

Industrial Aluminum Electrolysis

The definitive course on the theory and practice of primary aluminum production

September 13-16, 2010 • Hotel Luzeiros São Luis, Maranhão, Brazil

What This Course Offers

- Theoretical and practical aspects of primary aluminum production
- An understanding of the electrolysis process
- Overview of the state-of-the-art aluminum production
- On-site visit to the Alumar aluminum smelter

Attendees will participate in group discussions and learn to solve technical problems at aluminum smelters, such as: diagnosis and treatment of problem pots; heat balance applied to potline operations.

Course Goals

- To promote more efficient operation of aluminum smelters
- To stimulate corresponding research and development

Who Should Attend

- Technical and project managers
- Supervisors and operators of Hall-Heroult cells
- Contributors to the development of primary aluminum production technology
- The course is open to all individuals interested in aluminum production

Language

The course presentations and notes will be in English.

What Your Registration Includes

- 4 Day Course
- Smelter Tour
- Course Notes
- Welcome Reception (Sunday evening)
- Lunch (daily)
- Refreshment Breaks
- Closing Reception/Dinner (Wednesday evening)

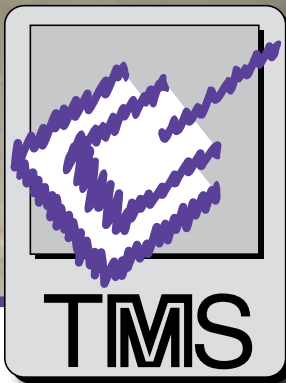
**Sponsored by: TMS Light Metals Division
and**



Course Topics

Alumina Quality and Solubility
Anode Effect Mechanism and Emission Rates
Carbon Dust in Pots - Causes and Problems
Cell Energy Input and its Utilisation
Current Efficiency Improvements and Optimization
Diagnosis of Problem Pots
Electrolyte Compositions
Fluoride Emissions Control
Graphite Resistor and Gas Preheat
Group Work on Heat Balance
Group Work on Problem Pots
Heat Balance Fundamentals
Impact of Alumina Properties on Pot Operations
Introduction to the Al Electrolysis Process
Measures to Control Metal Purity in Prebake Reduction Cells
Measures to Manage Pot Complement
MHD for Reduction Cells Busbar Design
Modern Shell Design for Reduction Cells
Optimising Work Practices to Minimise Disturbances and Maximise Smelter Cell Performance
Options for Minimising the Duration and Quenching Anode Effects
Plant Tour to the Alumar Smelter
Pot Control
Pot Operational Diagnostics
Pot Voltage Management: Resistance Target Setting and Modifiers
Potline Shutdown and Restart
Productivity & Work Practice Challenges When Operating Cells At The "Edge"
Thermal Balance Modeling for Lining Design
Understanding the Variability and Control of Temperature and Aluminum Fluoride in Cells
Use of Stored Data /Recent History of Cell Condition Variations for Advanced Diagnostics of Abnormalities
Work Practices and Safety in Potrooms

Be sure to note your personal topics of interest on the registration form because presenters will customize content to meet specific needs and interests identified!



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Course Presenters

Halvor Kvande, *Hydro Aluminium, Norway*

Steve Lindsay, *Alcoa Inc., USA*

Alton Tabereaux, *Consultant, USA*

Gary Tarcy, *Alcoa Inc., USA*

Barry Welch, *Welbank Consulting, New Zealand*

Dagoberto Severo, *CAETE, Brazil*

Pablo Navarro, *Aluar Aluminio Argentino, SAIC, Argentina*

Lodging

Special rates are available for course participants who stay at the Hotel Luzeiros São Luis, in Maranhão, Brazil. Make your reservation by telephone +55 98 3311-4949 before August 1, 2010 to receive the special rate.

For more information on the Hotel Luzeiros São Luis, please visit <http://www.luzeirossaoluis.com.br/>

For More Information

Nate Natale, TMS

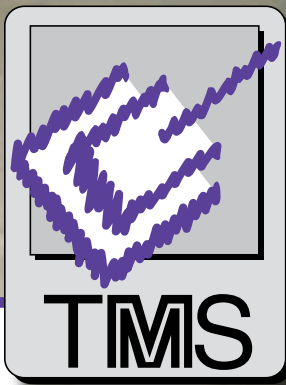
(724) 776-9000, ext. 222 • (800) 759-4TMS

natale@tms.org

<http://www.tms.org/education/shortcourses/alcourse2010.aspx>

Photo Credit: Alumar





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Registration Form: Complete this form and return with payment before August 1, 2010 to:

MAIL

The Minerals, Metals & Materials Society
184 Thorn Hill Road
Warrendale, PA 15086 USA

FAX

Fax: (724) 776-3770

First Name _____ Last Name _____

Job Title _____

Company _____

Street Address _____

City _____ State/Province _____

Zip/Postal Code _____ Country _____

Telephone _____ Fax _____

E-mail Address _____

Job Responsibility Production R&D

Education _____

Topics of Specific Interest _____

Payment: \$2,500 (U.S. Dollars)

Check or Money Order

(payable to The Minerals, Metals & Materials Society, in U.S. dollars, drawn on a U.S. bank)

American Express Diners Club MasterCard VISA

Credit Card Number _____ Exp. Date _____

Cardholder Name (print) _____

Cardholder Signature _____

Cancellations: TMS reserves the right to cancel this course due to low registration; registrants will be notified at least 10 days prior to the course date and receive full refunds. If a registrant must cancel, TMS must be notified in writing before August 1, 2010; payment will be refunded less a \$75 processing fee. No refunds will be processed after August 1, 2010.