BOILERS AND BURNERS FORUM

ENVIRONMENTAL CONTROL SYSTEMS, PLANT MANAGEMENT AND OPERATION

BENEFITS OF ATTENDING:
- Learn about new boiler and furnace management approaches through practical case studies and critical discussion
- Understand how to apply IEC61508 and IEC61511 to your plant or project
- Identify opportunities for energy and cost savings
- Learn how to increase reliability and overall safety of your boilers and burners
- Find out how to simulate typical boiler control systems and uncover potential problems in design
- Gain insight into the boiler industry and where it is heading
- Understand how to apply AS3814 standard to your burner management system
- Update your knowledge on best practice
- Network with experienced boiler and burner experts and your peers

WHO SHOULD ATTEND:
- Boiler Plant Operators and Installers
- Boiler Plant Construction Managers
- Process, Control and Automation Engineers
- Plant Engineers
- Operation, Maintenance and Inspection Managers
- Plant Managers and Supervisors
- Chemical Engineers and Technologists
- Mechanical Engineers and Technicians
- Consulting, Project and Design Engineers
- Insurance Company Inspectors
- Government Compliance Officers and Inspectors
- And all other professionals involved in Boiler and Burner Operation or Management

FOR MORE INFORMATION:
Ph 1300 138 522
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14th & 15th March 2012
Rydges on Swanston Melbourne, Australia

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Featuring:
Keynote Speaker
GRAHAM JEFFERSON
Engineering Consultant - Boilers and Burners
(See back page for Key Note Speaker Bio)
PLUS presenters from Germany and Saudi Arabia

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INTRODUCTION TO BOILERS AND BURNERS

This forum aims to be highly practical and will give delegates access to the most up-to-date information about design, installation, commissioning, operation, maintenance, troubleshooting and management of boilers and burners. Using real life examples and case studies, this forum will focus on control systems, applying current standards to your projects and cost and energy saving opportunities. It will also look at the nuts and bolts of boiler design. This forum is designed for engineers and technicians from a wide range of abilities and backgrounds. It will provide a toolkit of take home practical advice, tips and best practice techniques which delegates will be able to immediately apply in their workplace. There has been an increasing focus on meeting the demands on modern day power plants within the confines of environmental restrictions. This forum will seek to provide the knowledge necessary to tackle environment related issues and provide the most up-to-date boiler and burner technologies aimed at ensuring environmental compliance. The essential safety requirements for boilers and burners will also be highlighted and delegates will learn how to comply with these in accordance with the latest standards. This two day forum in Melbourne will showcase a variety of high quality local and international presenters and experts in the field. The presentations will include case studies and examples from a range of industries. The topics covered will allow delegates to have a far stronger ability to troubleshoot and design workable boiler and burner systems. Delegates will gain the confidence to work with and solve their boiler and burner problems simply and efficiently.

FORUM DAY 1 – 14th March 2012

8.00am Registration
8.15am Opening Address
8.20am HALF DAY WORKSHOP
Includes Morning Tea - 10.30am
Modelling, Emulation and Simulation of Boiler Control Systems
Graham Jefferson
Engineering Consultant - Boilers and Burners
This practical workshop is aimed at providing you with the skills to build simple models to simulate typical boiler control systems. You will be able to test “what if” situations and examine the operational and economic impacts of each. We will investigate a number of real-life control applications from various power plants then you will participate in designing, building and testing alternative strategies. A short tutorial on digital PID implementation will be followed by exercises to test and tune typical controllers found in boilers. Modelling and simulation of processes is typically a high-level, theoretical undertaking; however this workshop will be highly practical and will help you uncover potential problems even in the simplest of designs.

Lunch - 12 noon

1.00pm Release Risk Management: Callide Oxyfuel Project
Isaac Ayodeji
Control Systems/Electrical Engineer, Callide Power Station
Flue gas release from conventional power plants is no longer a great risk. Usually the release comes from a height that does not pose significant danger to personnel on ground and the dispersion behaviour of such releases is well understood in the industry. The recent trend toward climate change control has led to revolutionary changes in the industry. One such development is Oxyfuel Technology which involves recirculating the flue gases back to the burner tips. The world's first large-scale demonstration plant for Oxyfuel technology will commence operations at the Callide Power Station, Queensland in 2012. It promises zero emissions when fully deployed. The arrival of unconventional generation technology presents a whole new set of release risks that have to be managed. This paper will give you insight to how these risks are being managed on the Callide Oxyfuel project.

1.45pm The Application of IEC61511 to a Circulating Fluidised Bed Boiler Project
Ian Pennington
Project Technical Manager, CH2M Hill
In this presentation, you will get an introduction to the IEC61508/IEC61511 standards and a refresher on SIL concepts. You will learn about the implications of applying the IEC61508/IEC61511 life cycle to a Circulating Fluidised Bed Boiler (CFB) project. Design issues, project management/program constraints and available data will be covered for this current project. The combustion processes (coal, biomass and diesel start-up) will also be briefly explored to provide background to the SILs applied to the boiler Safety Instrumented Functions (SIFs). A discussion on the combustion related boiler SIFs will give you an insight into the safety issues related to a CFB boiler.

2.30pm Identifying Opportunities for Steam System Water and Energy Savings
Tom Steele
Technical Consultant, Nalco
The rising cost of water and fuel and the impact of a carbon tax is driving the industry to look at ways of saving water and energy throughout the steam system. Improved water management and control technology has created many opportunities for savings including upgraded pre-treatment systems, on-line feed water and blow down control, condensate and blow down heat recovery. We will discuss the contribution of make-up and condensate quality to feed water condition and how this impacts on blow down control and steam system efficiency. You will hear a variety of case studies that will illustrate various savings scenarios.

3.45pm Accurate Control of Gas Pressure to Increase Efficiency and Reliability
David Best
Senior Technical Consultant, Accutherm International
Accurate control of gas pressure at the burner is essential to maintaining burner efficiency, reliable turndown, and burner control system reliability. Correct selection and installation of the gas pressure regulator and over pressure device is critical to ensure optimum burner control. In this presentation, we will look in depth at the design of the gas pressure regulator. You will gain an understanding of the performance limitations presented by the regulator design, the inlet pressure range and burner operational extents. Various installation considerations will also be covered.

Closing - 5.15pm

NETWORKING SESSION
Cocktail Hour - 5.15pm to 6.15pm
An hour dedicated for all attendees to meet and socialise with experts and industry peers at the Forum Cocktail Hour.
### FORUM DAY 2 – 15th March 2012

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<tr>
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<tr>
<td>8.30am</td>
<td>Session 7</td>
<td>Optimisation and Protection of Medium to Large Boilers</td>
<td><strong>Graham Jefferson</strong>, Engineering Consultant - Boilers and Burners</td>
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<tr>
<td>9.30am</td>
<td>Session 8</td>
<td>Wallerawang Unit 7 Combustion Optimisation and Plant Upgrades</td>
<td><strong>Wayne Hill</strong>, Boiler Asset Manager, Delta Electricity</td>
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<td>10.45am</td>
<td>Session 9</td>
<td>Energy Savings in Boiler &amp; Burner Systems</td>
<td><strong>Stefan Schult</strong>, Energy Efficiency Applications, SAACKE GmbH (Germany)</td>
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<td>11.30am</td>
<td>Session 10</td>
<td>Applying Devices to Your Burner Management System to Comply with AS3814</td>
<td><strong>Marc Radojkovic</strong>, Regional Manager (VIC, NSW, SA &amp; TAS), HIMA Australia</td>
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<td>1.15pm</td>
<td>Session 11</td>
<td>Thermal Analysis to Reduce Maintenance</td>
<td><strong>Frank Stefens</strong>, Specialist Support, DURAG Process &amp; Systems Technology (Germany)</td>
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<td>2.00pm</td>
<td>Session 12</td>
<td>Inadequacies in Current Australian Standards and the Future for the Boiler Industry</td>
<td><strong>Brendan O’Brien</strong>, Director, O’Brien Boiler Services</td>
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<td>3.15pm</td>
<td>Session 13</td>
<td>The Practical Application of a Mathematical Model for the Distribution of Heat Flux in an Ethylene Cracking Furnace</td>
<td><strong>Dr Ibrahim K. Rajab</strong>, Department of Mechanical &amp; Manufacturing Engineering Technology, Jubail Industrial College (Saudi Arabia)</td>
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<td>4.00pm</td>
<td>Session 14</td>
<td>Online Acoustic Monitoring of Power Boilers</td>
<td><strong>Selwyn Braver</strong>, Managing Director, Martec Asset Solutions</td>
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**Morning Tea - 10.15am**

**Lunch - 12.15pm**

**Closing - 4.45pm**
Graham has 38 years of experience in management of multi-disciplinary teams in various process control applications in boiler/burner management systems, minerals processing and food. He has also developed and delivered training material for process control systems world wide.

Graham is regarded as one of the foremost leaders in the area of design, implementation and tuning of all aspects of regulatory process control systems. Graham has experience in modelling and simulation of various process control applications such as Evaporator plants, HVAC systems, multiboiler firing sequences and multiple pump station simulation. As a TUV certified Functional Safety Engineer, he has also assisted many companies in the Asia Pacific region with their compliance issues.

**KEYNOTE SPEAKER**

**GRAHAM JEFFERSON** - Engineering Consultant - Boilers and Burners

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**GENERAL INFORMATION**

**Confirmation Details**

An acknowledgement will be sent to delegates within 2 days of receiving the registration. A further confirmation and invoice will be emailed prior to the forum.

**Cancellation Policy**

Full reimbursement will be accepted if written notification of cancellation is received by IDC Technologies on or before 2nd March 2012. A fee of 20% will apply to any cancellations received between 2nd March and 9th March 2012. No cancellation requests can be accepted after 9th March 2012 however substitute delegates are welcome.

**Venue**

Rydges on Swanston
701 Swanston Street
Carlton
VIC 3000
Ph: (03) 9347 7811
**Accommodation**

Accommodation is available at the conference venue. Please contact directly on (03) 9347 7811. Mention the Boilers and Burners Forum to receive a special rate.

For alternative accommodation, contact IDC on 1300 138 522.

**Food and Beverages**

All lunches, morning and afternoon refreshments are included.

**Unable to Attend**

If you are unable to attend the full forum program, contact us for details to attend individual sessions or to purchase the Forum Resource Kit.

**Enquiries**

1300 138 522 or conferences@idc-online.com

**REGISTRATIONS**

We encourage you to register early, as spaces are limited. Your payment must accompany the registration form in order for it to be processed and confirmed.

**By Fax:**

1300 138 533

**By Mail:**

IDC Technologies
PO Box 1093
West Perth
WA 6872

**By E-mail:**

idc@idc-online.com

**On our Website:**

www.idc-online.com

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