



Vacuum Carburizing

TAKES CENTER STAGE AT MICHIGAN SYMPOSIUM

ALD-Holcroft Vacuum Technologies Co. will host a two-day technical symposium at the Henry Ford Museum in Dearborn, Michigan September 23–24, 2008. Expected attendees include business executives, design engineers, manufacturing engineers, drivetrain engineers, metallurgists and current and

prospective users of vacuum carburizing processes and equipment.

“Although the symposium is a learning experience, we’ve found that equally important are the socializing opportunities in which far more detailed experiences are shared and informational networking opportunities

are developed,” says William Gornicki, vice president of sales and marketing at ALD-Holcroft. “It’s always interesting to see how lessons learned in one particular industry can help those in another and vice versa.”

The symposium will bring together individuals from a variety of

organizations to speak on the trends and recent advancements in low pressure carburizing (LPC). Topics covered in the symposium include the economics of converting from atmosphere processing to vacuum processing, case studies providing actual process experiences and expectations, new standards in workload fixtures and the advantages of LPC in the design process.

“Over this past decade, we’ve seen the development of several different methods for applying this technology,” Gornicki says. “It’s only now that the weaker methods are falling to the wayside and the more viable methods are rising to the top.”

Technical papers will be presented at the symposium by industry experts from Bodycote, Dana, General Motors, Praxair, Timken, the Herring Group, Vac-u-Heat, SGL Carbon and ALD-Holcroft Vacuum Technologies. All papers are related to the practice of LPC, and the speakers will be available for question-and-answer sessions as well as open discussions.

While most technical conferences are relegated to hotel banquet centers, the vacuum symposium will take place in Lovett Hall—a renowned 1930s ballroom within the Henry Ford Museum complex.

“We felt it was time to raise the bar and make the event a little more fun,” Gornicki says. “Given our proximity to the Henry Ford Museum, and the irony



INVESTING IN THE FUTURE

putting
VANGEAR at the
forefront of
technical
innovation

Since 1952 Vancouver Gear Works' development has been driven by the future. This foresight allows us to acquire the equipment, technology and trade skill in advance of demand.

In order to guarantee control of our manufacturing process & maintain the high level of quality that our customer's demand, VanGear's Quality Control has passed through a large number of accreditation programs.



Hofler Rapid 2000 CNC Gear Grinder
• Operational Summer 2008
• Any imaginable profile and lead modification possible

We are accredited by ANAB (ANSI-ASQ National Accreditation Board) to the following standards:

- API Spec Q1 • API Spec 7 • API Spec 7-1
- ISO 9001:2000 • ISO 29001:2003



Hofler Rapid 1500 CNC Gear Grinder
• DIN1 / AGMA15 Quality Level



Hofler 1600 HF CNC Gear Hobbing Machine
• First in the world with on-board Gear Inspection

Vancouver Gear Works Ltd.
14551 Burrows Rd.
Richmond, BC
Canada, V6V 1K9
Toll-Free: 1-877-888-3111
Telephone: 604-278-3111



info@vangear.com / www.vangear.com



TO COMPETE GLOBALLY YOU NEED THE RIGHT TEAM

You already compete globally; Why not look to a global supplier for gear hobs. One that enables **“your team”** to take advantage of **“our”** competitive edge. **DTR Corporation (formerly Dragon Precision Tools) is a world-class leader** in maximizing gear hob tool life through innovative designs, with the latest in coatings and high speed steels. **The global gear market relies on Dragon to perform in any playing conditions.** Look to us to get you through any challenge the market-place has to offer.



DTR
DRAGON PRECISION TOOLS
(formerly Dragon Precision Tools)
WWW.DRAGON.CO.KR

NEW U.S. Office Location (Chicago)
2400 E. Devon Ave., Suite 210, Des Plaines, IL 60018

PHONE: 847-375-8892
FAX: 847-699-1022

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

PHONE: +82.32.814.1540 Email inquiries to:
FAX: +82.32.814.5381 alex@dragon.co.kr

Precision Stock Bevel Gears From the Bevel Gear Specialists

Arrow Gear is widely known as a producer of high precision custom gears.

Arrow also offers a full line of spiral bevel gears from stock – including ground tooth gears. Stock gears are a cost-effective alternative to custom gearing – especially beneficial for low production volumes and prototype work.

Our state-of-the-art gear manufacturing facility is among the most advanced in the world. This capability allows us to provide high precision stock gears in matched sets that are carburized and hardened – meeting quality specifications from AGMA Q9 up to Q13 on ground tooth gears. Based on customer needs, our stock gears can often be modified to meet specific design requirements.

To learn more about Arrow's stock gear products, please visit our Website or contact our Design Engineering department.



2301 Curtiss Street • Downers Grove, IL 60515 USA
(630) 969-7640 • www.ArrowGear.com



of Ford's mainstay (the automotive industry) and our leading industry (gear carburizing), we felt the match was a natural."

The complimentary dinner provided on the first evening will take place on the grounds of Greenfield Village, a 240-acre facility that features nearly 100 historic buildings from colonial America. The supper will be served at the Eagle Tavern as guests are treated to true 1851 cuisine and hospitality by the innkeeper and his family.

"This two-day symposium is shaping up to be the technical exchange of the year regarding LPC," Gornicki says. "We've lined up a dynamic list of topics and an all-star roster of presenters, and we're excited to bring this learning and networking opportunity to the market."

The cost for the symposium is \$295 and includes lunch each day as well as the 1851-style dinner. Pre-enrollment is necessary by September 8, 2008. For more information regarding the symposium, visit www.ald-holcroft.com or call (248) 668-4004. ⚙️

Get Your Addendum On!



While the Addendum column is both entertaining and fun to write, our staff will occasionally sit and stare at each other in meetings attempting to generate story ideas for the back page. If you're knowledgeable in the gear industry and have an idea to share, we'd love to hear about it. We only ask that your anecdote is **60% entertaining, 40% informative** and **deals specifically with the gear industry.**

Just Like This Ad

Please help us start talking to each other again by submitting your ideas to:
mjaster@geartechnology.com, jmcguinn@geartechnology.com
or wrs@geartechnology.com.



Does your organization sponsor a technical event?

Call our editors at (847) 437-6604 to be considered for expanded coverage here.

July 21-23—Powder Metallurgy Basic Short Course. Penn Stater Conference Center Hotel, State College, Pennsylvania. The three-day course sponsored by the Metal Powder Industries Federation (MPIF) is designed for engineers, tool and product designers, metallurgists, supervisors, technicians, QC personnel and managers, although a technical background is not necessary. The short course is appropriate for PM parts users or aspiring ones, specialists hoping to broaden their background and newcomers looking for an introduction to the field. Attendees will learn about the history of PM, the current state of the industry and what's in store for the future. They will also learn why PM parts are popular, how they are produced, different designs, the role of sintering in developing functional properties, injection molding, special tests and MPIF standards. The program includes a tour of The Pennsylvania State University's Center for Innovative Sintered Products. Course fees, based on MPIF/APMI membership, include various literature, a certificate of completion and breakfast and lunch each day. For more information, visit www.mpif.org.

September 9-13—AMB 2008. Trade Centre, Stuttgart, Germany. This international exhibition for the metalworking industry is supported by the German Engineering Federation and the Association of German Machine Tool Manufacturers. The exhibition is located in the heart of Baden-Württemberg, which is known as the leading high-tech region in Europe. This is the first year the event is being held at this newly built trade center, which is much larger and located next to the Stuttgart airport. Various industry users, exhibitors and visitors are native to this area, including 50 percent of the largest European machine tool manufacturers and over 40 percent of the European metalworking industry. They will be attending along with specialists from both small- and medium-sized ventures and industry newcomers using AMB as a marketing platform. Eight months before the exhibition 1,000 companies have registered already. This year the event is organized according to

exhibitors' themes, so the fairgrounds may be twice as large, but visitors should be able to find what they're looking for. For more information, visit www.messe-stuttgart.de/amb.

September 15-16—Gear Failure Analysis Seminar. Big Sky Resort, Big Sky, Montana. The American Gear Manufacturers Association presents this 17th annual Gear Failure Analysis Seminar designed to help manufacturers avoid gear failure by knowing what causes to be aware of and how to fix problems. This technical education seminar looks at specific types of gear failure like macropitting, micropitting, scuffing, tooth wear and breakage, and methods to avoid these issues. Expert Robert Errichello, of the GEARTECH consulting firm, will be leading the seminar using lectures, slide presentations, hands-on workshops and Q&A sessions to educate attendees about the reasons for gear failure. Participants will also receive Errichello's *Failure Analysis Textbook and Gear Failure Analysis Atlas*. For more information, visit www.agma.org.

September 16-18—Basic Gear Noise Short Course. Gear Dynamics and Gear Noise Research Laboratory, The Ohio State University, Columbus, Ohio. For more than 29 years the Basic Gear Noise Short Course has been offered by The Ohio State University's GearLab as a tool for gear designers and noise specialists challenged by gear noise and transmission design problems. The course shows participants how to design gears so that major excitations of gear noise, such as transmission error, dynamic friction forces and shuttling forces, are reduced. The course teaches the basics of gear noise generation and measurement, in addition to gear rattle, transmission dynamics and housing acoustics. Instructors will demonstrate specialized gear analysis software and several Ohio State gear test rigs. Attendees are invited to share specific gear and transmission noise concerns in an interactive workshop session. For more information, contact Jonny Harianto, OSU Department of Mechanical Engineering, 201 West

19th Avenue, Columbus, OH 43210; phone (614) 688-3952, fax (614) 292-3163, harianto.1@osu.edu, or visit www.gearlab.org.

September 17-19—Gear Manufacturing Technology Course. Gear Manufacturing Inc., Anaheim, CA. The Gear Consulting Group offers this three-day AGMA course to teach theory and practical aspects of gear manufacturing. Participants will learn about everyday problems and appropriate responses to troubleshooting. Instructors Geoff Ashcroft and Ron Green of the Gear Consulting Group will cover material including gear theory, inspection, manufacturing, hobbing, shaping, tools, production estimating, hard finishing and gear shaving. Course tuition includes all necessary materials, an AGMA reference manual and a certificate of completion. For more information, contact the Gear Consulting Group at (269) 623-4993.

September 22-23—Fastener Fair. SYMA Event Centre, Budapest, Hungary. The Fastener Fair represents every aspect of the fastener and fixing market by bringing together manufacturers, machine suppliers, wholesalers, distributors, importers, exporters and tool suppliers. The fair aims to be an environment for new ideas and partnerships, so professionals can come away with new business. The event also intends to highlight Europe's near East as an appealing market for manufacturing and assembly because of low-cost labor and economies and new members of the EU. The primary objective of the exhibition is to be cost- and time-efficient, meaning all stands will be closely monitored in size. The Fastener Fair is marketed to large end users in order to gauge both ends of the market, from end user to distributor. For more information, visit <http://www.fastenerfair.com/page2153/budapest-2008.aspx>.