

## How It's Run

Lectures will be presented as outlined below, featuring an international faculty. The following individuals will serve as course presenters:

**Philippe Beghein**

*SGL Carbon Group, France*

**Roy Cahill**

*Alcoa Inc., USA*

**Warren Haupin**

*Alcoa Inc., Retired, USA*

**Dick Jeltsch**

*Consultant, Formerly Kaiser Aluminum, USA*

**Erik Jensen**

*EAJ Consulting, USA*

**Halvor Kvande**

*Hydro Aluminium Primary Metal, Norway*

**Steve Lindsay**

*Alcoa Inc., USA*

**Vinko Potocnik**

*Consultant, Canada*

**Alton Tabereaux**

*Alcoa Inc., USA*

**Gary Tarcy**

*Alcoa Inc., USA*

**Mark Taylor**

*University of Auckland, New Zealand*

**Barry Welch**

*Welbank Consulting, New Zealand*

**Nick Zienkowicz**

*Vulcan Refractories, Ltd., Great Britain*

Extensive group discussions will cover solving technical problems at aluminum smelters to increase production, lower energy consumption, improve metal quality and reduce environmental emissions within the areas of:

- bath chemistry
- cell operations
- potroom problems

## Application

NAME: \_\_\_\_\_

JOB TITLE: \_\_\_\_\_

ORGANIZATION/COMPANY: \_\_\_\_\_

\_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY, STATE, ZIP: \_\_\_\_\_

\_\_\_\_\_

COUNTRY: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

FAX: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

Job Responsibility:  Production  R&D

Brief Description of Job and Responsibilities: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Education: \_\_\_\_\_

Specific Interests: \_\_\_\_\_

\_\_\_\_\_

Special Needs (include dietary): \_\_\_\_\_

\_\_\_\_\_

### Tuition Payment: \$1,650.00 US Dollars

Check, Money Order (Payable to TMS)

Payment shall be made in US dollars drawn on a US bank.

Credit Card

VISA  MasterCard  American Express  Diner's Club

Credit Card Number: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

Card Holder Name: \_\_\_\_\_

Card Holder Signature: \_\_\_\_\_

## Registration

To register for the Industrial Aluminum Electrolysis course, complete the attached form and submit with payment before August 15, 2005. A limited number of participants can be accommodated in the course based on a first come, first serve basis. Class size is limited in the interest of participant interaction. Early registration is encouraged; previous courses have sold out.

In the event that course registration is not sufficient, attendees will be notified of the course cancellation a minimum of 10 days prior to the scheduled beginning of the course. Individuals wishing to cancel their registration may do so on or before the August 15 registration deadline, for a minimal processing fee. No refunds will be processed after the August 15 deadline.

### Questions?

#### **Contact:**

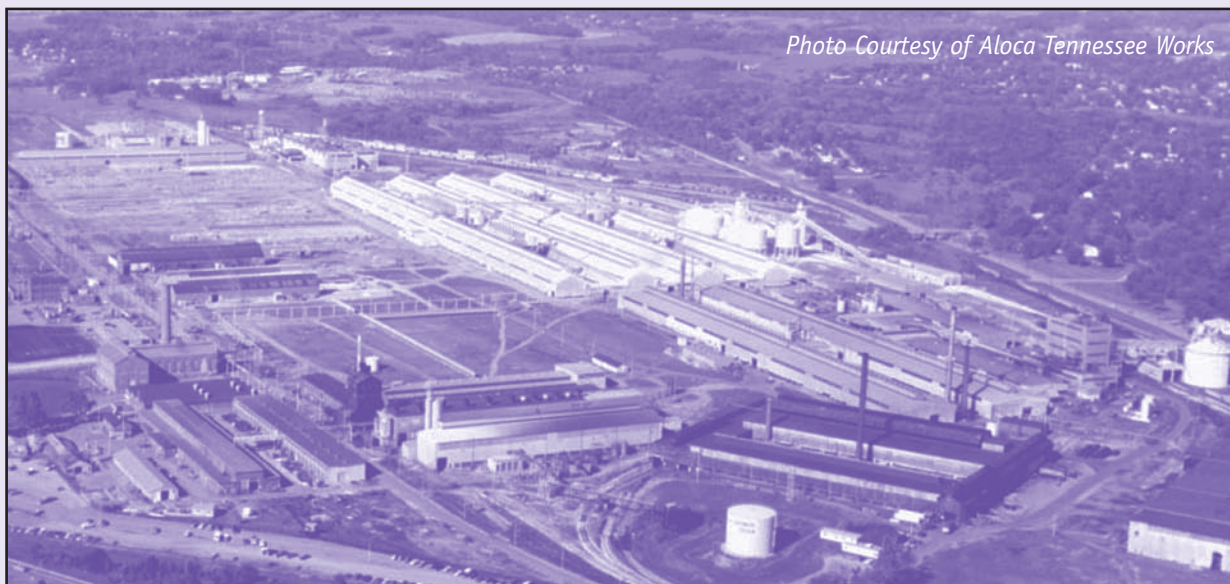
Christina Raabe, Manager, Technical Programming & Continuing Education  
TMS (The Minerals, Metals, & Materials Society)  
184 Thorn Hill Road, Warrendale, PA 15085 USA  
Tel: (724) 776-9000 x212 / Fax: (724) 776-3770  
E-mail: raabe@tms.org

## Tuition

The cost per participant is \$1,650 (US Dollars), which includes course notes, a welcome reception, refreshment breaks, breakfast each day, lunch each day, the smelter tour, and a closing reception/dinner. Also, sponsored evening social events are planned.

***Submit application form with payment before August 15, 2005 to:***

TMS - Christina Raabe  
184 Thorn Hill Rd, Warrendale, PA 15086 USA  
Fax: (724) 776-3770



*Photo Courtesy of Aloca Tennessee Works*

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# Industrial Aluminum Electrolysis



## 12<sup>th</sup> Premier Course on the Theory and Practice of Primary Aluminum Production

September 12–16, 2005  
Radisson Summit Hill  
Knoxville, Tennessee, USA

*Sponsored by the TMS Light Metals Division*

# TMS

[www.tms.org](http://www.tms.org)

184 THORN HILL ROAD  
WARRENDALE, PA 15086-7514  
USA

## What It Is

Industrial Aluminum Electrolysis is a 4½ day course on the theoretical and practical aspects of primary aluminum production. It provides a better understanding of the electrolysis process and an overview of the state of the art. Its goal is to promote more efficient operation of aluminum smelters and stimulate corresponding research and development.

Previously held in Quebec, Quebec, in 2003, the Light Metals Division of TMS will hold the 2005 course in Knoxville, TN, USA to feature an on-site visit to Alcoa Tennessee Works.

## Who Should Attend

This course is directed to anyone who operates Hall-Heroult cells or contributes to the development of primary aluminum production technology.

## When

The Course will run 4½ days; Monday through Thursday from 8:00 am to 5:00 pm and Friday from 8:00 am to 11:30 am. A hosted Welcome Reception will be held Sunday evening.

## Where

Radisson Summit Hill  
401 Summit Hill Drive  
Knoxville, TN 37902

Lodging charges are not included in the tuition fee, however, a block of rooms have been reserved with the Radisson Summit Hill (Telephone 865/522-2600, Fax 865/541-5995) at a group rate of \$85/US + taxes per night for single or double occupancy. Participants are expected to make their own reservations by August 15, 2005.

## Course Topics

- Alternative Aluminum Production Processes
- Alumina Quality and Solubility
- Anode
- Anode Effects
- Bath Chemistry
- Carbon Dust in Pots
- Cathode and Cathode Materials
- Cell Start-Up
- Cell Operations and Current Efficiency
- Diagnosis of Problem Pots
- History of Aluminum Production
- Increasing Pot Productivity
- Magnetohydrodynamics
- Measurement Techniques for Pot Analysis
- Perfluorocarbon Emissions
- Pot Productivity
- Pot Tuning Optimization
- Potroom Ventilation
- Practical Application to Operations
- Principles of Aluminum Electrolysis
- Process Control
- Process Simulation
- Safety in the Aluminum Industry
- Tour of Aluminum Smelter

....and several other topics