

ASM-AFS NEWSLETTER

September-October 2011

NOTES FROM THE SEPTEMBER MEETING

For our September meeting, Fred Specht from Ajax TOCCO Magnethermic gave a historical overview of the induction hardening technology, followed by discussion of the progress in SCR and IGBT device technology that enables greater current carrying capability resulting in fewer devices, fewer windows and varying frequency ranges used in solid-state power supplies. Fred also talked about the design improvements that provide better electrical efficiencies, computer controls, model simulations, coil construction, and quench and water cooling innovations in the induction hardening industry.



NOTES FROM THE OCTOBER MEETING

For our October meeting, Professor David C. Van Aken from the Missouri University of Science and Technology (formerly University of Missouri-Rolla) talked about the development of lightweight steel armor which exhibits up to 13% improvement in specific strength over cast 4130 steel armor currently used in P900. Professor also discussed their testing and validation program and the most optimal casting practice for the best P900 ballistic performance. Here are some pictures from the meeting!



ASM STUDENT OUTREACH COMMITTEE UPDATE

The ASM Peoria Student Outreach Committee hosted a booth at the Boy Scouts of America Heartland District Fall Camporee. This Camporee was themed Extreme Engineering and was held at Wildlife Prairie State Park on the weekend of October 15th. ASM Peoria Chapter volunteers displayed several toolkits to demonstrate some basic materials properties, medical materials, and magnetism to help foster interest to engineering in junior high- and high-school students.

ASM Blacksmithing Workshop

ASM-AFS Central Illinois Chapter organized 2 blacksmithing classes on October 15 and October 22 with 14 participants total. The participants learned to form a taper point on round bar to make an S-hook and a BBQ meat turner. Other projects included forging a heart hook, dutch oven lid lifter, bottle- and letter opener. Counting members, students and high school program attendees, ASM sponsored introducing over 250 people to the basics of blacksmithing since 2004.



ANNOUNCEMENTS AND UPCOMING EVENTS

► Don't forget about our upcoming **meeting on November 14**. John R. (Chip) Keough, the owner and CEO of Applied Process Inc, will give a presentation titled "**Austempered Ductile iron – A Green Alternative?**" If you would like to attend, please contact Catherine Stecklein (Stecklein_Catherine@cat.com, 309.675.1276)

Mark your calendars with the following dates for the 2011-2012 season meetings:

- January 9, 2012
- February 13, 2012
- March 12, 2012
- April 9, 2012
- May 14, 2012

► ASM-AFS Central Illinois Chapter will be conducting a training series: **ASM MEI Heat Treatment of Steel**. The classes are scheduled once per week on Thursdays from January 26 to March 22, 2012, 4:30-6:30 pm (CST). Webex will be available. To register, please contact Laura Ligeski (Ligeski_Laura@cat.com, 309.494.5605). Registration deadline is January 19, 2012.

► If you have colleagues who have not joined ASM or AFS, encourage them to do so! It is a great opportunity to make friends, identify mentors, and achieve your career goals. For more information on membership benefits and application procedures please visit <http://www.asm-afs-peoria.org/>"

If there are events that you would like me to add, or if you have any general questions, please let me know. Thanks!

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