involute helecoid are much simpler, apply regardless of the form on the worm and are also applicable to any type of VEE screw thread. If a wire is selected to contact the pitch point, the result will be the same as the Vogel equations. If the exact wire is not

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used, as one is rarely going to make a special gage wire, using the involute equations are MORE accurate than the Vogel method using the approximations for compensating for the wrong wire. The only place I know of these equations being published before is in an article of mine on "Worm and Spur Gear Drives" which came out in *Machine Design*, March 3, 1966.

Eliot K. Buckingham  
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