

PRESENTING THE 18TH ANNUAL

# Australian Gas Turbines Conference

29 – 30 November 2017 | Bayview Eden Melbourne



## CONFERENCE DAY ONE Wednesday 29th November 2017

**8:30 Registration and Morning Coffee**

**9:00 OPENING | Opening remarks from the Chair**

Dr. Maxine Watson, *Partner*, **MorrisWatson**

**9:10 Speed networking** - Get to know your peers right from the start with this informal speed networking session.

**9:20 What you need to know about the new filter classification ISO 16890**

- From Mid 2018 ISO 16890 replaces EN779 and ASHRE Norm
- Understand ISO 16890, how it works and what advantages it has
- Learn how the old norms translate into the new one
- How to change your specifications to the new ISO 16890 when tendering for filters

Michael Mueller, *Managing Director*, **Freudenberg Filtration Technologies**

**10:10 Synergy LMS100's, 5 Years On**

- From commissioning to present day
- Performance and component life
- Approaching the first Major Interval

Matthew Weston, *Technical Mechanical Officer, Generation Business Unit*, **Electricity Generation and Retail Corporation trading as Synergy**

**10:50 Refreshment break**

**11:20 CASE STUDY BY VIDEO LINK | Mark V Communication Interface Overload - Loss of Lube Oil Event**

- Mark V controller, released in 1991 and has accumulated well over 200 million operating hours in a variety of applications with a good record for safety and reliability.
- Earlier this year a unit suffered damage to its bearings after a loss of lube oil at high load so what went wrong?
- This case study examines in detail how voting and other processor functions were compromised. Including signals recorded to have changed state simultaneously, indicating that operator action was unlikely

Abel Rochwarger, *Chief Engineer*, **Gas Turbine Controls Corporation**

**12:00 When Things Go Bang: Seven Steps to Managing a Successful Insurance Recovery**

- What does your policy cover? Machinery breakdown and business interruption cover explained
- What does your policy exclude? The trips and traps of the exclusion clauses
- What caused the breakdown? The importance of the expert engineer and the root cause analysis
- Repair or Replace? A critical decision at a critical time.
- Friend or Foe? The role of the broker and the loss adjuster
- How is the claim quantified? The need for independent analysis and advice
- Negotiation or Litigation? The quickest route to getting the cheque

Justyn Jagger, *Partner*, **Morgan Lewis Stamford LLC**

**12:40 Lunch**

### 13:50 **CASE STUDY | GT 26 Gas Turbine Life Extension**

- Predicting significant life extension for hot gas path components in an Alstom GT 26 gas turbine.
- Understanding of gas turbine design, analysis and material damage kinetics.
- Justification for extending inspection intervals using a more comprehensive creep damage tool to enhance the OEMs standard 'Equivalent Operating Hour' degradation model.

Dr Kieran Chalk, *Senior Consultant*, **Frazer-Nash Consultancy Ltd**

### 14:30 **CASE STUDY | Origin Energy Gas Turbine Fleet**

- Introduction & overview of the Origin Fleet;
- Overview of our operational statistics for the last couple of years;
- Engineering case studies: -
  - o Condition based outage extension of Siemens E Class turbines;
  - o Rotor-in-Major inspections of PG9001E gas turbines;
  - o No barring starts for PG9001E gas turbine

Richard Elmes, *Lead Turbine Engineer*, **Origin Energy**

### 15:10 **'RAPID SOLUTIONS' For GE Frame Users**

- Site specific requirements to reduce turbine life cycle maintenance costs for GE Frame End Users and improve performance, availability, reliability and efficiency.
- Real time access to MJB's substantial inventory of gas turbine rotors, capital parts and accessories available for immediate purchase or exchange.
- The concepts, options are presented in a Case Study outlining benefits to end users

Nathan Griffiths, *Sales Manager*, **MJB International**

### 15:50 **Refreshment break**

### 16:20 **Maximise GT reliability with oil filtration and flushing**

*The presentation will also cover oil spills: how we avoid them and measures customers can implement*

James McAllister, *Company Director*, **BioKem Oil Services**

Wayne Buckland, *Sales and Marketing*, **CTG Lubrication Services & Food Grade Oils**

### 16:50 **Top Ten Turbine Troubles**

- Case studies from Quest Integrity's archives of bits falling off (or into) gas turbines.
- Real life examples of damage mechanisms experienced by normal everyday turbine owners and operators.
- What happened, why did it happen, and how was it fixed?

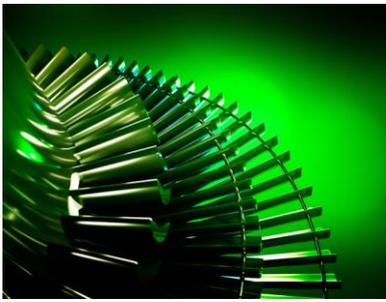
Dr Matt Smillie, *Consultant Engineer*, **Quest Integrity Group**

### 5.30 **Q&A Session**

### **CLOSING | Closing remarks from the Chair**

### 5.45 **Networking drinks in the exhibition space**

### 7.00 **Official Conference Dinner**



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## CONFERENCE DAY TWO Thursday 30th November 2017

**8:30 Morning coffee**

**9:00 OPENING | Opening remarks from the Chair**

Dr Maxine Watson, *Partner, MorrisWatson*

**9:10 INTERNATIONAL PRESENTATION BY VIDEO LINK | The First LM6000s In the Philippines**

- Knowing your plant ... Avion staffing structure .... Strategy
- Ensuring "Quality" and "Fit for purpose" of equipment
- Default LM6000 Installation V Avion specific fine tuning
- Ongoing support (MSA with MTU)
- Avion Trading and Marketing overview

James Conrad Abarquez, *Maintenance Planner & Scheduler*, & John Chester Kim Brucal, *Performance Engineer, First Gen Philippines*

**9:50 Data driven condition based maintenance to enable extension of service intervals for GE LM gas turbines**

- Introduction
- Effective decision making in Gas Turbine Operation & Maintenance
- Time based maintenance vs. condition based maintenance
- Benefits of condition based maintenance
- Concerns around condition based maintenance
- How to overcome these concerns to enjoy the benefits?
- Data driven predictive health monitoring
- From raw data to automated analysis to professional interpretation
- Professional feedback in the form of practical O&M recommendations & dashboards
- Recommendations & dashboards enable effective decision making in GT O&M
- Two case studies about successful service interval extensions on GE LM2500 engines
- Summary

Jeroen van Veldhuizen, *CEO & Co-founder, VBR Turbine Partners*

**10:20 Presentation by MTU**

- Extended running hours LM2500 & 6000
- Cost reduction opportunities Engine repair vs Engine MOH
- Service Bulletin review
- Depot Highlights 2016
- LPT Logistics

Sebastian Moerl, *Maintenance Services, MTU Australia*

**10:40 Refreshment break**

**11:10 Session to be advised**

#### 11:50 **New Approach to Turbine Combustor Flame Sensors**

- Overcoming current Issues for Flame Detection
- Direct connection to Turbine Control
- Case Study: Field Testing Results
- What this means for achieving low NOX emissions

John Devine, *General Manager*, **Fireye Inc.**

#### 12:20 **Technical showcase presentation**

Outsourcing product specific process to specialist partners; using Predictive Asset Management and Modular Maintenance to reduce downtime

- Determining when to replace your assets
- How modular maintenance affects your downtime
- Why is outsourcing the future?
- Monitoring and prioritising your spare parts

Matthijs Koreman, *Gas Turbine Sales and Marketing Manager*, **PM Control Australia**

#### 12.40 **Lunch**

#### 13:40 **Technical Showcase Presentation: Best Practices for Gas Turbine Compressor and Centrifugal Compressor Cleaning**

One of the major deterioration challenges affecting the performance of gas turbine axial compressors and process centrifugal compressors is fouling. The accumulation and adhesion of dirt on the internal compressor surfaces contribute between 70 to 85% of gas turbine performance loss. In the case of process centrifugal compressors operating in gas field operations, hydrocarbon and chemical processing industry a 15 to 30% drop in capacity not uncommon.

A strategy to mitigate these losses and restore all or part of the performance degradation is often based around compressor washing process.

The presentation sets out current best practice for compressor cleaning techniques based on field data and experience on a variety of the machinery across a wide range of operating environments.

Online cleaning techniques for both gas turbines and process centrifugal compressors are discussed in detail and provide a clear insight to obtain the best results. Offline washing of gas turbines is considered an essential maintenance activity, we discuss the various techniques to get the most from offline compressor cleaning.

Martin Howarth, *Managing Director*, **Rochem Technical Services Ltd**

#### 14:20 **Presentation details to be announced**

Visit [www.informa.com.au/gasturbines2017](http://www.informa.com.au/gasturbines2017) for latest updates

#### 14:50 **Risk Based Assessment for Management of Open Cycle Gas Turbine Packages**

Risk based assessment is a powerful tool in asset management. In conjunction with other inspection and assessment techniques it can provide robust guidance as to the critical items in the operations and maintenance of gas turbines and associated balance of plant. This presentation includes real-life example of risk-based approach used to assess:

- Aeroderivative turbine packages used in power generation.
- Heavy industrial gas turbines critical spares review.
- Outage planning and deferral evaluation

Dr Matt Smillie, *Senior Consultant*, Rob Dudley, *Consultant Engineer*, Olivia Chung, *Consultant Engineer*, **Quest Integrity Group**

#### 15:20 **Q&A Session**

#### 15:40 **CLOSING | Closing remarks from the Chair and afternoon refreshments**