

The Peoria Chapter of ASM International

May 2, 2005 at the

Mark Twain Hotel – Packard Plaza

The Peoria Chapter of ASM International
and American Foundry Society

Present

THE SCIENCE, PROPERTIES, AND APPLICABILITY OF Ni₃B INTERMETTALIC SURFACE FINISHING

Yancy W. Riddle, Ph.D

Vice President of Technology, Universal Chemical Technologies

CHAPTER AWARDS 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. Yancy W. Riddle is the Vice President of Technology at Universal Chemical Technologies. Dr. Riddle has a BS in Mechanical Engineering from Northeastern University, as well as a MS and a PhD in Materials Science from Georgia Institute of Technology. He can be reached at yriddle@universalchemical.com.

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

◆ ◆ CHANGE IN AFS ADDRESS? CALL JOHN GRABEL (309) 633-8658 ◆ ◆

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/AFS Annual Baseball Game

Come out and cheer on the Peoria Chiefs at O'Brien Field on Sunday, July 10 at 2pm. Tickets are \$5 a person and include entrance to the game and the all-you-can-eat Pepsi Picnic Plaza Buffet.

Contact Steve Cross
(Cross_Steven_M@cat.com,
(309)675-3616) by
Wednesday, July 6, for
tickets and further
information.



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The Science, Properties, and Applicability of Ni₃B Intermetallic Surface Finishing

Materials and mechanical engineers looking for surface finishing solutions are often met with a deluge of choices that are the “hardest and most wear resistant”. With such vague introduction to a technology how can an engineer be expected to wade through the myriad of choices to find a surface finishing technique that is well-matched for the needs of the application? Intermetallic phases are often the material of choice for high-performance surface finishes, but limitations to the application of such materials to metallic alloy surfaces are often found. UCT Coatings Inc offers a Ni₃B intermetallic surface finishing technology that is both a powerful and compatible solution for many common tribological problems. Furthermore the material can be applied as a thick layer in a non-line-of-sight manner using a liquid bath technique then easily converted to the Ni₃B intermetallic phase. This presentation will focus first on the microstructure of this technology as a gateway for understanding the performance properties that are to be expected when utilized. The goal is not to be the “hardest and most wear-resistant” but rather to be a surface finish that solves real-world surface problems in an industrially attractive fashion.

AFS/ASM Golf Outing

The American Foundry Society will be holding their annual golf outing on June 4th, 2005. The event will be a 4 person scramble at Kellogg Golf Course. The price per person is \$90 for golf and dinner, \$50 for golf only, and \$45 for dinner only. Checks should be made payable to AFS. For reservations, contact Dan Johnson at (309) 633-8675.

