



ASSET MANAGEMENT COUNCIL

presents

Training Intensive:

Risk and Reliability for Good Asset Management

Monday, 9 November 2009

**SMC Conference & Function Centre
66 Goulburn Street
Sydney NSW 2000**

Reliability analysis is the means by which we assess the future behaviour of equipment and decide if and when we should intervene with enhancement, maintenance or disposal actions. That is, “we will look into the future and if we do not like it we will change it”.



One Day Training Intensive

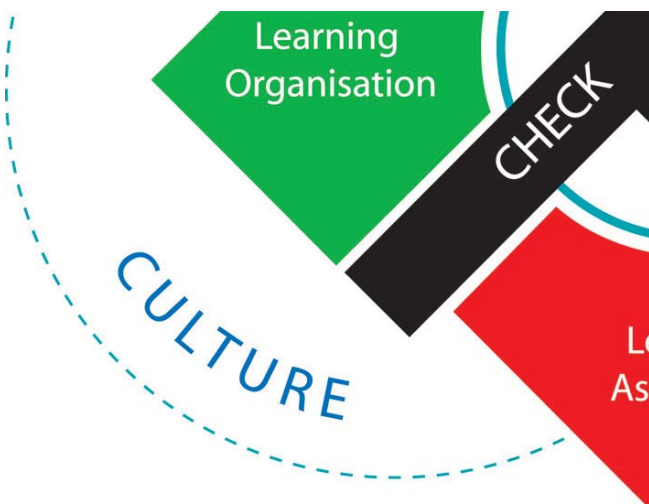
This training intensive will provide

- An awareness of risk and reliability, and how it relates to good asset management
- An introduction to a range of approaches and methods for risk and reliability assessment
- Case studies from a range of industries that illustrate how businesses may enhance decision making by the correct use of risk and reliability techniques.

Three presenters will be used for this intensive bringing a wealth of knowledge to the topics. The presenters will bring experience and practical examples from different industries as take aways for deeper understanding for participants.

Definition of Reliability (from AM Council and Wiki) (note this should/could also include issue of availability and its supporting measures of maintainability and supportability)

Risk & Reliability analysis is the means by which we assess the future behaviour of equipment and the consequences of failure to decide what asset and organisational based mitigation actions we should apply to achieve business intent. These actions could include change to; task quality improvement (culture and leadership), task content (sustain or replace) or system design (system reliability specification, assessment and verification).. That is, "we will look into the future and if we do not like it we will change it".



Jim Kennedy

James (Jim) Kennedy, CPEng, is the Immediate Past Chair of the AM Council and has a 42 year perspective on the escalating importance of maintenance engineering which began when he was an Engineer Officer in the RAAF. In 1986 he joined the Institute of Engineers National Panel on Maintenance, the forerunner of MESA, and subsequently became a founding member of MESA and later the AM Council.

Over the last 6 years Jim has trained over 1500 people nationally and internationally from Group General Managers to Team Leaders in the principles and practice of asset management. A number of large utilities have achieved significant turnaround following the adoption of key asset management models contained in his course.

Peter Kohler

Peter Kohler is currently Director of International Relations and the Asset Management Body of Knowledge (AMBoK) Project Director. Peter was previously appointed National Chairman of MESA from 1999-2001. Peter has gained extensive experience in engineering and asset management since he graduated from his Bachelor of Engineering from the University of New South Wales. He has also undertaken further study at the Royal Naval Engineering College (UK). Peter was a Captain and Engineer in the Royal Australian Navy. Whilst there, he directed risk analysis projects and oversaw the implementation of appropriate processes and computing solutions for major asset items. Since leaving the Navy in 1996, Peter has established a risk engineering and asset management consultancy, and has gained significant success as a consultant.

Gary Winsor

Gary Winsor is an electrical engineer and with over 28 years experience in the construction and maintenance of rail and electrical infrastructure. Gary spent five years in a part time Asset Management consulting role with Energy Australia, before taking up a fulltime position as an Operations Investment Manager in 2004.

Gary has extensive experience in FMECA/RCM analysis, quantified risk analysis, systems engineering, integrated support analysis, reliability/availability modelling, maintenance requirements analysis and asset management. Gary has developed a number of asset economic, reliability and risk models to assist decision making in maintenance and replacement planning.



RELIABILITY & RISK FOR ASSET MANAGEMENT

Reliability as a scientific discipline is barely 60 years old, forged in the crucible of World War II. Reliability grew as a branch of engineering in the US military during the 1950s due to rapidly increasing system complexity and the imperatives of wars both hot and cold. The 1960s brought development of FMECA by US Military and the development of guide documents for establishing reliability programs. In the late 60s their use spread to the commercial aircraft programs.

The 70s brought the development of the RCM process in the aircraft industry and later the nuclear industry. Around the same time risk management evolved to include event tree and fault tree analysis methods. Most of our applied techniques in risk and reliability are those available since the beginning of the 1980s. The difference now is the level of standardisation and the availability of cheap powerful computers with easily used tools and validated algorithms.

An understanding of reliability is essential to assess the inherent risk of technical systems. Reliability analysis is the means by which we assess the future behaviour of equipment and decide if and when we should intervene with enhancement, maintenance or disposal actions. That is, "we will look into the future and if we do not like it we will change it"

Reliability, and risk management, are now everyday words in a technology driven society and may attract some colourful descriptions. For the practicing asset managers the words represent the front end of a basic toolkit to objectively communicate the range of outcomes from a design, project or management decision. This objectivity is captured in the following:

"If you can't measure it then you don't know anything about it"

Lord Kelvin 1824-1907

CASE STUDIES

Local and international case studies in a variety of industry applications will be an integral part of the Risk & Reliability intensive content. The practical examples have been selected to provide a wide variety of 'take aways' that will assist participants to gain a greater understanding of how to achieve system and equipment reliability.

Intensive Content

INTRODUCTION

- Introduction and general principles
- Why do we do RAMS?
- AM Council Asset Management Models
- Where does Reliability fit within the Asset Technologies model?

RISK

- Why is reliability really important in risk?
- Safety outcomes from unreliability
- Top down and bottom up risk assessment techniques
- Maintenance as a risk management activity

RELIABILITY

- Reliability (RAMS) standards
- Probability of something happening
- Limitations of reliability data
- RCM - standards and general principles
- Service reliability versus inherent asset reliability
- Different models for different circumstances.
- Industry examples of different applications

HUMAN ASPECT OF RELIABILITY

- Human factors
- Organisational factors
- Key role of culture and leadership and its impact on reliability

DISCUSSION FORUM

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Reliability for Asset Management REGISTRATION FORM

General Information

Session Time: The seminar will run from 8:30 am to 5:00 pm.

Registration: To qualify for Early Payment discount, your registration form WITH PAYMENT must be received at the Asset Management Council at least 5 weeks prior to the intensive date.

Attendance at training intensive is available when registration payment has been received in full. Phone bookings are accepted but places are confirmed only on receipt of payment in full.

Fee Includes: Attendance at training intensive, notes, lunch, morning and afternoon tea.

Cancellation and Refund Policy: Paid registrations cancelled in writing at least 4 days before the training intensive will receive a full refund less 10% service charge. Cancellations on the day receive no refund but may substitute the attendee. All requests for transfer or cancellation must be submitted in writing. Fees are fully refundable should the Asset Management Council finds it necessary to cancel the training intensive. Refund of fees is the full extent of the Asset Management Council's liability in these circumstances.



RELIABILITY & RISK FOR ASSET MANAGEMENT

REGISTRATION

Complete and Return to
Asset Management Council
Fax: 03 9880 7511
Email: info@amcouncil.com.au Or
Mail: PO Box 245, Surrey Hills, Vic, 3127

Price per person: \$595 incl GST
Member price per person: \$520 incl GST

DISCOUNT: EARLY PAYMENTS received 5 weeks prior to seminar will receive a \$110 (GST inclusive) discount

Corporate Member Discounts on application

Name:

Email:

Organisation:

Address:

Suburb: State: Postcode:.....

Phone: Mobile:

PAYMENT

Enclosed is my Cheque: Made payable to "Asset Management Council"

or Credit Card: Master Card, Visa, Amex, Diners

Cardholder Name:

Card Number

Total Amount:..... Expiry Date:

Cardholder Signature