

Subsea Production Systems

Operation, Inspection & Maintenance

Tuesday 4th August 2020

Online Course

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

TUESDAY 4TH AUGUST

08.30 **Logon/Welcome**

08.45 **General Intro to Subsea Production Systems**

Ross Hendricks, 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**

Christian Bottcher, 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?**

Kevin Gauld, 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 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**

Mark Appleby, Baker Hughes

Subsea Separation
Subsea Compression
Direct Seawater injection

16.45 **Course Conclusion**

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

REGISTRATION FORM

Please submit your registration to:

Patricia Slapp
Tel: + 61 (0) 8 9481 0999
Email: p.slapp@sut.org

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

Course fees: (please tick)

Member \$290 AUD
Non-member \$340 AUD
Student Member \$105 AUD

The prices above are inclusive of GST

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

Amex Mastercard Visa

Card number

Card holder's name _____

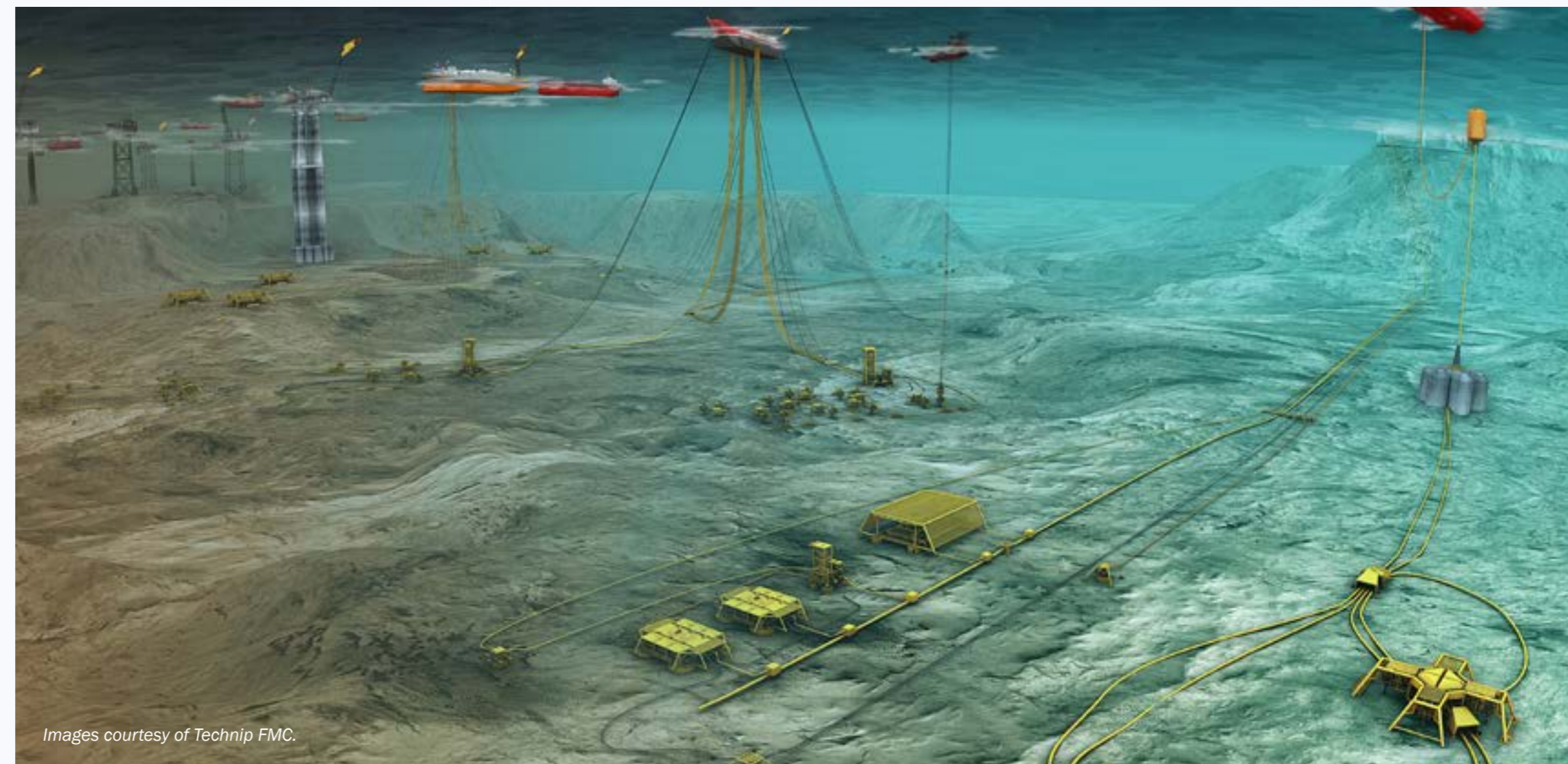
Signature _____ Expiry date _____

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.



Images courtesy of Technip FMC.