



# September 2012 ASM/AFS Meeting Monday, September 10



## Materials Challenges in LARGE Mining Equipment

**Michael McKean**  
**Allison Arndt**

Caterpillar Global Mining, South Milwaukee, WI  
(formerly Bucyrus International)

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**Date:** Monday, September 10, 2012

**Location:** Barrack's Cater Inn, 1224 W. Pioneer Parkway, Peoria, IL

4:30-5:30 Social Hour

5:30-6:00 Dinner

6:00-7:00 ASM Technical presentation

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Free Parking is available. The cost of dinner is subsidized and will be \$18 at the door (\$5 students). ASM/AFS members may purchase a ticket for \$40 that will cover four dinners throughout the 2012-2013 season. **RSVP to Trent Jacobson ([Jacobson\\_Trenton\\_G@cat.com](mailto:Jacobson_Trenton_G@cat.com) or 309.675.0843)**

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**Abstract:** Ultra class mining equipment such as draglines and electric rope shovels present unique materials considerations. Due to the extremely large size of these machines and their harsh operating conditions, unusual challenges can exist in design, material sourcing, and in manufacturing. Mr. Michael McKean and Ms. Allison Arndt, metallurgical engineers with Caterpillar Global Mining in South Milwaukee (formerly Bucyrus International), will present some of their experiences with these products.



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**Speakers:** **Mr. Michael McKean** is a Senior Forensic Engineer at Caterpillar Global Mining in South Milwaukee, WI. Mike graduated from Marquette University with an Engineering degree in 1973. He has worked at Bucyrus International and Caterpillar for 39 years in various metallurgical capacities including performing failure analysis for Engineering and Warranty department, developing material standards for Engineering, and providing metallurgical support for all areas of the corporation. He also spent nine years involved with casting quality and in plant casting salvage issues.

**Ms. Allison Arndt** is a Senior Metallurgical Design Engineer at Caterpillar Global Mining in South Milwaukee, WI. Allison received her B.S. degree in Materials Science & Engineering from the University of Wisconsin-Madison in 2002. She has worked in various Metallurgy, Engineering, Quality, and Purchasing roles at Caterpillar and Bucyrus International for the last 10 years. Allison is currently involved in steel synergy projects for the integrated companies and is the engineering metallurgist for the ultra class mining surface extraction segment.