



AMERICAN CERAMIC SOCIETY

St. Louis Section
and the
Refractory Ceramics Division

Fifty-third Annual Symposium

on

Refractories

March 29-30, 2017

Hilton St. Louis Airport Hotel

Theme:

“Real World Applications of Refractory Testing”

PROGRAM

“Real World Applications of Refractory Testing”

March 28th, 2017

5:00 P.M. Kickoff Event – Gateway Arch Riverboat Cruise of the Mississippi

March 29th, 2017

7:15 A.M. Registration and Coffee

8:00 Morning Technical Sessions
Welcome and Introductions

St. Louis Section Chairman

Bill Davis

HarbisonWalker International

Refractory Ceramics Division Chair

Josh Pelletier

Kerneos, Inc.

Co-Program Coordinators

Ashley Hampton

Vesuvius

Brian Rayner

The Edward Orton Jr. Ceramic Foundation

8:15 Spinel: In-Situ versus Performed – Clearing the Myth
Dale Zacherl – Almatix, Inc.
Marion Schnabel & Andreas Buhr – Almatix GmbH, Germany
Reinhard Exenberger & Christian Rampitsch – voestalpine Stahl GmbH, Austria

8:45 The Effect of Aluminosilicate Calcine Quality on Finished Monolithic Refractory Hot Properties
Scot Graddick, Dave Tucker, Chris Beiter & Danilo Frulli – Imerys Refractory Minerals
Steffen Mohmel, CARRD

9:15 Why do Industrial-Sized No-Cement Castables Sometimes Explode during Heatup? A Remedy to Ensure Safe and Fast Heatup of Microsilica-Gel Bond Castables
Bjørn Myhre & Hong Peng – Elkem Silicon Materials, Norway

9:45 Coffee Break

10:15 Eradicating the Occurrence of Efflorescence, Carbonation and Alkali Hydrolysis (AH) on “Cured” Insulating Castables
Jason P. Street & Thomas R. Viverito – Morgan Thermal Ceramics

10:45 Determining and Enhancing the Permeability of Dense Refractory Castables: Implications for Installation
Josh Pelletier, Christoph Wöhrmeyer & Carl Zetterström – Kerneos, Inc.

11:15 The Application of Physical Properties to Refractory Design and Selection
Mike Alexander – Riverside Refractories, Inc.

11:45-1:00 Luncheon Banquet

Afternoon Session

- 1:00-1:45 Presentation of the T.J. Planje St. Louis Refractories Award to **Andreas Buhr – Almatiss GmbH**
- 2:00 ASTM Committee C08 on Refractories – An Overview of the Definitive Standard Tests for Refractories
Bill Headrick – Missouri Refractories Company (MORCO)
- 2:30 Coffee Break
- 3:00 Possibilities and Opportunities for Determining the Thermal Conductivity of Different Refractory Products
Peter Quirnbach & Hartmut Koerber – Deutsches Institut fuer Feuerfest und Keramik, Germany
Ralf Simmat & Christian Dannert – Forschungsgemeinschaft Feuerfest e.V., Germany
- 3:30 Refractory Testing to Capture Real World Applications
Devdutt Shukla – Vesuvius USA
- 4:00 Slag Corrosion Test Methods
Anna Mattione, Ronald O'Malley & Jeffrey D. Smith – Missouri University of Science & Technology
- 4:30 Questions & Discussion
Co-Program Coordinator
- 4:45 RCD Annual Members Meeting
- 5:00 Closing Remarks
Bill Davis
HarbisonWalker International
Josh Pelletier
Kerneos, Inc.
- 5:00-7:00 Exposition and Cocktail Hour
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| Almatiss | Kerneos, Inc. |
| Alteo-Alumina | Kyanite Mining Corp. |
| AluChem | Lancaster Products |
| American Ceramic Society | Orton Ceramic Foundation |
| BassTech International | Possehl Erzkontor N.A. |
| Blastcrete Equipment Company | PQ Corporation |
| Calucem, Inc. | RED Industrial Products |
| Christy Minerals | Refractory Minerals |
| Cilas Particle Size | TAM Ceramics |
| Conitex Sonoco | Washington Mills |
| DIFK GmbH, Germany | ZIRCAR Ceramics, Inc. |
| Electro Abrasives/US Electrofused Minerals | |
| Elkem Materials, Inc. | |
| FX Minerals | |
| Great Lakes Minerals | |
| Imerys Refractory Minerals | |
- 7:00 Dinner Buffet

March 30th, 2017

6:30 A.M. Refractory Ceramics Division (RCD) Breakfast Meeting

8:15 Morning Technical Sessions
Welcome and Introductions

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8:30 **Invited Paper – 2016 Alfred W. Allen Award Winner**
Reflections on Refractory Materials and Their Evaluation
Victor C. Pandolfelli – Federal University of São Carlos, Brazil

9:30 Turning Reheat Furnace into Science
Yong Lee & Kurt Johnson – ArcelorMittal Steel Global R&D

10:00 The Use of Heat Flow Analysis and Infrared Thermography for the Identification of Alternative Insulation Strategies
James G. Hemrick – Reno Refractories, Inc.

10:30 Coffee Break

11:00 Refractories for Coal Boilers
Jeff Yakulis, Jeff Bogan, Josh Sayre & Corey Forster – HarbisonWalker International

11:30 High Definition Imaging of Hot Refractory during Operating Conditions
Bill Porter – Bet-Ker America LLC
Saku Kaukonen & Juha Roininen – Sapotech Oy, Finland

12:00 Questions & Discussion
Co-Program Coordinator

Bill Davis

HarbisonWalker International

Josh Pelletier

Kerneos, Inc.

12:30 St. Louis Section Officer Business Meeting