



AMERICAN CERAMIC SOCIETY

**St. Louis Section
and the
Refractory Ceramics Division**

Fiftieth Annual Symposium

on

Refractories

March 26-27, 2014

Hilton St. Louis Airport Hotel

Theme:

“Refractory Bonding Systems”

PROGRAM

“Refractory Bonding Systems”

March 25th, 2014

5:00 P.M. – 6:00 P.M.

Welcome Reception and Cocktail Hour – 100th Anniversary of ASTM C08

Hilton St. Louis Airport – Lambert Room

Hosted by ASTM C08 on Refractories

Sponsored by Missouri Refractories, Kerneos, Inc., Almatiss, Vesuvius, Allied Mineral Products, Kyanite Mining and Alsey Refractories

March 26th, 2014

7:15 A.M. Registration and Coffee

8:00 Morning Technical Sessions
Welcome and Introductions

St. Louis Section Chairman

Dilip Jain

Kyanite Mining

Refractory Ceramics Division Chair

Dave Tucker

CE-Minerals/Mulcoa

Co-Program Coordinators

Bill Headrick

Missouri Refractories Company

Josh Pelletier

Kerneos, Inc.

8:15 **Keynote Address**

A Review of Refractory Bond Systems for Monolithic Refractories

Chris Parr, Josh Pelletier, Christoph Wöhrmeyer, Carl Zetterstrom and Magali Szepizdyn – Kerneos SA

9:15 Effect of Additives on the Properties of Magnesium Phosphate Cement
George Gower – Refractory Minerals Co, Inc.

9:45 Coffee Break

10:15 Cement Hydration and Strength Development – How Can Reproducible Results be Achieved?
Dale Zacherl – Almatiss

10:45 Comparison of the Properties of Cement and Cement-Free Castable Bond Systems
Sam Bonsall – Vesuvius USA

11:15 Questions and Discussion
Co-Program Coordinator

11:45-1:00 Luncheon Banquet

Afternoon Session

1:00-1:30 Presentation of the T.J. Planje St. Louis Refractories Award to **Jeffrey D. Smith – Department of Materials Science and Engineering, Missouri University of Science and Technology**

1:30 **Invited Speaker**

How do Steelmakers Choose Refractories – the Role of Bonding Systems

Tom Vert – ArcelorMittal Dofasco

Interactive Q&A Session

2:30 Coffee Break

3:00 Findings on Relationships between Particle Packing, Ultrafines and Rheology of Refractory Castables

Bjorn Myhre – Elkem

3:30 Activated Alumina Binders in Refractory Compositions

Scott Barnhouse – Alteo NA LLC

4:00 A 50 Year History of Contract Refractory Dryout/Heatup Services

Irish Cobane – Hotwork

4:30 Questions & Discussion
Co-Program Coordinator

4:45 RCD Annual Members Meeting

5:00 Closing Remarks

Dilip Jain

Kyanite Mining

Dave Tucker

CE-Minerals/Mulcoa

5:00-7:00 Exposition and Cocktail Hour

Almatis

AluChem

Alteo-Alumina

American Ceramic Society

BassTech International

Calucem, Inc.

Christy Minerals

Cilas Particle Size

DIFK GmbH, Germany

Great Lakes Minerals

IMERYS Refractory Minerals

KERNEOS, Inc.

Kyanite Mining

LAEIS GmbH

Lancaster Products

Missouri S&T

Orton Ceramic Foundation

Possehl Erzkontor N.A.

RED Industrial Products

Refractory Minerals

TAM Ceramics

Velco GmbH

7:00 **Celebratory Dinner Banquet (All registered meeting attendants welcome!)**

100th Anniversary of ASTM C08 on Refractories

50th Anniversary of the St. Louis Section of the American Ceramic Society

Hosted by ASTM C08 & St. Louis Section/Refractory Ceramics Division

Sponsored by Missouri Refractories, Kerneos, Inc., Almatis, Vesuvius, Allied Mineral Products, Kyanite Mining and Aalsey Refractories

Featuring: Guest Speakers Len Krietz for ASTM and Kent Weisenstein for STL Section

Special Entertainment by *ReVera! of St. Louis*

March 27th, 2014

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

8:15 Morning Technical Sessions
Welcome and Introductions

St. Louis Section Chairman

Dilip Jain

Kyanite Mining

Refractory Ceramics Division Chair

Dave Tucker

CE-Minerals/Mulcoa

Co-Program Coordinators

Bill Headrick

Missouri Refractories Company

Josh Pelletier

Kerneos, Inc.

8:30 ***Invited Speaker***

Refractory Castable Binder Engineering

Victor C. Pandolfelli – Federal University of S. Carlos – Brazil

9:30 The Use of Phosphates as Binders and Additives for Refractories
Erwin Schmidt – Chemische Fabrik Budenheim KG

10:00 Coffee Break

10:30 Bonding System in MgO-CaO-Fe₂O₃ Refractory for EAF Furnace Bottoms
Henry He and Steve Mangin – Magnesita Refractories

11:00 Correlation Between Measured Thermophysical Data and Mineralogical Constitution of Refractories
Peter Quirnbach and Hartmut Koerber – Deutsches Institut fuer Feuerfest and Keramik (DIFK)

11:30 GUNMIX – A New Moistening System to Improve Bonding in Dry Gunning
Christian Wolf – Velco GmbH

12:00 Questions & Discussion
Co-Program Coordinator

St. Louis Section Chairman

Dilip Jain

Kyanite Mining

Refractory Ceramics Division Chair

Dave Tucker

CE-Minerals/Mulcoa

12:30 St. Louis Section Officer Business Meeting & Lunch

REGISTRATION FORM

Please select:

- Pre-Registration Fee (Deadline March 21) \$225.00
- On-Site Registration Fee \$275.00
- Emeritus/Senior Fee \$125.00
- Student Fee \$50.00
- Exhibitor for Exposition (Table Top) \$300.00
(Exhibitor cost does not include registration fee)
- Lunch - Chicken Fish Pasta/Vegetarian
- Celebratory Dinner Banquet for...
 50th Anniversary STL Section
 100th Anniversary ASTM C08 on Refractories
 Beef Fish Pasta/Vegetarian
- Guest for Banquet \$60.00
 Beef Fish Pasta/Vegetarian

(Fill in below)

NAME:
NAME ON BADGE:
COMPANY:
ADDRESS:
CITY/STATE/ZIP:
EMAIL:
TEL/FAX:

METHOD OF PAYMENT

CHARGE MY CARD: \$		
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EXP:	CVV:	
NAME ON CARD:		
SIGNATURE:		

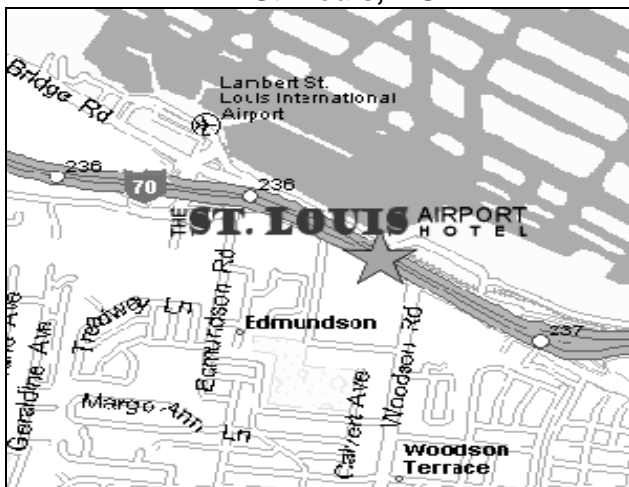
Company or Personal Check in U.S. Dollars
(Make checks payable to: St. Louis Section)

Send To: Patty Smith
 Missouri S&T
 105 Straumanis-James Hall
 401 W. 16th St.
 Rolla, MO 65401
 Tel (573) 341-6265
 Fax (573) 341-2071
 Email: psmith@mst.edu

NOTE: Dress Attire – Semi Casual (Tie Optional)

LOCATION

Hilton St. Louis Airport Hotel
 10330 Natural Bridge Road
 St. Louis, MO



A block of rooms has been set aside at the Hilton St. Louis Airport Hotel in St. Louis, MO for this meeting. Please refer to **Group Code MUS** at the Hilton when reserving a room for which the rate is \$104.00 single/double per night or you can reserve online. **Reservations must be made before March 2nd 2014**

HOTEL ACCOMMODATIONS

Hilton Hotel (**Mar 2, 2014**) (314) 426-5500

The web page address is:

<http://www.hilton.com/en/hi/groups/personalized/S/S/TLHIHF-MUS-20140324/index.ihtml>

Hampton Inn	(314) 429-2000
Drury Inn	(314) 423-7700
Marriott Airport	(314) 423-9700