



EUCI Presents a Web Conference on:

IN FURNACE LASER-BASED MEASUREMENT SYSTEMS

OPTIMIZE COMBUSTION IN COAL-FIRED BOILERS

March 31, 2010



12:00 – 1:30 PM Eastern Time



EUCI is authorized
by IACET to offer
0.1 CEU for
this program.



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OVERVIEW

Optimizing combustion at a coal-fired power plant can be very challenging. The competitive power markets require these plants to enhance availability, improve efficiency, reduce emissions and increase fuel flexibility. At the same time, plants are faced with the operational impacts of increased slagging and water wall wastage resulting from burning non-design fuels and reducing emission levels. These can all be competing objectives at times but all are affected by how well the combustion in the furnace is balanced and optimized. Improving efficiency will also become even more important as requirements to reduce CO₂ from the existing coal-fired fleet are implemented as part of future GHG legislation.

In the past, engineers and operators were restricted to using a limited number of back-end, multi-point extraction sensors, far from the combustion area to tune the boiler on a one-time or as-needed basis. If any operating conditions changed (such as coal quality) the boiler was no longer optimally tuned. With non-invasive, laser-based technology systems, engineers and operators can obtain key combustion constituents such as temperature, O₂ and CO directly from the furnace and in real-time, to maintain optimum combustion performance over a wide range of operating conditions. Better measurements, means better results, greater efficiency, and reduction in costs.

WHO SHOULD ATTEND

This program is specifically designed for utility plant personnel who are responsible for optimizing the combustion in coal-fired power plants, including:

- Performance engineers
- Boiler engineers
- Plant operators or supervisors
- Instrument and control engineers
- Power plant fuel experts, purchasers, and project managers
- Other utility personnel interested in TDLAS technology
- Suppliers supporting utilities with generation materials and equipment

LEARNING OUTCOMES

- Determine how laser-based measurements can be used to create two-dimensional profiles of key combustion constituents directly in the furnace
- Explore applications of in furnace laser based measurement systems on different types of boilers and fuels (T-Fired, Wall-Fired, Cyclone and Down-shot)
- Analyze how combustion data can be utilized to reduce NO_x levels; reduce slag; and improve efficiency

AGENDA

- Basic measurement principles of Tunable Diode Laser Absorption Spectroscopy (TDLAS)
- Main components of the laser-based measurement systems
- Installation and maintenance requirements of TDLAS systems
- Applications and configurations for various types of boiler designs
- Generation of two-dimensional constituent profiles
- Case studies for NO_x reduction; slagging and efficiency improvement
- Questions and answers

IACET



EUCI has been approved as an

Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102. In obtaining this approval, EUCI has demonstrated that it complies with the ANSI/IACET Standards which are widely recognized as standards of good practice internationally.

As a result of their Authorized Provider membership status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standards.

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Requirements for completing webinar:

Participants must be logged in to the web conference for its entirety to receive continuing education credit

Methods of Instruction:

Web based PowerPoint presentation and on-line interactive question/answer session.

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INSTRUCTORS

Scott Affelt is **Vice-President of Sales and Marketing** for **Zolo Technologies**. Prior to joining Zolo Technologies, he was President of Doosan Babcock Energy America LLC (formerly Mitsui Babcock USA LLC) where he was responsible for the after-market services business in America including coal boiler upgrades and emission reduction solutions. Mr. Affelt has over 20 years of experience in the energy industry including: natural gas and electric power sales and marketing; environmental technology; and coal-fired generation. Mr. Affelt holds a B.S. degree in Engineering from the Colorado School of Mines and an MBA from the University of Southern California.

Newton Logan is **Vice President of Operations** for **Zolo Technologies**. Prior to joining Zolo he was Vice President of Operations at Research Electro-Optics in Boulder, CO for five years. His other work experience includes six years with two medical device companies and twelve years with Spectra-Physics. Mr. Logan received a MBA from the Amos Tuck School of Business at Dartmouth College and he holds a BA in Economics from Colorado College.

LOGGING IN TO THE WEB CONFERENCE

After registration, each registrant will receive a confirmation of payment or an invoice, depending on method of payment. Each registrant will also receive an e-mail with appropriate login information and more information regarding the event 24 hours prior to the start of the event. To log on, you will need a Windows PC with a broadband connection and audio system.

WHAT IS A SINGLE SITE CONNECTION?

A site connection allows a single connection to the web conference. That connection is open to any number of users in a collaborative setting. Because there are no travel expenses and only a single registration fee is required, each additional participant lowers the cost per participant significantly.

By purchasing a site connection, you can invite as many people as you would like to view and participate in the session from a single location. Set up the session in a conference room and project the presentation and chat on a large screen. You also have rights to distribute copies of the presentation materials to everyone involved. Please note that audio is received via the computer sound system and must be broadcast to your group.

If for any reason a relevant stakeholder cannot co-locate for the session, we encourage you to include that person by purchasing an additional connection at the reduced fee of \$195 per session. This will ensure that every member of a team receives the same relevant, timely information in the most efficient way.

If you have any technical or purchasing questions, please contact us at (303) 770.8800.

Start Time: 12:00 PM Eastern Time

United States Regional Start Times:

9:00 AM Pacific :: 10:00 AM Mountain :: 11:00 AM Central :: 12:00 PM Eastern

Use the time zone converter (<http://www.timezoneconverter.com/cgi-bin/tzc.tzc>) to find your correct start time.

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REGISTRATION INFORMATION

Mail or fax this form along with payment. You will receive a confirmation and/or invoice within 48 hours. Make checks payable to EUCI.

MAIL DIRECTLY TO:

EUCI
4643 S. Ulster St., Ste. 350
Denver, CO 80237, USA

ONLINE:

www.euci.com

FAX TO:

(303) 741.0849

PHONE:

(303) 770.8800

REFUND / CANCELLATION POLICY

All cancellations received prior to March 12, 2010 will be subject to a \$50 processing fee per web conference per registrant. Written cancellations received after this date will create a partial credit of the tuition good toward any other EUCI conference, publication or web conference. This credit will be valid for six months. No refunds will be given after March 12, 2010 in any case. In case of webinar cancellation, EUCI's liability is limited to refund of the webinar registration fee only.

PLEASE REGISTER THE FOLLOWING

- In Furnace Laser-Based Measurement Systems: Optimize Combustion in Coal-Fired Boilers, March 31, 2010, Single Site Connection: \$345

Early Bird on or Before March 30, 2010: \$295

- Additional Connection: \$245

Early Bird on or Before March 30, 2010: \$195 each

Number of additional connections: _____

- Web Conference Presentations Available on CD:**

CDs are available 2 weeks after the web conference is complete. The cost per CD is US \$295 [add US \$50 for international shipments]. Upon receipt of order and payment the CD will be shipped to you.

NOTE: All presentation CD sales are final and are non-refundable.

ENERGIZE WEEKLY

When you sign up to "Energize Weekly" you will receive a new conference presentation each week via email on a relevant industry topic. The presentations are selected from a massive library of over 1000 current presentations that EUCI has gathered during its 22 years organizing conferences.

- Sign me up for "Energize Weekly"**

How did you hear about this event?
(Direct email, Colleague, Speaker(s), etc.)

Name _____ Job Title _____

E-Mail _____

Company _____ Telephone _____

Address _____ City _____ State _____ Zip _____

PAYMENT METHOD

Please charge my credit card: Visa MC AMEX Discover Security Code _____

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Or enclosed is a check for \$ _____ to cover _____ connections.

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