

# The Peoria Chapter of ASM International

April 4, 2005 at the

Mark Twain Hotel – Packard Plaza

The Peoria Chapter of ASM International  
and American Foundry Society

Present

**AUSTEMPERED GRAY IRON**

Dr. Karl Rundman,  
Michigan Technological University

**SUSTAINING MEMBERS NIGHT**

Social Hour - 4:30pm • Dinner - 5:30pm

Technical Talk - 6:00pm

Reservations are **\$15.00**.

Call Kate Chen at (309) 675-7529 Chen\_Kate@Cat.com.

Please make all checks payable to "Peoria Chapter of ASM".

## About Our Speaker...



*Dr. Karl B. Rundman* is a Research Professor in the Department of Materials Science and Engineering at Michigan Technological University. His research includes austempering of ductile and gray irons, the physical metallurgy of alloys subjected to a variety of heat treatments, and the kinetics and mechanical properties of austempered irons.

## FINAL 2004-2005 ASM EXECUTIVE MEETING

*The final ASM Executive Meeting for the  
2004-2005 season will be held on May 2  
at the Packard Plaza from 2:30-4:30pm.*

### ASM Peoria Chapter Merit Scholarship

A \$1000 scholarship is available to an outstanding Central Illinois high school senior interested in pursuing a career in materials or metallurgy. Qualified applicants must have a minimum 3.0/4.0 high school grade point average and be enrolled in a university engineering program in Fall 2005. Applications are available on the ASM Peoria website (<http://www.asm-afs-peoria.org/>). Please submit application materials by April 29, 2005. For more information, contact Allison Arndt (309-578-2089 or [arndt\\_allison\\_a@cat.com](mailto:arndt_allison_a@cat.com)).

### ASM INTERNATIONAL

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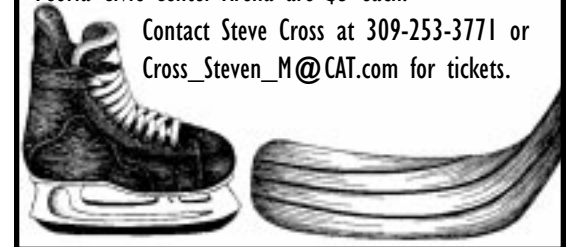
## AUSTEMPERED GRAY IRON

Given the success and benefits of austempered ductile iron (ADI), interest has turned to gray iron to see whether similar benefits may be realized. In this study, which formed the Masters thesis of Jason Parolini, a pearlitic gray cast iron was subjected to a variety of austempering heat treatments. A kinetic study using optical metallography, x-ray diffraction, and hardness measurements was used to define the optimal heat treatment for producing austempered gray iron. This was followed by a study of the tensile properties of the iron heat treated to optimal conditions. The stability of the austempered structures produced was evaluated at 300°C. It was found that austempering can increase the strength and ductility of gray iron by as much as a factor of 2 over the as-cast material; however, stability of the austempered structure must be considered when placing this material into elevated temperature service.

### ASM/AFS Hockey Night

The annual ASM/AFS Hockey Night will be Saturday March 26. Come watch the Peoria Rivermen take on the Wheeling Nailers. The Nailers are currently the top ranked team in the north region, national conference of the ECHL, and the Rivermen will be playing for a spot in the playoffs. Tickets for the 7pm game at the Peoria Civic Center Arena are \$5 each.

Contact Steve Cross at 309-253-3771 or  
[Cross\\_Steven\\_M@CAT.com](mailto:Cross_Steven_M@CAT.com) for tickets.



◆ ◆ CHANGE IN ASM ADDRESS? CALL KATY MACGREGOR (309) 675-3155 ◆ ◆

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