



**Interesting Information List**

**Previous CM & Lube Newsletters**  
December 2007 ► [View](#)  
April 2008 ► [View](#)

**Registration for 2008 CM & Lube Forum in Melbourne Oct 28 & 29 is now open**  
► [Details/Cost](#) ► [Agenda](#)  
► [Pre & Post Workshops](#)  
► [Online Registration](#)

**Information from Brendan Casey's Hydraulic Newsletter**  
► [Noise in Hydraulic Systems](#)  
► [Hydraulic System Contamination \(Solids, Water and Air\)](#)

**An interesting V Belt Tension Tester using sound waves instead of force deflection - \$800US**  
► [View](#)

**An interesting Oil Drum Handling & Dispensing System for 205L Drums**  
► [View](#)

**Rolling Element Bearing Lubrication article – FAG**  
► [View](#)

**More low cost Thermal Imaging Cameras- FLIR i5 \$4,450+GST ► [View](#)**  
IPI Ti20 \$6,000 ► [View](#)

**Snell Group Thermal Imaging Newsletter**

**Effective Use of the Patch Test for Simple On-site Analysis**

Article by - Mervin H. Jones, Swansea Tribology Services Ltd. U.K.



The very best oil analysis programs incorporate some degree of on-site analysis. For most plants, mills and mines, particle monitoring is the most productive on-site oil analysis activity available. Studies show that particle contamination is responsible for up to 80 percent of lubrication-related machinery failures. Hard particles can enter the system through seals, breathers, new oil changes and top-offs. They can also be generated within the system from component wear. These particles can abrade, fatigue and erode component surfaces - robbing it of precious life.

Because particles cause so many problems, they should be monitored regularly and controlled by filtering the oil or changing as required. Because, particles are generated when a machine fails, monitoring for increased generation of wear debris alerts the technician of an impending failure. The simple patch test enables the technician to quickly identify abnormal levels of contamination and wear debris so that corrective actions can be scheduled accordingly. [Click on this Link to see the full article](#)

**Ed – The Patch Test is becoming the technicians first pass oil test of choice for fixed plant.**

**Toys for the Boys** (Ray Beebe's comment - They'll be in Weeties packets next!)

I have been a regular purchaser of tools and instruments on EBay and other web sites and so far have rarely been disappointed. Check out these EBay bargains. Prices include postage.

- [DIGITAL VIBRATION METER](#) (Ed Specs look good) - \$290
- [Air Speed Flow Meter Thermo Anemometer](#) - \$84
- [Digital Hardness Tester for Rubber](#) (eg for conveyor belts) - \$230
- [Digital Ultrasonic Thickness Meter 1.5 - 200mm](#) - \$185
- [Digital Ultrasonic Thickness Meter 1.0 - 200mm](#) - \$240
- [Digital Ultrasonic Coating Thickness Meter for Paint](#) - \$130
- [Digital Sound Level Meter +CD Software USB](#) - \$130
- [Concrete Testing Hammer ETC-225](#) - \$330
- [Portable Handheld Digital Viscometer Meter](#) - \$1,335
- [Stereo Microscope & Digital Camera 40X USB](#) - \$340
- [Digital Microscope & Camera 10X to 200X USB](#) (Ed Patch tests?) - \$90



- ▶ [Current](#)
- ▶ [Back Issues](#)

**Pictures from the West Australia Varanus Island Gas Explosion – What you should try to avoid**

- ▶ [View](#)

**Never assume the materials you receive are good quality. This pressure vessel in China failed at only 50% of the Hydro pressure**

- ▶ [View](#)

**Planning and Team Engagement – The 10 C's**

- ▶ [View](#)

**Humour – Examples of Safety Standards not to be emulated**

- ▶ [View](#)

**Integrating Vibration and Oil Analysis within today's CM Programs - Paper by James Berry**

- ▶ [View](#)

**Implementing an Oil Analysis Program – Paper by Dwayne Jenkins**

- ▶ [View](#)

**Precision Maintenance & CBM Program Development at National Institutes of Health – Presentation by Jeff Evans, Ken Gilliam & Donna Phillips**

- ▶ [View](#)

**Condition Monitoring Methods for High Voltage Electrical Equipment – Paper by Joe Tusek - CW**

- ▶ [View](#)

**Standard for Assessment of Steel and Concrete**

## The Broader Opportunity from Thermal Imaging

For more than 20 years Thermal Imaging (TI) has been used very successfully for monitoring electrical substations and switch yards, transmission lines and some other electrical and mechanical gear. This has mostly been carried out by contractors due to the cost of the TI camera but this cost has been steadily reducing. In the last 5 years much larger number of organisations have purchased TI cameras. For some it has been just an interesting toy that stays in the cupboard most of the time but many others have found extremely valuable uses for Thermal Imaging. Often these applications for TI are discovered in diverse and unanticipated areas. An example is the discovery of sediment in the warm pipe at the right. As TI cameras are so broadly useful in understanding equipment condition and they are now becoming small, cheap and easy to use, they can start to be considered as a generic inspection tool for electrical and mechanical maintenance people.

[Click on this Link to see the full article](#)



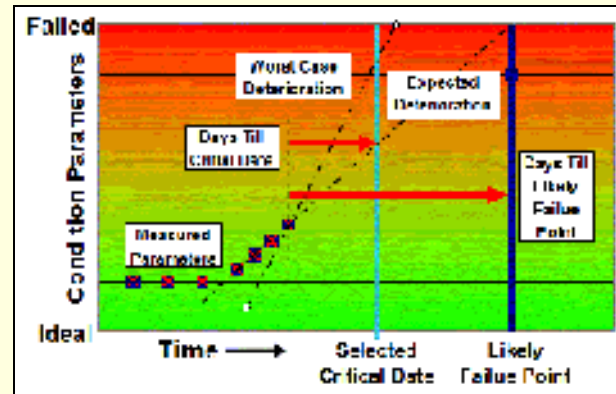
## How long will it last? A CM question to test your mettle!!

(Ed opinion)

It is a question that anyone in a Condition Monitoring role eventually faces for an important machine that's in serious trouble. One of the standard answers is "Its current condition is 'Severe' but I can't tell you how long it will last". As predicting the future is hard, this response is supported by many 'experts', who sometimes suggest that predictive maintenance is misnomer and the best you can do is to quantify a machines current condition. If we are very sick, we expect our medical professionals to be able to give us a prognosis (prediction), "How long have I got Doc", even if the answer is a bit uncertain. It should be the same with prognosis of machine failure. If your reaction is to take this easy way out, my suggestion is to start learning more about prognosis and failure risk management, plus take a touch of courage.

So if it's difficult to predict how long a machine will last, why would you try? The first reason is that you probably have information about the situation that no one else has and if someone has to make a decision about the problem, they should have as much information as you can give. The second reason is about equipment criticality and the amount of money to be saved by making the best decision, which may be huge. When the decision is about saving \$1,000's, it may not be worth too much effort. When the decision is about saving \$10,000's, \$100,000's or Millions or about the possibility of people being hurt or killed, then it definitely is worth the effort. With tasks like prognosis, you learn best by doing. So when you find a machine fault, start predicting (at least to yourself) how long it will take to deteriorate. Learning and thinking more about what could be happening inside equipment and what might be causing it, often gives the confidence to keep it running longer. Running equipment longer is money in the bank for any business, if the risks are low and the benefits are high.

[Click on this Link to see the full article](#)



## CM & Lube 2008 National Forum Melbourne Oct 28 & 29

▶ [Details/Cost](#) ▶ [Detailed Agenda](#) ▶ [Pre & Post Workshops](#) ▶ [Online Registration](#)

The annual SIRC Condition Monitoring and Lubrication National Forum now in its 3rd year provides an ideal way for reliability, condition monitoring and lubrication personnel to learn from the achievements and directions of the leading practitioners in Australasia. See attendee comments

**Structures** – From Boral

► [View](#)

**Training for Inspection of Plant Structures** - Sydney Water

► [View](#)

**The Accuracy Controlled Enterprise** – An interesting and detailed Paper by Mike Sondalini

► [View](#)

**Pump & Vib Diagnostic Papers** March/April AINDT Journal (pages 24 & 29)

► [View](#)

► [Journal back issues](#)

**Presentation from Previous CM & Lube National Forums**

► [2006 Forum](#)

► [2007 Forum](#)

below.

- "In a word **Superb**" Ray Beebe - Monash Uni
- "A great way to listen and **learn from success stories**. Well done!!" D. Perera - Qenos
- "Excellent - very rewarding and **truly worthwhile**. Great to meet up with others in similar situations" Matthew Hicks - Hydro Aluminium/ABB
- "The **breakout groups** were great" James McCleary – Northparkes Mines
- "Australian Expertise in CM is **World Class** and this conference exposes that expertise" Bruce Evans - Connell Wagner
- "We brought along 15 guys, mostly planners & they loved it" Matt Gorman - OneSteel
- "It is good to see & hear presentation from CM practitioners and not just from professional presenters" Graham Chevis - OneSteel
- "Pitched at practitioner level. **Every presentation had a gem** ready to apply at home" Vincent Loye - Santos
- "I see this Forum as the **premier learning, sharing & networking opportunity** for condition management & Lubrication related personnel" Rod Bennet – Silcar

**Just some Highlights for this years conference**

- **Condition Monitoring? It ain't enough!!** - [Rod Bennett](#) [Silcar/Bluescope](#)
- **Hydrocarbon Management at Rio Tinto** - [Rod Burchby](#) - [Rio Tinto Coal](#)
- **Operator Driven Reliability** – [SKF](#)
- **Integrating Condition Monitoring & Planning** – [Wayne Bissett](#) – [OneSteel](#)
- **What is Equipment Reliability and How Do You Get It?** - [Mike Sondalini](#) – [LRS](#)
- **Bearing Fault Detection with Vibration Analysis** - [Jason Tranter](#)- [Vib. Instit. Aust](#)
- **Thermal Imaging Case Studies** - [Colin Akers](#) – [PaperlinX](#)
- **Achieving improvements in Lube/Greasing Practices** [Wayne Dearness](#)– [Oil&Toil](#)
- **Mobile Equipment Workshop Lube Management Case Study** - [Xstrata Copper](#)
- **Getting Started with CM for only \$2,000?** - [Ray Beebe](#) – [Monash Uni](#)
- **Integrated Corporate Plant Condition Reporting** - [OneSteel](#) [Paul Gallagher](#)
- **A Practical Approach to Condition Monitoring** - [Dare Petreski](#) – [Pall Corp](#)
- **Filters & Filtering to achieve Lube Cleanliness**- [Wayne Bissett](#) – [OneSteel](#)
- **Bearing Failure Analysis Case Studies** [Dr Gary Martin](#) – [Attar](#)

**Pre Forum Workshops**

- **Introduction to Vibration Analysis** - Jason Tranter [Download Information](#)
- **Lubrication Practices Workshop** - Bernie Piovesan [Download Information](#)
- **Reliability Eng. for Operating Plants** - Howard Witt and Mike Sondalini [Download Information](#)

**Post Forum Workshop**

- **Lubrication Management LM02** [Download Information](#) (Includes Contamination Control & Oil Analysis Introduction) By [Wayne Dearness](#)

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**[NSW IMRt Home Page](#)**

**SIRF Roundtables - Shared learning networks for organisations seeking best business performance**

**<http://www.sirft.com.au/>**