ASM International
The Materials Information Society

Wednesday, April 20th
"Understanding Heat Treatment Results Using Metallography"
George Vander Voort, Buehler, Ltd.

Biographical Information:
George Vander Voort, Director of Research and Technology for Buehler Ltd., is a graduate of Drexel University and Lehigh University with a background in metallurgy and materials science and 29 years experience in the specialty steel industry. A past president of the International Metallographic Society and past chairman of ASTM Committee E-4 on Metallography, George has six patents and over 240 publications including Metallography: Principles and Practice (McGraw-Hill, 1984; ASMI, 1999) and the ASM video course, Principles of Metallography. He recently served as a trustee for ASM International and was the editor for the 2004 revision of Volume 9 of the ASM Handbook, Metallography and Microstructures. He is on the editorial boards of Materials Characterization and Praktische Metallographie. George has taught 52 ASM Metals Engineering Institute courses and given many seminars and workshops for Buehler and various technical societies. He is a fellow of ASMI and ASTM and has 29 awards for his microscopy work including the Jacquet-Lucas Grand Prize and the Dubose-Crouse Award of the International Metallographic Contest.

Abstract:
The talk will discuss how metallography has been used to examine the microstructure of steels subjected to many heat treatment processes: annealing, normalizing, quench hardening, isothermal and continuous cooling transformations, control of retained austenite and grain growth, and various surface hardening techniques, e.g., induction or flame hardening, carburizing, nitriding and carbonitriding.

Meeting Schedule:
- **5:00 p.m. Social** (Cash Bar in Green Mill Restaurant—You are welcome to socialize with other ASM members in the bar area. It is open to the general public.)
- **6:00 p.m. Dinner** (Choose one, $20 per person, check or cash only. MN Chapter ASM does not accept credit cards. See back for reservation.)

Meeting Location: Green Mill/ Hampton Inn, 1000 Gramsia Rd., Shoreview, MN 55126, is located on the frontage road at the intersection of 694 and Lexington Avenue.

PHONE (763) 413-7935; FAX (763) 413-3273; EMAIL iimclifford@msn.com; WEB www.mnasm.org
MN Chapter ASM  
2005 Program Schedule

April 20th  George VanderVoort, Buehler Ltd. at Green Mill, Shoreview, MN
May 18th   TBD

Interested in a particular topic presentation, a tour, a certain speaker, a different meeting location? Your ideas are welcome! Please call the MN Chapter ASM office (leave message) at 763-413-7935! The Board is in the process of planning the program year 2005-06 beginning in September through May.

Serving You...

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Admin. Support: Joy Clifford 763-413-7935
May 3-5, 2005
Twin Cities 2005 Exposition & Conference, Minneapolis Convention Center

The Twin Cities APEX returns to the Upper Midwest with a stronger and expanded event. As Minnesota’s largest machine tool & metalworking exposition, Twin Cities brings buyers and sellers together in the best forum to interact and collaborate. Attendees find the latest technologies and applications to increase the success of their manufacturing business. Exhibitors meet thousands of qualified decision makers and buyers looking to update equipment and services. Look for expanded technical sessions on precision micro machining, micro molding and nanotools. Twin Cities expands beyond the normal event setting in 2005 to offer exhibitors and attendees the best meeting place to facilitate business. www.sme.org/twincities

Are you interested in serving on the Board of Directors for the 2005-06 program year? If so, we need to know that you are interested! Be involved with planning the meetings, speakers, the annual seminar, scholarships, directory, etc. It's a great way to promote the materials/manufacturing industry and network with companies who share the same interests. Call 763-413-7935 or email: jimclifford@msn.com by April 20th.

Experienced Metallurgical Technician position available at Engel Metallurgical Ltd. Send resume to P.O. Box 6100, St. Cloud, MN 56302 or to Les Engel at les@engelmet.com.
MN Chapter ASM (Register by Friday, April 15th at Noon)
Dinner Reservation Form

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<th>Company</th>
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Because of our catering agreement, dinner reservations may not be cancelled nor added after NOON on the Friday prior to each Dinner/Meeting. If you have made a reservation and are unable to attend the dinner, we must invoice you or your company for your reservation. If you have not made a reservation before NOON on the Friday prior to the Dinner/Meeting and are able to attend the meeting, you are welcome to attend the presentation. Your attendance at Chapter events is important! Thank you!

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