

*International Conference on*

**Maintenance & Overhaul  
Management  
in Power Generation**

**2 – 3 October 2003**

*Preceded by Optional*

***Training Workshop on***

**RISK BASED MAINTENANCE**

**1<sup>st</sup> October 2003**

- Historical Aspects of Risk
- Review of Risk Based Approaches
- Introduction to Risk Based Maintenance in Power Plant
- Risk Based Outage Task Prioritisation
- Examples Based Risk Workshop
- Practical Case Study

***PROGRAMME & REGISTRATION FORM***

**Venue:** Institution of Mechanical Engineers, Central London, UK

**Organised By**



**European Technology Development, UK**

## Conference: Maintenance & Overhaul Management ( 2 - 3 October 2003 )

### [Overview of the Conference](#)

The past ten years or so has seen extensive changes occurring in the power generation industry. Deregulation, competition, environmental pressures have all had a major impact on the way the industry conducts its business. The current focus on profitability has yielded significant changes to maintenance practices including how overhaul content is determined and to how the work is scheduled and carried out. These changes have been occurring across the world albeit at different rates and to different degrees.

The objective of this International Conference is to allow exchange of experience between different regions of the world on the impact that these industry changes have had on maintenance methods and practices and on developments in how the work is scheduled and managed. It will provide a stage for highlighting the latest trends as well as revealing how long term problem areas are assessed and dealt with by different organisations.

"Best practice" is a somewhat over used term, nevertheless it is expected that via this platform for interaction and debate on different approaches consensus may be reached on those that may offer the most benefit.



## Training Workshop: Risk Based Maintenance ( 1<sup>st</sup> October 2003 )

### [About the RBM Training Workshop](#)

In response to the recent high level of interest being shown by operators the Conference will be preceded by a one-day optional Training Workshop on Risk Based Maintenance. The aim of the workshop is to provide grounding in the basic concept of risk and highlight the use of risk as a basis for organising maintenance activities in Power Generation and particularly as a means of identifying value added outage activities during the outage planning process. It will also provide general background on how the risk informed approach has evolved and overview the current status of this approach in different industries. It will include *case studies* and *worked examples* and will allow for interactive discussions and exchange of experiences on the topic in an informal but focussed environment. To ensure the optimum interactive environment the **number of attendees will be limited**, so **early booking is advised**.

# Programme: RBM Training Workshop (Optional)

Wednesday, 1<sup>st</sup> October, 2003

<b>Registration and Coffee</b>	<i>(09.00 – 09.30)</i>
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**Development of the Risk Concept** *(09.30–10.00)*

Dr. N. Le Mat-Hamata

This will provide a useful background on the development of risk as a concept and how it has evolved in the Petrochem and nuclear industries and why it is now appearing in the fossil fuel area.

**Measuring Risk – Options** *(10.00– 10.30)*

Alan Bissell

Review of options and the principal parameters and how they can be used

**The Practice of RBM - Structured Approaches** *(10.30 – 11.00)*

Dr. N. Le Mat-Hamata

Critical overview of API approach and ASME Guidelines

*Coffee* *(11.00– 11.30)*

**Introduction to Risk Based Maintenance in Power Generation** *(11.30 – 12.00)*

Alan Bissell

This provides a review of main techniques and approaches currently used to assess risk in fossil power plant

**Interactive workshop around a Case study** *(12.00– 12.45)*

An example situation will be used as the basis of the workshop and the options for using a Risk-Based Approach examined and compared with traditional responses

*Lunch* *(12.45 – 14.00)*

**RBM within an Optimised Maintenance Program** *(14.00 – 14.45)*

Jack McElroy, EPRI Solutions

This will describe the current “state of the art” in maintenance optimisation and will highlight how a risk based approach fits within an Optimised Maintenance Framework

**Risk Based Outage Task Prioritisation** *(14.45 – 15.30)*

Jack McElroy, EPRI Solutions

A method for prioritising outage tasks by determining the value of activities in terms of risk moderation and cost.

*Coffee* *(15.30 – 16.00)*

**Outage Task Prioritisation Case Study** *(16.00 – 16.30)*

Jack McElroy, EPRI Solutions

Presentation of results from a risk based outage task evaluation project

**Discussion on Case Study and Open Forum** *(16.30 - 17.30)*

# Maintenance & Overhaul Management

## *Two- Day International Conference*

### *Programme*

Thursday, 2<sup>nd</sup> October 2003

<b>REGISTRATION and COFFEE</b>	<b>(08.45 – 09.25)</b>
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#### **Introduction and Welcome**

Ahmed Shibli,  
European Technology Development Ltd., UK (09.25 – 09.30)

#### **SESSION 1: MAINTENANCE AND OVERHAUL PLANNING AND EXECUTION** (09.30 – 12.30)

**ESB Experience with Best Practice Outage Management** (09.30 – 10.00)  
Felim Keegan,  
Electricity Supply Board, **Ireland**

**The Role of the Work Management Process in  
Improving Maintenance** (10.00 – 10.30)  
Larry Kastner and David Bair,  
Reliability Management Group, **USA**

**Sopty Overhaul Optimisation** (10.30 – 11.00)  
Mikko Pakarinen and Sanna Tiainen-Erkkilä,  
Fortum Services, **Finland**

*Coffee* (11.00 – 11.30)

**Title to be Confirmed** (11.30 – 12.00)

**Managing HRSG Inspection and Repair Works Effectively** (12.00 – 12.30)  
Sharip Rahimi,  
Lumet Power Plant, **Malaysia**

*Lunch* (12.30 – 14.00)

# Maintenance & Overhaul Management Conference

**Thursday, 2<sup>nd</sup> October 2003** (Continued)

## **SESSION 2: MANAGING RELIABILITY AND RISK** (14.00 – 17.30)

**Economic Analysis of Boiler Tube Failures in New South Wales** (14.00 – 14.30)  
Bob Small, Connell Wagner PPI, Australia

**Plant Reliability Risk Management** (14.30 – 15.00)  
Jack McElroy, EPRI Solutions, USA

**Factors influencing the performance and reliability of Tubular Boiler Components** (15.00 – 15.30)  
Pertti Auerkari, VTT Technical Research Centre, Finland

*Coffee* (15.30 – 16.00)

**An Integrated Approach of Risk Based Maintenance for Steam Turbine Components** (16.00 – 16.30)

Kazunari Fujiyama<sup>1</sup>, Takahiro KUBO<sup>1</sup>, Yasunari Akikuni<sup>2</sup>, Toshihiro Fujiwara<sup>2</sup>, Hirotsugu Kodama<sup>2</sup>, Hitoshi Kichise<sup>2</sup>, Mitsuyoshi Okazaki<sup>2</sup> and Taro Kawabata<sup>3</sup>

1. Power and Industrial Systems R&D Center, Industrial and Power Systems & Services Company,

2. Thermal and Hydro Power Division, Industrial and Power Systems & Services Company,

3. Keihin Product Operations, Industrial and Power Systems & Services Company,

All Toshiba Corporation, Yokohama, **Japan**

**Size Distribution of Missed Defects from Considering Inspection Results and Probability of Inspection** (16.30 – 17.00)  
Wangwen Zhao, Amey VECTRA Limited, UK

**Panel Discussion** (17.00 – 17.30)

**Conference Dinner**

**20.00 hrs**



# Maintenance & Overhaul Management Conference

Friday, 3<sup>rd</sup> October 2003

**SESSION 3: THE INFLUENCE OF OPERATIONAL ASPECTS** (09.30-12.30)

**Duke Energy North America Moss Landing Power Plant Units  
6 & 7 Reliability Upgrades and the Cost of Cycling Analysis** (09.30 –10.00)  
Steven A. Lefton<sup>1</sup> and Ken D. Speer<sup>2</sup>,  
1. Aptech Engineering Services In. 2. Duke Power, California, USA

**A Top-Down Approach to Assessing the Maintenance  
Costs Associated with Cycling Plant** (10.00—10.30)  
Marie Corio, Applied Economic Research Inc., USA

**Effect of Plant Cycling on Maintenance** (10.30– 11.00)  
Fred Starr, European Technology Development Ltd., UK

*Coffee* (11.00 – 11.30)

**Measuring Operational Risk and methods for Hedging  
in the Current Competitive Environment** (11.30 – 12.00)  
Marie Corio & Jacob Lentsman, Applied Economic Research Inc, USA

**The Effect of Fuel Policy on Planning** (12.00 – 12.30)  
Edric Leong Suarn Kie,  
Senoko Power, Singapore

*Lunch* (12.30 –14.00)

# Maintenance & Overhaul Management Conference

**Friday, 3<sup>rd</sup> October 2003** (continued)

## **SESSION 4: MAINTENANCE AND PLANT LIFE MANAGEMENT SUPPORT** (14.00 - 17.30)

### **MHI's Activity for Life Management of Aged Power Boilers** (14.00 – 14.30)

H. Matsumoto<sup>1</sup>, N. Nishimura<sup>1</sup>, K. Iwamoto<sup>1</sup>, K. Tominaga<sup>2</sup>

1. Mitsubishi Heavy Industries Ltd., Nagasaki Research and Development Centre, Nagasaki,
2. Mitsubishi Heavy Industries Ltd., Nagasaki Shipyard and Machinery Works, Nagasaki, **Japan**

### **Fifteen Years of Experience With Contracted Life Management in Alcan Aluminium, Lynemouth Power Station** (14.30 – 15.00)

Toby Lant<sup>1</sup>, John Matthews,<sup>2</sup> Vaun Campbell,<sup>2</sup> Phil Richardson<sup>2</sup>

1. ERA Technology Ltd., **UK**.
2. Alcan Aluminium, Lynemouth Power Station. **UK**

### **ELOP System of Plant Management** (15.00 – 15.30)

Steven A. Lefton, Aptech Engineering Services Inc., **USA**

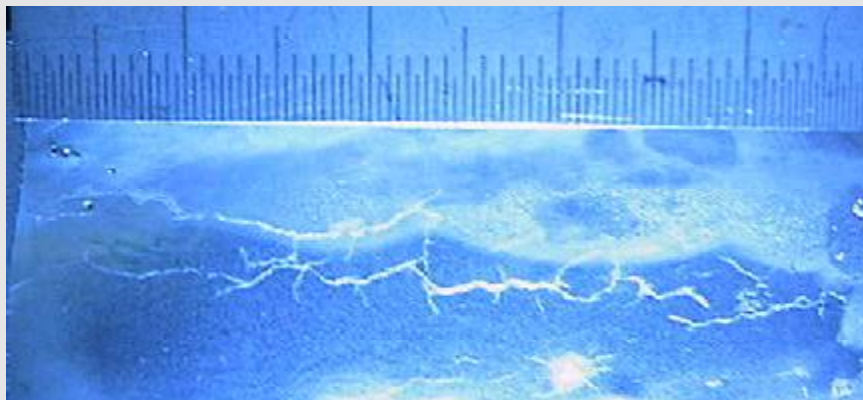
### *Coffee* (15.30– 16.00)

### **Software for Maintenance Management** (16.00 – 16.30)

Andy Brightmore<sup>1</sup> Neal Chapman<sup>2</sup>, Mike Bernasek<sup>3</sup>

1. TWI Ltd, Cambridge, **UK**,
2. Entergy, James A Fitzpatrick Power Plant, Oswego, NY **USA**,
3. C-spec, Pleasant Hill, CA, **USA**

## **Discussion and Closing Remarks** (16.30 – 17.15)



# REGISTRATION FORM (MOM Conference + Workshop)

(1<sup>st</sup> – 3<sup>rd</sup> October 2003)

Information required for the delegate badge

Title & Name:	Company	
Address:	Position	
	Phone	
	Fax	
	e-mail	

## Registration Fee

Please put x in the relevant box below (Note: All costs shown are in pounds sterling).

<input type="checkbox"/>	I would like to attend the 2 day <b>MOM Conference</b>	Fee	<b>£700</b>	+ VAT @ 17.5%	=	<b>£822.50 **</b>
<input type="checkbox"/>	I would like to attend the 1 day RBM Training <b>Workshop</b>	Fee	<b>£350</b>	+ VAT @ 17.5%	=	<b>£411.25 **</b>
<input type="checkbox"/>	I would like to attend <b>Conference and Training Workshop</b>	Fee	<b>£950</b>	+ VAT @ 17.5%	=	<b>£1116.25 **</b>
<input type="checkbox"/>	Conference attendance for <b>authors</b>	Fee	<b>£600</b>	+ VAT @ 17.5%	=	<b>£705.00 **</b>

**\*\* Total Fee Payable. For the events held in the UK, the Value Added Tax (VAT) is payable by ALL delegates, including those from overseas.**

**All Registrations after 10 September will be subject to an additional 15% late registration charge.**

## Payment

Please state how you paid / intend to pay the Registration Fee: .....

<b>By UK bank cheque, bankers draft, bank to bank transfer to:</b>			
European Technology Development Ltd. (Ref: MOM Conference)			
Nat West Bank, A/C No: 26096625, Sort Code: 60-12-36, UK			
<b>By Credit Card:</b> Major cards such as Visa / Master Card / JCB / Switch are accepted with the exceptions of American Express and Dinners Club. (Please send this information by fax / post)			
Name of Account Holder			
Card Type and Number		Expiry Date	
Authorisation signature			

**Please complete this Form and send to ETD by e mail / fax or post:**

POST	Alan Bissell, ETD Ltd. 2 Warwick Gardens, Ashtead, Surrey KT21 2HR, UK		
FAX	+ 44 1372 229 164	Tel. Enquiries	+353 1 287 8290 or +44 1372 802 555
E-mail	<a href="mailto:Registration-om@etd1.co.uk">Registration-om@etd1.co.uk</a>		

*Details of Venue and Hotels in the vicinity will be supplied when confirming your Registration.*