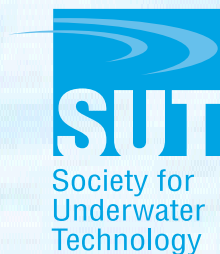


Subsea Awareness Course

22nd - 26th June 2009

Meritus Mandarin Singapore

333 Orchard Road, Singapore



This four and a half 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.

PROGRAMME

Day 1: 09.00 – 12.30

General Introduction to the Subsea Sector

Presented by: Sarawak Shell Bhd

Overview

- Why subsea?
- What other options are available, including option evaluation and election?
- 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 - 13.30 Lunch

Overview of Principles of Fluid Flow

Presented by: Schlumberger

- Understanding the nature of fluids, thermal management of subsea systems

Tea/Coffee

- Deep- and ultra-deepwater development, seabed processing

17.00 Networking over drinks and canapés

Day 2: 09.00 - 17.00

Subsea Wellheads/Trees

Presented by: FMC Technologies Pte Ltd.

Introduction

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

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

Tree systems

- HXT and VXT System Overview
- HXT & VXT Installation & Tooling Overview
- HXT Installation Animation
- VXT Installation Animation

12.00 – 12.45 Lunch

Templates Manifolds and Connections

Connection Systems

Tea/coffee

2pm Depart Hotel for site visit to FMC's base at Gul Circle.

17.00 Return to Hotel, Day end

Day 3: 09.00 – 16.30

Subsea Control Systems

Presented by: Aker Solutions

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

12.30 – 13.30 Lunch

Subsea Control Fluids

Presented by: Castrol Offshore

- The control fluid as a component of the system
- Anatomy of a control fluid
- Environmental impact

Tea/coffee

Acoustic Systems

Presented by: Sonardyne

16.45 Day end

Day 4: 09.00 - 12.30

Installation

Presented by: SWG Offshore Int. Pte Ltd.

Field Architecture Overview

- Subsea tieback

Moorings

- Types & Design criteria
- Mooring legs
- Anchor Types
- Drag anchors • Driven piles
- Suction anchors • Design for success: Knowing those critical areas.

Tea/Coffee

Pipelines

- Flexibles • Rigid
- Single wall • PIP
- Design requirements
- Installation techniques
- Reel lay • S-Lay
- J-Lay • Towing (bundles)
- Vessel types

12.30 - 13.30 Lunch

Remote Intervention

Presented by: Fugro Subsea Services

Introduction

- Safety, current environment, technology drivers, water depth

ROV Technology

- Introduction, system types
- Typical system components
- Operational systems & capabilities, launch & recovery systems

Tea/coffee

AUV Technology

- Introduction, system components, capabilities, sensors, trials & testing

Systems

- Tooling standards, interfacing, component replacement systems
- Connection systems, diverless pipeline repair

16.30 Day end

Day 5: 09.00 - 12 Noon

Workshop Tour

Fugro Subsea Technologies Pte Ltd.

From drawing board to reality: You will have the opportunity to follow the stages involved in creating and building the FCV 1000 - Next Generation Work Class ROV. You will be taken through the stages from concept/drawing/building to FAT.

You will also have the opportunity to view the ROV control cabins with the latest generation pilot console.

12 Noon, return to Hotel Course Close



Registration form overleaf - For more information on this course, please contact Joyce Bremner on j.bremner@sut.org

PRESENTING COMPANIES:



Registration Information – Subsea Awareness Course - Singapore

(June 09)

To register, either e-mail the information required on the registration form to J.Bremner@sut.org or fax the completed form to Joyce Bremner on +61 8 9204 3826 Tel. +61 (0) 403 185 226

Registration Fees

SUT Members 3000.00 Singapore Dollars

Non Member 3500.00 Singapore Dollars

Please note that all payments will be charged in British Pound Sterling, an exchange rate of 2.4 Singapore Dollars to £1 will be used

Included in the Fees: All refreshments during the Course, transport to and from site visits a copy of the Course notes in handout format and DVD containing PDF versions of the presentations.

Preferred Payment Methods:

Credit Card: Mastercard or Visa ONLY. We cannot accept payment by other cards.

Cheque: Cheques only accepted in Sterling.

Bank Transfer: (exclusive of transfer fees and currency exchange rates) to

Barclays Bank Limited, Pall Mall Business Centre, London, SW1Y 5AX

Account no. 80849499 Sort Code 20 65 82 Account name: Society for Underwater Technology

Joining Instructions:

Joining instructions will be e-mailed to the registered delegate (as shown on the registration form). All details of presenters and updates to the programme will be included in the joining instructions.

Site Visit:

All costs for the site visits are included in the registration fee, transport will be arranged by the SUT.

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 Course.

Registration Form

Please e-mail details to J.Bremner@sut.org or fax the completed form to +61 8 9204 3826

SUT Member No. _____

Please tick to indicate your preferred payment method:

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

Name _____

Company _____

Address _____

E-mail address _____ Tel No. _____

Credit Card No: VISA or MASTERCARD ONLY _____ / _____ / _____ / _____

Exp. _____ / _____ Security no _____ (last 3 digits on the back of your card)

Name on the card _____

Billing Address if not as above _____

Amount to be charged _____ Signature _____