

ASM-AFS NEWSLETTER

August 2012 – October 2012

NOTES FROM THE ASM SEPTEMBER MEETING

For our September meeting, engineers from Caterpillar Global Mining (formerly Bucyrus) Allison Arndt and Michael McKean talked about materials challenges in ultra class mining equipment such as draglines and electric rope shovels. They presented some of their experiences with these products, unique considerations in design, material sourcing and in manufacturing that arise due to the extremely large size of these machines and their harsh operating conditions.



NOTES FROM THE ASM OCTOBER MEETING

For our October meeting, Richard Gundlach, a senior metallurgical engineer from Element Material Technology, Wixom, MI, talked about the new research program, funded by AFS, to investigate the relationship between Mn and S in gray cast iron. The goal of the project is to develop a better understanding of the multiple roles of S in the nucleation and eutectic solidification processes in cast iron. Ultimately, optimized balance of S and Mn concentration will help produce high-strength grey iron for better performance without the use of expensive alloy elements.

ALUMINUM FOUNDRY TOUR AND SEMINAR

On August 9, 2012, the ASM Peoria Chapter hosted a whole day event dedicated to Aluminum casting technology which included a tour of the Aluminum Castings Corporation in Galesburg, IL and AlCast in Peoria, IL, followed by the seminar on “Recent Advancements in Aluminum Casting Technology” by David Weiss from Eck Industries Inc.. Over 75 people attended the event and took part in discussion about aluminum basics, casting, design essentials, processing options, cost and performance trade-offs and state of the art research. This seminar provided a platform for discussing industrial trends, R&D, future development, cost-reduction and weight reduction opportunities that aluminum offers.



ASM VOLUNTEERISM COMMITTEE UPDATE

Jackie Earle, a Product Support Manager for Caterpillar's Remanufacturing Division and a dedicated ASM volunteer, attended a meeting of the ASM International Volunteerism Committee, held at the MS&T Conference in Pittsburgh, PA. This committee is working to help all ASM groups recruit, retain and recognize our precious volunteers. At the most recent

meeting, the committee reviewed the results of the internet survey: 38% of ASM Members have volunteered in some capacity; 82% of the volunteers said their experience met or exceeded their expectations, which means we have a great ASM climate. **If you'd like to learn more about volunteering for ASM, visit the website (<http://www.asminternational.org>) and search in the Membership location.**



ASM EMERGING PROFESSIONALS COMMITTEE UPDATE

Tim Hoeffft, AMT Engineering Manager, was invited to present at the MS&T'12 Emerging Professionals Committee Symposium. Tim presented on "Global Workforce Engineering Talent Development and Management". This presentation provided an overview of how multinational companies like Caterpillar recruit, develop and retain technical talent in its global workforce through employee on-boarding, career path development, as well as technical community involvement and knowledge management practices. This presentation was specifically scoped to assist young engineers and engineering managers in their ultimate career paths. The ASM International Emerging Professionals Committee is established to provide early career professionals with an insight on the inner workings of the ASM and to serve as the voice of early career professionals at the National level. From Caterpillar, Olly Rowan serves as the Chair of the ASM Emerging Professionals Committee and Umesh Patil serves as the Programming subcommittee co-chair.

NSBE MATERIALS WORKSHOP

On Saturday, October 27th, a group of ASM/AFS volunteers presented several materials engineering demonstrations at Fresh Start 2012, a student outreach event hosted by the Central Illinois chapter of the National Society of Black Engineers (NSBE). In the morning, the ASM/AFS team hosted 17 high school students for an hour-long, hands-on materials workshop. The students cast small tin figurines and participated in several demonstrations, including Superslurper powder, crushed pop cans, quench and tempered bobby pins and a thermoelectric fan. During lunch, middle school students experimented with ferrofluids, a shape memory alloy, falling magnets and bouncing balls at the ASM/AFS display table. Thanks go to Travis Brammer, Kevin Dammann, Marv McKimpson and Olly Rowan for helping with this outreach activity.



UPCOMING ASM MONTHLY MEETINGS

Mark your calendars with the remaining dates for the 2012-2013 season meetings:

- November 12 2012
- January 14, 2013
- February 11, 2013
- March 11, 2013
- April 8, 2013
- May 13, 2012

Olly Rowan
ASM Publicity Chair 2012-2013
ASM-AFS Central Illinois Chapter
Rowan_Olga@cat.com