Subsea Awareness Course

23rd — 27th September 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.

16.45 Day end
17.30 Course Dinner

Day 2. 09.00 – 17.00
Subsea Wellheads/Trees
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
- Xmas tree applications
- Completion risers

Tea/Coffee

Wellhead Systems
- MS-700 wellhead system overview
- MS-700 wellhead installation animation
12.00 – 13.00 Lunch

Tree Systems
- HXT & VXT system overview
- HXT & VXT installation and tooling animation

Templates Manifolds and Connection Systems
14.15pm – Depart Hilton for workshop tour to GE’s facility at Jandakot

Arrive back Parmelia Hilton Hotel
17.00 - 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.

Subsea Options
- Hydraulics, Electrics, Umbilicals, Sensors.

Operator Interface
- Master Control Station, functionality and options.

Future Technology Drivers
- Technology Drivers
12.30 – 13.30 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 Introduction.
Field Architecture Overview:
- Subsea Tieback • Subsea Floater

Installation Vessels
- Vessel Types • Positioning
- Critical Success Factors

Structures
- Structure Types & Installation
- Foundations, Types & Installation
- Critical Success Factors

Pipeline - Flexible
- Flexible Types • Critical Success Factors • Installation methods

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

 Tie Ins
- Rigid Spools • Flexible Jumpers
- Flying leads • Critical Success Factors
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
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

Arrive back Parmelia Hilton Hotel.
16.00 Course end.

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

**Presenting Companies Include:**

- Aker Solutions
- Castrol Offshore
- DCF subsea
- GE Oil & Gas
- Oceaneering
- Technip
- Woodside

All details of lecturers and updates to the programme will be provided with the Joining Instructions.

www.sut.org.au
Registration Information

For further information on this event please contact Jennifer Maninin on j.maninin@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 & 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: SUT Member No.________________________

Credit Card _______ (Visa, MasterCard or AMEX*) Cheque _______ Invoice (PO No.) ________________

Name ____________________________________________________________

Company _________________________________________________________

Address __________________________________________________________

E-mail address __________________________________________ Tel No. ________________

Credit Card No: Visa, MasterCard or AMEX*. ____________/____________/____________/

Exp. ____________/____________/____________/____________

Security no ____________ (last 3 digits on the back of your card)

Name on the card ______________________________________________________

Billing Address if not as above ____________________________________________

E-mail address where receipt to be sent for credit card payment ______________________________________

Amount to be charged $ _____________ Signature _____________________________

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