



THE QUALIFICATION OF NEW TECHNOLOGY

Presented in association with Astrimar Ltd and Atkins



One Day Course - Monday 26th November 2012

Salt Room, Ibis Hotel, Murray Street, Perth, Western Australia

Background

As the subsea energy industry moves into deeper waters and more difficult operating environments, outside existing industry experience, additional technical risk and uncertain reliability performance is introduced. A similar challenge is faced with the deployment of new and evolving marine renewable technologies. A defined qualification process is required to manage the risk associated with the first/early deployment of the technology. This applies as equally to the introduction of genuinely new technology, as it does to 'stretching the envelope' of existing hardware in a new environment.

The course

This one-day course is aimed at engineers, at any stage in their careers, who are involved in the development of new technology or in the adoption of new technology within offshore developments, or who need to accommodate existing technology in more challenging applications. It is equally applicable to operators, contractors, OEMs and technology developers. The course will provide an overview of industry best practice for the qualification of technology and how to select and design appropriate testing regimes to demonstrate functionality, reliability and durability. A combination of presentations, discussions and group breakout sessions are used to convey the information in a dynamic and interactive way.



The Programme

09:00 - 16:30

Session 1 Introduction to Risk, Reliability and Qualification

What is meant by the term “Qualification”?
Why qualification is needed to deliver reliable technology
Introduction to the TRL approach to qualification
Overview of related industry standards and recommended practices

Session 2 Interpreting TRL and Applying the TRL Ladder

Interpreting the API RP 17N TRL Ladder
How the TRL ladder can be applied to different types of equipment
Group exercise - equipment specific adaption of the generic TRL ladder

Tea/Coffee

Session 3 The Technology Qualification Process and use of Preliminary and Detailed TRL Assessments

Technology qualification process
Initial TRL assessment at a preliminary high level
System analysis to determine more detailed equipment TRLs
Progression of novel technology through the TRLs
Assessment of existing technology to recognise changes in application or extrapolation of design
Group exercise - initial TRL assessment

Session 4 Defining Qualification Goals and Requirements

The difference between a technology development project and the deployment of new technology within a field development project
Types of qualification goals and requirements
Allocation of goals and requirements
Discussion

Lunch

Session 5 Testing and Analysis to Support Qualification

Key test engineering and analysis methods for technology validation including materials testing, accelerated life testing, stress screening, reliability testing, environmental testing, software testing, field testing and reliability growth

Session 6 Use of FMECA to Determine Testing Requirements

Use of the FMECA process to identify potential failure modes to be addressed in qualification test planning
Group exercise—identification of appropriate testing

Tea/Coffee

Session 7 Qualification Planning, Implementation and Assurance

Planning for qualification in technology development projects and field development projects
Implementing successful and auditable qualification programmes
Reliability estimation using test data for new technology
Estimating and managing residual technical risk
Verification and validation of analysis and testing
Qualification assurance and reporting

Session 8 Summary, Discussion and Feedback



This course is presented in association with Astrimar.

Should you require further information on this event, please contact Joyce Bremner on j.bremner@sut.org
To register, either e-mail the information required on the registration form to perthevents@sut.org
or fax the completed form to +61 8 9446 9905

Registration Fees

SUT Members \$ 450 Inc. GST

Non Members \$ 500 Inc. GST

Fee includes - All refreshments & handout notes of the presentations.

Preferred Payment Methods:

Credit Card: Mastercard, Visa, or AMEX* only. We cannot accept payment by any other card.

* Please note if paying by AMEX there will be a 2.75% surcharge.

Cheque: Australian Dollar only, made payable to The Society for Underwater Technology

Send to, SUT, PO Box 7284 Cloisters Square, Perth, WA 6850

Please make sure you reserve a place by e-mail or fax before sending payment.

Joining Instructions:

Joining instructions will be e-mailed to the registered delegate (as shown on the registration form).

All details of venue, presenters and updates to the programme will be included in the joining instructions.

Cancellations:

Refunds will be made on written cancellation received up to ten working days in advance of the event, but will be subject to a 15% handling charge. 50% will be deducted up to three working days in advance and 100% thereafter up to the start of the event. No refund will be given for non-attendance. Delegates may wish to nominate a substitute in their place.

Transport During the Course:

Delegates are responsible for their own travel arrangements to and from the venue.

Registration Form

Please e-mail details to Perthevents@sut.org or fax the completed form to +61 8 9446.9905

Please tick to indicate your preferred payment method: SUT Member No. _____

Credit Card _____ (Visa or MasterCard or AMEX*) Cheque _____ Invoice (PO No.) _____

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Credit Card NO: Visa, MasterCard or AMEX* _____/_____/_____/_____

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Billing Address if not as above _____

E-mail address where receipt for credit card payment should be sent _____

Amount to be charged \$ _____ Signature _____