

Materials & Corrosion

An Awareness Course



Image courtesy of ChampionX

Wednesday 28 July - Thursday 29 July 2021

Frasers Suites, 10 Adelaide Terrace Perth

Are you new to subsea or unfamiliar with corrosion considerations?

This two-day course has been specifically designed for people new to subsea or unfamiliar with the various corrosion considerations which need to be applied during design, construction and operation of subsea assets. The course will cover the following topics:

- ▶ Overview of corrosion issues
- ▶ Corrosion & Erosion Modelling
- ▶ Chemical Selection, Injection & Inhibition
- ▶ Specification, Fabrication & Welding
- ▶ Cathodic Protection & Coatings
- ▶ Operational Integrity & FFS
- ▶ Planning and Implementation of Inspection & Monitoring
- ▶ Service Facility Site Visit
- ▶ Curtin Corrosion Centre Site Visit

WHY WILL THIS COURSE BENEFIT YOU?

The aim of this course is to provide an overview of the various materials and corrosion issues which are applicable to subsea structures. The choices made which impact one area of corrosion and integrity will often impact the choices in other areas, and also affect the long term inspection and monitoring which may be required to ensure the design life is met.

Having a general overview of the interaction between the various factors and the impact that certain choices make and the equipment used in inspecting and monitoring the structures will provide attendees with a broad knowledge on the interaction which needs to be considered in any installation.

PRESENTERS

The course will be presented by experienced personnel from both the supply and subsea industries. Most of the course will be held in a classroom environment, with the session being interactive, with every opportunity to ask questions and discuss the material presented as well as a couple of site visits to relevant facilities.



Image courtesy of ChampionX

Thank you to the presenting companies:

COURSE SCHEDULE

WEDNESDAY 28TH JULY

- 08.30 **Registration**
- 09.00 **Introduction & Overview**
Grahame Strong, CCE
Overview & setting the scene.
Operating conditions for equipment.
Basic mechanisms of corrosion.
Effects of elevated temperature, CO₂, H₂S, sand, seabed topography & choice of material.
- 09.45 **Corrosion & Erosion Modelling**
Chris Selman, Wood
Models available to model effects of CO₂, H₂S & sand production on internals of pipelines.
Advantages, disadvantages & limitations of models.
- 11.15 **Morning Tea**
- 11.30 **Chemical Selection, Injection & Inhibition**
Edith Ugwumba, ChampionX
Types of inhibitors for oil & gas subsea production systems.
Selection & qualification of inhibitors.
Top of line corrosion management
Downstream process impacts.
- 13.00 **Lunch Break**
- 13.45 **Specification, Fabrication & Welding**
Niekie Jooste, The WeldNet
Materials used in subsea & welding related issues
Types of welds / Heat treatment / Metallurgy of welds
Differences between fabrication for subsea & topsides
Limitations imposed on welding offshore pipelines
Testing welds
- 15.15 **Afternoon Break**
- 15.30 **Cathodic Protection & Coatings**
John Grapiglia, CCE
Codes & standards in design of CP systems
Factors affecting performance of CP systems
Issues related to CP & the interaction with coating systems
- 17.00 End Day 1
- 17:30 Course Networking event

THURSDAY 29TH JULY

- 08.30 **Operational Integrity & FFS**
Colin Radici, Rosen
Pipeline pigging
Codes & standards for defect assessment/repair
Types of pigs, their benefits
Data collection & how it's processed
Limitations affecting intelligent pigging & pipeline design
- 10.00 **Morning Tea**
- 10.15 **Planning & Implementation of Inspection & Monitoring**
Irene Pettigrew, Sonomatic
Issues affecting subsea structures
Types of inspection
ROV types, inspections & tooling
ROV capabilities & regulatory requirements for inspection
What data is required to perform thorough inspections?
Other forms of inspection (divers etc)
- 11.45 **Lunch**
- 12.30 **Depart for site visit**
Baker Hughes
Delegates will be taken on a guided tour of the Baker Hughes subsea service facility. They will have the opportunity to view various items of subsea production equipment and gain insight into material selection and corrosion control applied to equipment operating in a subsea environment.
- Curtin Corrosion Centre
Delegates will visit the Curtin Corrosion Centre to develop an understanding of what exactly can be tested in this well-equipped facility.
- 17.00 **Course Conclusion (time is approximate)**
- ** SUT reserve the right to amend the course programme as required.

REGISTRATION FORM

Please submit your registration to:

Renae Drew
Tel: + 61 (0) 8 9481 0999
Email: perthevents@sut.org

SUT Membership Number _____

Full name _____

Job title _____

Organisation/company _____

Address _____

City _____

County _____ Postcode _____

Telephone _____

Email _____

Signature _____

Course fees: (please tick)

Early Bird* Member	\$1090 AUD	<input type="checkbox"/>
Early Bird* Non-member	\$1300 AUD	<input type="checkbox"/>
Member	\$1360 AUD	<input type="checkbox"/>
Non-Member	\$1620 AUD	<input type="checkbox"/>
Student Member	\$ 440 AUD	<input type="checkbox"/>

*Early Bird rates apply to all bookings paid by by 30 June 2021.
All bookings received from 1 July 2021 will be charged at the standard rate. Rates include GST at standard rate.

Terms & Conditions 2021: Refunds will be made on written cancellation received up to 10 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 send a substitute in their place at no charge. Should there be any COVID related shutdowns that impact this course it will be run online instead of in person. Please note, direct competitors of site inspection hosts will be unable to participate in this component of the course.

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 a 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.

Onsite parking available at the venue for \$15/day



Images courtesy of ChampionX