Subsea Awareness Course

4th – 8th February 2013
Karri Room, Parmelia Hilton Hotel
Mill Street, Perth, Australia

This five-day Course has been designed to be suitable for contractors, engineers, operators and those new to the offshore industry, those transferring from other disciplines within the industry and those who have worked in subsea previously but would benefit from a refresher course and exposure to the latest technology.

Whilst most of the course will be presented in a ‘classroom’ environment, the sessions will be interactive, with the opportunity to ask questions and discuss what has been learnt. In particular, hands-on and visual components have been included wherever possible to enable delegates to view software models and products destined for subsea service.

**PROGRAMME**

**Day 1. A.M. 09.00 – 16.45**
**General Introduction to the Subsea Sector**

**Overview:**
- Why subsea?
- What other options are available, including option evaluation and selection?
- Examples of different systems used on existing fields.
- What are the current design philosophies and the technology drivers?

**Subsea development options**
- Single well tieback.
- Template.
- Cluster manifold etc.

**Tea/Coffee**

**Components of subsea systems ‘building blocks’**
- What is the purpose of each and how do they fit into the overall system?

**Development areas:**
- Deep water/ultra deep water
- Complete subsea solutions

**12.30 Lunch**

**13.30 – 16.45**
**Flow Assurance**
- Understanding the nature of fluids
- Thermal management of subsea systems • Deep and Ultra deepwater development.
- Seabed Processing.

**16.45 Day end**

**17.30 Course Dinner**

**Day 2. 09.00 – 17.00**
**Subsea Wellheads/Trees**

**Introduction.**
3D Interactive Subsea Systems Overview

**Getting to know the Technology and Terminology**
- Drilling Vessels
- The basics of Drilling a Well
- An overview of Key components and their methods of operation
- SubseaTree Applications
- Completion risers

**Tea/Coffee**

**Wellhead Systems**
- UWD-15 Wellhead System Overview
- UWD-15 Wellhead Installation Animation

**Tree systems**
- EHXT, EVDT and EVXT Tree System Overview
- EHXT, EVDT & VXT Installation & Tooling Overview
- EHXT Installation Animation

**12.00 – 12.45 Lunch**

**Manifolds and Pipeline Sys.**
HOST Template/Off Template/Cluster

**Tea/Coffee**

**Tie-in & Connection Sys.**
KCC/KLConnectors, ROVCON, SPoolCON, STABON, UCON-H & Animations

**14.15pm - Depart Hilton for FMC’s base at Henderson**

**17.00 Back at Hilton - Day end**

**Day 3. 09.00 – 16.45**
**Subsea Control Systems Introduction.**
- Overview, what does the control system do.

**Types of Control System**
- Advantages/disadvantages of each type.

**Tea/Coffee**

**Typical Equipment**
- Hydraulic Power Unit, Electrical Power Unit, Master Control Station, Subsea Control Modules.

**Tea/Coffee**

**Subsea Options**
- Hydraulics, Electrics, Umbilicals, Sensors.

**Operator Interface**
- Master Control Station, functionality and options.

**Future**
- Technology Drivers

**12.15 – 13.15 Lunch**

**Subsea Control Fluids**
- The control fluid as a component of the system.
- Anatomy of a control fluid.
- Environmental impact.

**Tea/Coffee**

**Umbilicals**
- Design • Manufacture • Project Uses

**16.45 Day end**

**Day 4. A.M. 09.00 – 16.45**
**Installation.**

**Field Architecture Overview:**
- Subsea Tieback • Subsea Floater

**Tea/Coffee**

**Installation Vessels**
- Vessel Types • Positioning
- Critical Success Factors

**Structures**
- Structure Types & Installation
- Foundations, Types & Installation
- Critical Success Factor

**Pipelines - Flexibles**
- Flexible Types • Critical Success Factors
- Installation methods

**Pipelines – Rigid**
- Flexible Types • Critical Success Factors
- Installation methods

**12.00 Lunch**

**13.00 – 16.45 Remote Intervention**

**Introduction**
- Safety • Current Environment
- Technology Drivers.
- Water Depth.

**Remote Intervention Systems**
- Tooling Standards.
- Interfacing.
- Component Replacement systems
- Connection systems.
- Diverless Pipeline Repair.

**ROV Technology**
- Introduction • System Types.
- Typical System Components.
- Operational systems and capabilities.
- Launch and Recovery systems.

**Tea/Coffee**

**AUV Technology**
- Introduction.
- System Components.
- Capabilities, Sensors
- Trials and Testing.

**Diver Intervention**
- Air and Saturation Diving • Safety
- Diver Tasks • Support Vessels.

**16.45 Day end.**

**Day 5. A.M. 09.00 – 16.00**
**Risks, Reliability & Availability**
- Basic background
- Predictions and Modelling
- Design Techniques
- Practical Reliability

**Tea/Coffee**

**Angel Case Study**
- Field Integrity

**12.00 Lunch**

**12.45 - 16.00**

12.45 - Depart Hilton for workshop tour to Oceaneering DTS
16 Redemptora Road, Henderson, you will also have the opportunity to test your skills as an ROV Pilot on the ROV Simulator

**Return to Hilton**

16.00 Course end.

SUT reserves the right to change/amend the programme as it sees fit.

Presenting Companies Include:

[Aker Solutions](#)
[Castrol](#)
[DCF Subsea](#)
[FMC Technologies](#)
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[www.sut.org.au](http://www.sut.org.au)

All details of lecturers and updates to the programme will be provided with the Joining Instructions.
Registration Information
Awareness Course
Subsea

For 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 (0) 8 9446 9905 Tel. + 61 (0) 8 9446 9903

Registration Fees
SUT Members $2625 + GST = A$ 2887.50
Non Member $3150 + GST = A$ 3465.00

Included in the Fees: All refreshments during the Course, including dinner on the first night, and a copy of the
Course notes and a DVD containing PDF copies of the presentations available videos, and transport to site visits.

Preferred Payment Methods:
Credit Card: Mastercard, Visa or AMEX* ONLY. We cannot accept payment by any other card.
* Payment by AMEX will carry a 2.75% surcharge.
Cheque: Australian Dollar only, made payable to The Society for Underwater Technology
Send to, SUT, 5/5 Hasler Road, Osborne Park, Perth, WA 6017
Please make sure you reserve a place by e-mail or fax before posting your cheque.

Joining Instructions:
Joining instructions will be e-mailed to the registered delegate (as shown on the registration form). All details of
locations, host companies, lecturers and updates to the programme will be included in the joining instructions.

Course Dinner:
An informal dinner will be held in a local restaurant on the first night of the course (details with 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 at the beginning and end of each day. Transport will
be arranged by SUT from the Parmelia Hilton Hotel, for the site visit.

Registration Form
Please e-mail details to perthevents@sut.org or fax the completed form to 61 (0) 8 9446 9905

Please tick to indicate your preferred payment method:

Credit Card ______ (Visa, MasterCard or AMEX*)    Cheque ______    Invoice (PO No.) ________

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