## Australasian HRSG Users Group Conference and Workshops

### 4 - 6 December 2012, Brisbane Brisbane Convention & Exhibition Centre



www.ahug.co.nz

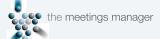
The Australasian HRSG Users Group (AHUG) will conduct its third annual meeting in Australia on 4-6 December.

AHUG 2012 will consist of a number of focused presentations, lots of interactive discussions and two half-day workshops on topics of primary interest to HRSG operators and advances in Next Generation HRSGs. All attendees will be requested to raise specific technical problems with their HRSGs, and then participate while other attendees join in to share their experiences and debate solutions.

There will also be a number of exhibits associated with all aspects of HRSGs.

Who should attend? Anyone involved in the design, construction, operation, cycle chemistry, or maintenance of an HRSG.

Conference Organiser



Phone: +61 2 9810 7322 Fax: +61 2 9810 7320 Email: meetings@tmm.com.au



Australasian HRSG Users Group Conference and Workshops

4 - 6 December 2012 - Brisbane



### Summary Agenda

### AHUG Conference

Venue: Brisbane Convention & Exhibition Centre Corner Glenelg & Merival Streets, South Bank, Brisbane Meeting Rooms M1 & M2

#### Day 1: Tuesday, 4 December

7:15	Registration
8:00 to 17:00	Conference Session
17:30 to 19:30	Networking Drinks

#### Day 2: Wednesday, 5 December

8:00 to 17:00 Conference Session
----------------------------------

### Workshops: Thursday, 6 December

7:15	Registration
8:00 to 12:00	Workshop - Technical and Management
	Aspects of Optimizing the Cycle Chemistry for
	Combined Cycle/HRSG Plants
13:00 to 17:00	Workshop - Next Generation HRSG Design

Important Note: Due to limited workshop seating capacity early registration is recommended.

### Workshop - Technical and Management Aspects of Optimizing the Cycle Chemistry for Combined Cycle/HRSG Plants

The cycle chemistry of combined cycle/HRSG plants is one of the most important aspects which controls over 70% of the damage that occurs in these plants worldwide. All the technical and management aspects of operating with a world class program will be covered and include guideline development (using IAPWS guidance) for operation and shutdown, avoidance of damage mechanisms, instrumentation, and management processes.

### Workshop - Next Generation HRSG Design

Review of the advanced performance anticipated from the next generation of HRSGs; summary of features required to achieve faster startup, higher efficiency and adequate component life while two-shifting.

#### Call for AHUG Conference Papers

There are still a few open spots on the agenda for the presentation of short brief case studies (5-10 minutes) presented by Owners/Operators describing actual plant issues. If you have experienced a significant plant issue or interesting feature that you think others would benefit from knowing about, please send a suggestion.

Submissions for these short presentations should be sent to bdooley@structint.com

### **Conference Committee**

AHUG 2012 is chaired by Barry Dooley, Structural Integrity Associates with the assistance of a Steering Committee consisting of:

- » Bob Anderson, Competitive Power Resources
- » John Blake, Stanwell Corporation
- » Mark Utley, Contact Energy
- » Lester Stanley, HRST
- » David Addison, Thermal Chemistry
- » Des McInnes, Stanwell Corporation

Australasian HRSG Users Group Conference and Workshops

4 - 6 December 2012 - Brisbane

### Conference Agenda: Tuesday 4th & Wednesday 5th December Mezzanine Level, Rooms M1 & M2

Registration - Arrival Tea & Coffee	
7:15Registration - Arrival lea & Coffee8:00Opening comments	
Open floor discussion	
Morning tea	
Case Study : Creep fatigue life assessment of repaired main steam stop valve. Charles Thomas,Quest Integrity Group and John Broad, Genesis Energy	
Updates by attendees Presentation A: Improving sampling techniques to optimise HRSG FAC Management John Blake and Scott Drysdale Stanwell Corporation Presentation B: Chemistry at Darling Downs Power	
Station - After commissioning Aletta Botha, Origin Energy	
Project Specification/EPC Contract considerations Ashley Grohn, Aurecon	
Open floor discussion	
Working Lunch within Exhibition	
Optimising HRSG shutdown and startup Bob Anderson, Competitive Power Resources	
Establishment HRSG component lifetime and ramp rates Ian Perrin, Structural Integrity Associates	
Discussion on HRSG startup, shutdown and life assessment	
Updates by attendees Presentation C: Superheater Thermocouple Installation and Results at Swanbank John Blake, Stanwell Corporation	
Afternoon tea	
How to make timely, well-informed decisions in outages based on inspection findings Anita Zunker, Pressure Equipment Integrity Ltd.	
Updates by attendees Presentation D: P91 main steam elbow replacement at Swanbank John Blake, Stanwell Corporation Presentation E: Wet Layups at Contact Energy's Otahuhu Plant Morris Young, Contact Energy	
Open floor discussion	

5:00 - 7:00 Networking drinks within Exhibits- pre-function area		
Wednes	day: Conference	
7:30	Registration - Arrival Tea & Coffee	
8:00	Open floor discussion	
9:30	Morning tea	
10:00	HRSG steam drums - Important functions and reliability aspects Lester Stanley, HRST Incorporated	
10:30	Drum level instrumentation and the latest ASME code requirements Jim Kolbus, Clark-Reliance Corporation	
11:00	Updates by attendees Presentation F: What do power plants look like John Roberts, Sinclair Knight Merz Presentation G: Currently open	
11.30	Open floor discussion	
12:00	Working Lunch within Exhibition	
1:00	Advanced pipe/tube materials and the ASME Code Jeff Henry, Structural Integrity Associates	
1:45	Updates by attendees Presentation H: Optimal and effective sampling and analysis methods for Iron David Addison, Thermal Chemistry Limited	
	Presentation I: HRSG cost effective performance assessment	
2.20	Lester Stanley, HRST Incorporated	
2.30 3:00	Open floor discussion Afternoon tea	
3:30	Innovation solutions to design issue over the last 25 years John Roberts, Sinclair Knight Merz	
4:00	Updates by attendees	
	Update on Contact Energy's Te Rapa Plant Morris Young, Contact Energy	
	The latest on steam side oxides on T23 Alloys Barry Dooley, Structural Integrity	
5:00	Day 2 concludes	



Australasian HRSG Users Group Conference and Workshops



4 - 6 December 2012 - Brisbane

### Workshop Agenda: Thursday 6th December Mezzanine Level, Rooms M1 & M2

Thursday: W	/orkshops	
7:15 am	Registration and Arrival tea & coffee	
Workshop Technical and	Management Aspects of Optimising the Cycle Chemistry for Combined Cycle/HRSG Plants	
damage program of damag	chemistry of combined cycle/HRSG plants is one of the most important aspects which controls over 70% of the that occurs in these plants worldwide. All the technical and management aspects of operating with a world class will be covered and include guideline development (using IAPWS guidance) for operation and shutdown, avoidance ge mechanisms, instrumentation, and management processes. ducted by: <b>Barry Dooley, Gary Joy, Dave Swainsbury, Des McInnes and David Addison</b>	
8:00 am	Introduction: Barry Dooley and Dave Swainsbury           » Cycle chemistry control depends on a management approach which involves total integration of all plant staff (operations, maintenance, technical and chemists) and the identification of repeat situations to control future damage and failure.	
8.10 am	Chemically influenced combined cycle/HRSG damage leads to optimum treatment <ul> <li>Identification of the most common damage mechanisms worldwide provide the direction of the plant staff</li> <li>and chemists. Comprehensive cycyle chemistry programs need to address the key features of FAC, Deposits,</li> <li>UDC, Pitting and PTZ problems. Each will be briefly discussed and provide the bases of why the topics in the other workshop sections are needed and why plants can't afford to allow repeat situations to continue.</li> <li>Barry Dooley</li> </ul>	
9.15 am	<ul> <li>Road map application of IAPWS technical guidance documents</li> <li>The IAPWS technical guidance documents have been designed to address these key HRSG problems. Each TGD contains a road map approach of how the base conditions should be customised to a particular combined cycle plant. Gary Joy</li> </ul>	
9:45 am	Morning Tea	
10:15 am	Monitoring total iron in combined cycle plants         » Measuring total iron is the key indicator of whether the damage mechanisms are likely to occur. But monitoring total iron properly is one of the major deficiencies in combined cycle/HRSG plants worldwide. The optimum processes and accuracies of each will be covered. To include good practices from fossil plants. Des McInnes	
10.45 am	Fundamental level of instrumentation. Philosophy and usage.         » The second largest deficiency in combined cycle/HRSG plants is that the instrumentation doesn't match the IAPWS International Standard. The key control parameters will be discussed and the appropriate management approach highlighted. Dave Swainsbury	
11.15 am	<ul> <li>Shutdown and layup protection for flexible return to service</li> <li>» Combined cycle plants most often shutdown without optimum protection. The market today demands flexibility on the return to service capability. The key aspects will be discussed and include the attributes of wet and dry shutdown, short and long term, and the dependence on the return to service. David Addison</li> </ul>	
11.45 am	Management aspects of cycle chemistry control. Repeat situations.         »       It is most clear from plant assessments worldwide that allowing more than 3 repeat situations to exist will ultimate lead to failure/damage. The latest data from over 50 plant assessment will be presented to paint a consistent picture. A couple of examples will be provided. Barry Dooley and Dave Swainsbury	
12:00	Working lunch in Exhibition	



Australasian HRSG Users Group Conference and Workshops



4 - 6 December 2012 - Brisbane

### Workshop Agenda: Thursday 6th December Mezzanine Level, Rooms M1 & M2

### Workshop: Next Generation HRSG Design

Review of the advanced performance anticipated from the next generation of HRSGs; summary of features required to achieve faster startup, higher efficiency and adequate component life while two-shifting.

To be conducted by:

HRSG manufacturers including Alstom, NEM and Nooter-Eriksen.

1:00 pm	Introduction (Ian Perrin, Structural Integrity Associates, Inc.) » Overview of the challenges of next generation combined cycle plant and overall impacts on HRSG design.
1.15 pm	<ul> <li>Next generation gas turbines and their influence on HRSG design (Glenn Selby, Alstom Power Inc.)</li> <li>An overview of the features of next generation gas turbines and overall combined cycle plants, with specific discussion of trade-off between drum and once-through designs, designing in operational flexibility and the scalability of the single-row harp concepts for HRSG construction.</li> </ul>
2.00 pm	Next generation HRSGs (Raymond Gunnewijk, NEM) » The implications associated with HRSG design due to larger gas turbines will be discussed. The effect of higher gas turbine exhaust temperatures will be addressed to explain the need for stainless steel tubing and associated challenges. The need for configurable design will be discussed to explain how the HRSG can be adapted for different steam conditions, supplementary firing and even integration with hybrid solar systems.
2:45 pm	Afternoon Tea
2:45 pm 3.15 pm	Afternoon Tea         HRSGs - Today and tomorrow (Joe Schroeder, Nooter-Eriksen)         » Some examples of large HRSGs will be presented to explain the evolution of HRSG design over the last few years. The trend to larger HRSGs, operating at higher temperatures, requires more careful design to address fast start, cycling and overall reliability. In addition, erectibility must be considered in modularisation of the design
	<ul> <li>HRSGs - Today and tomorrow (Joe Schroeder, Nooter-Eriksen)</li> <li>» Some examples of large HRSGs will be presented to explain the evolution of HRSG design over the last few years. The trend to larger HRSGs, operating at higher temperatures, requires more careful design to address fast start, cycling and overall reliability. In addition, erectibility must be considered in</li> </ul>

TITLE.

Australasian HRSG Users Group Conference and Workshops 4 - 6 December 2012

### **Registration Form**

### Register online at: www.tmm.com.au

or complete the form & fax to The Meetings Manager Fax: +61 2 9810 7320 or scan & email to meetings@tmm.com.au



FIRST NAME:	LAST NAME		
POSITION:			
ORGANISATION:			
ADDRESS:			
CITY:	STATE:	POST CODE:	
TELEPHONE: ( )	EMAIL:		

Regi	tration: (all prices are in Australian dollars and include 10% GST)	FULL REGISTRATION
	AHUG Conference plus Workshops (4, 5, & 6 December) Fee includes: refreshments and lunches on Tuesday, Wednesday and Thursday, and Networking Drinks on Tuesday evening.	\$1190.00
	AHUG Conference Only (4 & 5 December) Fee includes: refreshments and lunches on Tuesday and Wednesday, and Networking Drinks on Tuesday evening.	\$1080.00
	Workshops Only (6 December)           Fee includes: entry to both workshops (Thursday), refreshments and lunch.	\$750.00

#### Accommodation - Rydges Hotel South Bank, 9 Glenelg Street, Brisbane, +61 7 3364 0800

Rooms are now subject to availability as our original room block has been exhausted. There are still a few room available at the Rydges Hotel South Bank @ AUD\$289.00 room only or AUD\$314.00 room + breakfast for one. <u>Please provide your credit card details to guarantee your booking</u>. These details will be sent to the hotel and you will be responsible for settling your account directly with the hotel on your departure. **Hotel cancellation policy: Cancellations made within 14 days of your arrival date will incur the cost of all nights booked.** My booking - Standard queen room \$ 249.00 Standard queen room + breakfast for one \$274.00 Please reserve for the following dates Arriving / Departing /

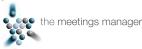
Please forward my below credit card details to the hotel to secure my booking

Payment Details	
Please charge the following credit card: Mastercard	Visa Amex Diners
A cheque payable to The Meetings Manager Pty Ltd is enclosed	Direct debit: Please invoice me with your EFT details
Card number	
Expiry date / CCV No.	Total Paid \$
Signature	Cardholders name

Cancellations: If you are unable to attend, a substitute delegate is welcome at no extra charge. Where no substitute is available, a fee of \$165 will be deducted from your registration fee for cancellations received by The Meetings Manager in writing at least 28 days prior to the event. Thereafter no refunds will be made.

Our Privacy Policy: By registering for this conference, relevant details will be held on a database by AHUG and The Meetings Manager. An attendee list will be provided to all participants (name, position and organisation only). If you do not wish your information to be used in this manner, please advise The Meetings Manager.

Conference Organiser:



The Meetings Manager Pty Ltd Suite 16/7 Rosebery Place Balmain NSW 2041 Phone: +61 2 9810 7322 Fax: +61 2 9810 7320 Email: meetings@tmm.com.au Website: www.tmm.com.au