

# Subsea Production Systems

**Operation, Inspection & Maintenance**

**Wednesday 5 June 2024**

**The operation of subsea production systems requires operation, inspection & maintenance strategies that differ considerably from their onshore counterparts.**

This essential course provides a greater understanding of operation in the the subsea environment. Upon completion of the course our expert presenters will have covered the following topics:

- ▶ General Introduction to Subsea Production Systems
- ▶ Operating Strategies & Practices
- ▶ Operating Subsea Systems
- ▶ Vulnerabilities - What could go wrong?
- ▶ Managing Subsea Assets
- ▶ Inspection, Repair & Maintenance
- ▶ Advanced Systems

## **WHY WILL THIS COURSE BENEFIT YOU?**

The Subsea Production Systems Course provides an introduction to the elements of a subsea production system and how they are operated to maximise production and protect system integrity.

Additionally, presenters will explore the typical operational parameters for a subsea system, the information available during normal operation and the requirements for inspection and maintenance to mitigate the many risks posed by both the subsea environment and the produced fluids.

## **WHO SHOULD ATTEND?**

Anyone who works for an operator, contractor or is part of the supply chain that supports the operation/maintenance of offshore and subsea systems would benefit from learning about the practical operation, maintenance and management of subsea production infrastructure. Those returning to the subsea industry or joining for the first time would also benefit, and gain exposure to the latest technology and operating practices.

Thank you to the presenting companies:



Baker Hughes 

DCF Subsea

TechnipFMC

wood.

 Woodside



# COURSE SCHEDULE

WEDNESDAY 5TH JUNE

08.30 **Registration/Welcome**

08.45 **General Intro to Subsea Production Systems**

Zahidul Hasan, Technip FMC

Components of subsea systems, the 'building blocks'  
The purpose of each element & how they fit into the overall system.

09.45 **Operating Strategies/Practices**

Dr Jeff Zhang., Wood.

Overall system operation 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 & unplanned transient operations (eg. field start-ups/shut downs)

11.00 **Break**

11.15 **Operating Subsea Systems**

Daniel Clarkson, Woodside Energy

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?**

Peter Brownlie & Peter Baker, Intecsea

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 Break**

13.30 **Managing Subsea Assets**

Roland Fricke, Woodside Energy

This session discusses the management of subsea operations by describing the following: Operations in the Asset Lifecycle  
Subsea Operators Goals & 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 & 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 **Break**

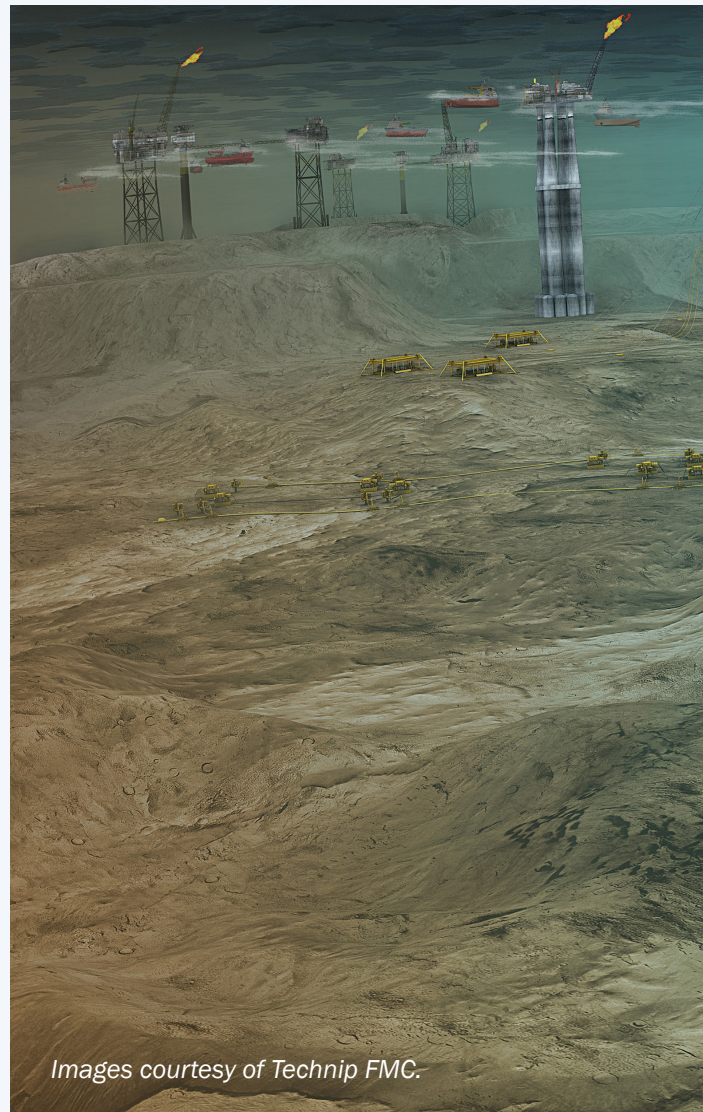
15.45 **Advanced Systems**

Michael Lewis, Baker Hughes

Subsea Separation  
Subsea Compression  
Direct Seawater injection

16.45 **Course Conclusion**

\*\* SUT reserve the right to amend the course programme as required.



Images courtesy of Technip FMC.



# REGISTRATION FORM

Please submit your registration to:

SUT Events Team  
Tel: + 61 (0) 8 9481 0999  
Email: [perthevents@sut.org](mailto:perthevents@sut.org)

SUT Membership Number \_\_\_\_\_  
Full name \_\_\_\_\_  
Job title \_\_\_\_\_  
Organisation/company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_  
County \_\_\_\_\_ Postcode \_\_\_\_\_  
Telephone \_\_\_\_\_  
Email \_\_\_\_\_  
Signature \_\_\_\_\_

**Course fees:** (please tick)

- |                   |           |                          |
|-------------------|-----------|--------------------------|
| Member Early Bird | \$600 AUD | <input type="checkbox"/> |
| Member            | \$680 AUD | <input type="checkbox"/> |
| Non-member EB     | \$715 AUD | <input type="checkbox"/> |
| Non-member        | \$800 AUD | <input type="checkbox"/> |
| Student Member    | \$230 AUD | <input type="checkbox"/> |

The prices above are **inclusive** of GST.

Early Bird rates apply to all bookings received by 5th May 2024. All bookings from 6th May 2024 will be charged at the standard rate.

**PAYMENT INFORMATION:**

Please invoice (PO NO.)   
or  
Credit Card

Credit card Mastercard, Visa or AMEX\* ONLY.

\*Payment by AMEX will carry a 2.75% surcharge Visa & Mastercard 1.5% surcharge

Amex  Mastercard  Visa

Card number

Card holder's name \_\_\_\_\_

Signature \_\_\_\_\_

Expiry date \_\_\_\_\_

Start date \_\_\_\_\_

Issue number \_\_\_\_\_

Security Code (last 3 digits on the back of your card)

Email address to send receipt \_\_\_\_\_

Please tick here if you do not want to receive our weekly newsletter.

