Operating Subsea Production Systems

29th March 2017

Cliftons – Parmelia House
191 St Georges Tce, Perth

Society for Underwater Technology

Subsea production is not a new concept; however, advances in subsea technologies continue to enhance the economic development of offshore exploration discoveries in all water depths. Crucial to the economic success of such developments is the need to understand the consequences of one's actions. This one-day course is aimed at creating an awareness of the applications of subsea equipment and plant, how subsea equipment is operated, the vulnerabilities to which it is susceptible, the requirements to continuously inspect, maintain and repair and the consequences of equipment downtime and lost production.

PROGRAMME:

08.30 **Registration**

08.40 Course starts

08.45 **General Introduction to Subsea Production systems**
Ross Hendricks, TechnipFMC
Components of subsea systems, the "building blocks". The purpose of each element and how they fit into the overall system.

09.45 **Operating Strategies/practices**
James Holbeach, Wood Group Kenny
Overall system operation for subsea tie-backs in oil / gas condensate developments. Differences in System operational control schemes (eg. FLNG vs Conventional LNG vs. Domestic Gas). Typical pressure, temperature & compositional operating envelope considerations. Flow rate control and liquid management. Hydrate & Wax mitigation and remediation strategies. Planned and unplanned transient operations (eg. field start-ups/shut downs)

11.00 Coffee/Tea

11.15 **Operating Subsea Systems**
David Thain, Woodside Energy Ltd.
A short overview of operating a subsea system, from well start up through the operating phase to well shutdown. What information is readily available, how to interpret it, to ensure a safe, smooth and efficient operation.

12.00 **Vulnerabilities - What could go wrong?**
Kevin Ingram, Chevron Australia
Explanations of the vulnerability of subsea hardware to the following:
Hydrates, waxes & scale, causes & remedies
Control Fluid Cleanliness; Incompatible Fluids
Insulation Resistance; Gas Ingress & condensing water
Technology Obsolescence
Reliability, redundancy & flexibility
Dragged & dropped objects - Fishing activity
Corrosion/erosion
Marine environmental influences - temperature, internal water motions, marine growth.

13.00 **Lunch**

13.30 **Managing Subsea Assets**
Brian Purvis, Woodside Energy Ltd.
This session discusses the management of subsea operations by describing the following: Operations in the Asset Lifecycle; Subsea Operators Goals; and Key Elements to these Achieve Goals. This includes examples of existing subsea infrastructure, operations and maintenance roles & team structures including indicative costs.

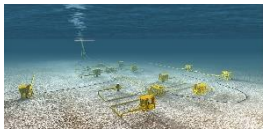
14.30 **Inspection, Repair and Maintenance**
Norman Mackay, DOF Subsea
The need for IRM and how it is carried out, exploring: Diver intervention; ROV & Survey Capabilities; IRM Vessels; Inspection and survey systems; AUV Systems; Integrity management: Planning and Timing. Procedure development; Case study examples

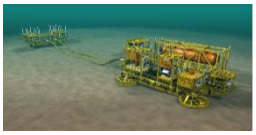
15.30 Coffee/tea

15.45 **Advanced Systems**
Paul Farquharson, GE Oil & Gas
Production modelling & Operator Simulators
Subsea Separation
Subsea Compression
Direct Seawater injection

16.45 **Certification & Course Conclusion**

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





Pictures courtesy of FMC Technologies Australia

Thank you to the presenting companies:

Chevron · DOF Subsea · GE Oil & Gas · TechnipFMC · WOOD GROUP · woodside

Registration Information

Should you require further information on this event, please contact Jennifer Maninin on j.maninin@sut.org Tel +61 8 9481 0999
To register please e-mail the information required on the registration form to perthevents@sut.org

Registration Fees

SUT Members Early Bird (register and pay before 1st March)	$400.00 + GST = $440.00
SUT Members (registration after 1st March)	$454.55 + GST = $500.00
Non Members Early Bird (register and pay before 1st March)	$472.73 + GST = $520.00
Non Members (registration after 1st March)	$536.36 + GST = $590.00

Fee includes - All refreshments and an electronic copy of the available presentations and videos are provided.

Not included - Hard copy presentations are not provided. Should these be required there is an additional fee of $60.

Preferred Payment Methods:
Credit Card: Visa, Mastercard or AMEX only *. We cannot accept payment by any other card.
* Payment by Visa or MasterCard will carry a 1.5% surcharge / AMEX will carry a 2.75% surcharge.

Invoice: Please tick here to be invoiced ☐

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. Please bring along a laptop to view the presentations.

Transport During the Course:
Delegates are responsible for their own travel arrangements at the beginning and end of each day.

Cancellations: Refunds will be made on written cancellation received up to ten working days prior to the event, but will be subject to a 15% administration charge. Cancellations received 9—4 working days prior to the event will be charged a 50% cancellation fee. Cancellations received 3—0 working days prior to the event will not be refunded. Delegates may wish to nominate a substitute in their place at no charge.

CPD Hours: CPD hours can be claimed for this course, please keep flyer and receipt for auditing purposes.

Please tick box if you do not wish to receive further SUT information ☐

Registration Form

Please e-mail completed form to **perthevents@sut.org**

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

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

Name _____ Please tick here if personally funding course ☐

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E-mail address _____ Tel No. _____

Credit Card No: VISA, MASTERCARD or AMEX ONLY * _____/_____/_____/_____

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