

METALCASTING ADVANCEMENT CENTER – WORKSHOPS & SEMINARS

Friday, March 19, 2010: PRE-EXPO WORKSHOPS

1:00 PM

Room: S210 A/B—**Registration Required: \$100**

Workshop. Cost Reduction & Quality Improvement – A Formula for Success; *John Campbell, Ph.D., Professor Emeritus, University of Birmingham, UK.*

The workshop will draw attention to the latest concepts regarding the filling and feeding of castings and ways to use the techniques in the foundry to reduce scrap, raise quality, and reduce costs. Principles will apply to all foundry casting processes and metals will include case study data operating foundries. The workshop will also discuss the effect of entrainment defects on the structure and properties of castings and techniques to avoid the creation of entrainment defects.

1:00 PM

Room: S210 C/D—**Registration Required: \$75**

Workshop. Quality Tools: Abused, Misused and Too Little Used Tools; *Ted Schorn, Vice President, Strategic Planning & Development, Enkei America, Columbus, IN.*

Spend time in this workshop with a casting quality “master mechanic.” In this workshop, master mechanic Ted Schorn will show applications of common and not so common tools that can help solve quality, environmental and safety problems. You’ll learn the common mistakes in tool use and pick up some new tools for some frequently occurring casting problems. Learn to avoid common mistakes people make using: SPC, Auditing, Visual Inspection, Pareto Charts, Why-Why Analysis to name a few. Learn some little used tools such as: P, C, NP and U Charts, process mapping, failure mode and effects analysis and scatter diagrams among others.

Saturday, March 20, 2010

9:00 AM

Room: S210 A/B—No Cost. Open to all CastExpo registrants

Practical Approach to Cast Iron Production and Profit; *AFS Division 5 – Cast Iron. William Fincher, Lufkin Industries, Lufkin, TX; Eugene Muratore, Rio Tinton Iron & Titanium America, Rosemont, IL; Christof Heisser, MAGMA Foundry Technologies, Deer Park, IL; George Kokos, Caterpillar, Inc., Dunlap, IL; Andrew Adams, Foseco Metallurgical, Inc., LaGrange, OH*

Seminar Topics:

Fincher: Process Effects on Gating and Riser Design

Muratore: New High Performance Steel: A Risky Charge Material

Heisser: Increase Casting Profitability with Gating Systems Optimized by Simulation

Kokos: Skin Problems Affecting Final Quality

Adams: Gating and Riser Choice Can Sidetrack your Profitability

1:30 PM

Room: S210 A/B—No Cost. Open to all CastExpo registrants

Aluminum Casting Overview; *Mark Osborne, Ph.D., Sr Engineer, General Motors Powertrain, Pontiac, MI.*

The seminar will cover the basics of aluminum metallurgy, melting and treatment of aluminum, safety, and the major aluminum casting methods (green sand, precision sand, permanent mold, lost foam, die casting, and investment casting).

2:00 PM

Room: S210 C/D—No Cost. Open to all CastExpo registrants

Die Casting Defects

This short course, based on the full two-day NADCA offering, is devoted to identifying the most common types of internal and external die casting defects. Probable causes and corrective measures for minimizing or eliminating the defects are also presented.

SUNDAY, MARCH 21, 2010

9:00 AM

Room: S210 A/B—No Cost. Open to all CastExpo registrants

Melting Practice; *Johnny Hill, Martin Foundry, Dallas, TX; David Williams, ASI International, Inc., Hilliard, OH; Richard Volk, United Refractories, Sharonville, OH; Timothy Hoyt, Allied Mineral Products, Inc., Columbus, OH; Michael Buyarski, The Federal Metal Co., Bedford, OH; David White, Schaefer Furnaces, Inc., Dayton, OH; William Pflug, Indoctotherm Corp., Mt. Laurel, NJ.*

Seminar Topics:

Hill: Channel Induction Furnace – Hot Inductor Change
Williams: Real-Life Fluxing Benefits to Iron and Steel Foundries
Volk: Refractory Cost Saving Ideas in the Cupola Melt Shop
Hoyt: Refractory Considerations for Iron
Buyarski: Copper Melting
White: Aluminum Melting
Pflug: Recent Advances in Automatic Pouring System Controls

10:00 AM

Room: S210 C/D—No Cost. Open to all CastExpo registrants

Die Maintenance

Understanding die material metallurgy is critical to extending die life. This short course, based on the full two-day NADCA offering, will provide an overview of die material metallurgy and die care. There will be a review of typical problems and avoidance.

1:30 PM

Room: S210 A/B—**Registration Required: \$75**

Cast Metals Institute Workshop. Lean Manufacturing for Metalcasters; *Frank E. Peters, Ph.D., Associate Professor, Department of IMSE, Iowa State University, Ames, IA.*

Faced with an increasing need to raise productivity and quality, while at the same time reduce costs and lead times, metalcasters adopt the principles of lean manufacturing to help achieve that goal. Attendees of this session will learn the elements associated with lean manufacturing principles, what they really mean, and how to apply them to metalcasting operations. Designed with the job shop metalcaster in mind, everyone from shop floor supervisors to process engineers to management will gain valuable ideas for improving their operations through lean manufacturing. Topics covered include: recognizing waste and opportunities for lean manufacturing, accommodating variability, workplace organization (5-S), Kaizen events, setup reduction, inventory reduction, and the cultural changes to support continual improvement.

1:30 PM

Room: S210 C/D—No Cost. Open to all CastExpo registrants

PQ2 and Gating

This short course will provide an overview of PQ2 and gating calculations for fitting a die to a machine of appropriate power and designing effective gating systems for the production of quality castings. The NADCA PQ2 and Gating software programs which automatically perform the required calculations will be showcased to demonstrate how they can be utilized to quickly generate results.

MONDAY, MARCH 22, 2010

9:00 AM

Room: S210 A/B—No Cost. Open to all CastExpo registrants

Steel Melting and Casting; *Glenn Cowie, Foseco Metallurgical, Inc., Cleveland, OH; Peter Satre, Allied Mineral Products, Inc., Columbus, OH; Christof Heisser, MAGMA Foundry Technologies, Deer Park, IL; Ralph Showman, Ashland Performance Materials, Dublin, OH; George Frigm, Haraeus Electro-Nite Co., Wilmington, DE; Larry Wolfe, Carmeuse North America, Pittsburgh, PA.*

Seminar Topics:

Cowie: Improving Profitability in Steel Foundries by Filtration

Satre: Refractor Considerations for Steel Melting

Heisser: The Future of Solidification Modeling

Showman: Optimization of Breaker Cores

Frigm: Soluble Gas Pick-up During Melting of Steel Alloys

Wolfe: Conversion from an Acid Practice to a Basic Practice in the EAF – Key Points and Benefits

10:00 AM

Room: S210 C/D—No Cost. Open to all CastExpo registrants

OEM Seminar

The morning session of this seminar will provide an overview of designing products for die casting. Various considerations need to be taken into account and these will be reviewed. The afternoon session will provide details for die casting product design such as alloy properties and selection, dimensional capabilities, and tolerances. Both OEM Seminar sessions are based on the full two-day NADCA Design Seminar.

1:30 PM

Room: S210 A/B—No Cost. Open to all CastExpo registrants

Green Sand Seminar: Part 1—The Basics of Green Sand Testing; *Gerard Thiel, Director, Metal Casting Center, University of Northern Iowa, Cedar Falls, IA; David Carroll, Regional Sales Manager, American Colloid Co., Elgin, IL.*

How do you keep your green sand system in control to ensure best properties for your sand and best surface finish for your castings? This seminar will discuss the basic green sand tests that foundries should run. Topics will include: what test to run, testing procedures, establishing a baseline for your sand system, sand testing errors, how to interpret test results, how to correlate results to the sand system, and when and how to take actions based on tests.

2:00 PM

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3:00 PM

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Green Sand Seminar: Part 2—Practical Answers to Your Sand System Questions; *Panel: TBA*

Meet leading green sand system experts and ask your most pressing questions. This seminar will begin with presentations from leading foundries about how they control their sand system. A panel of experts will handle your questions. This seminar will include the opportunity to bring your sand test results and meet one-on-one with leading experts to review your sand system.