

# Flexible Risers and Flowlines

## An Awareness Course

24<sup>th</sup> – 26<sup>th</sup> June, 2015,

Hotel Jen, 1A Cuscaden Road, 249716, Singapore

This course has been developed by key companies associated with system design, failure mode analysis, and integrity management of flexible flowlines and risers.

The course is aimed at those who specify, purchase, approve, install, operate, manage the integrity of, or decommission flexible risers or flowlines, including jumpers.

The course should provide enough knowledge for them to feel comfortable with their responsibilities and is likely to apply to both engineers and non-engineers at various stages in their careers.

### Wednesday 24th

09.00 Registration and Coffee

#### Introduction to Flexible Pipe

#### Design of Flexible Risers and Flowlines

- ◇ The structure of different types of flexible pipe
- ◇ Materials: plastics and their selection; corrosion considerations for steel

#### Tea/Coffee

- ◇ Dynamic riser design issues, including dynamic analysis and fatigue analysis
- ◇ How flexible pipe is manufactured
- ◇ Overview of ancillary equipment
- ◇ Future technology (including deep water issues)

12.45 – 13.45 Lunch

#### Installation of Flexibles

- ◇ Installation equipment (reels, carousels, etc)
- ◇ Considerations for selection of method, equipment, installation vessel etc.

#### Tea/Coffee

- ◇ Installation analysis: load prediction, sea state limitations, minimum bend radius etc.
- ◇ Tie-in operations

16.45 Classroom day end

17.00 – 18.00 Ice Breaker

### Thursday 25th

09.00 Site Visit

Depart Hotel Jen for site visit to Asiaflex Products Sdn Bhd, Technip's manufacturing facility in Johor Bahru, Malaysia. This is the only combined flexible pipe and umbilical manufacturing plant in Asia

Delegates will travel by coach from Hotel Jen to Asiaflex Products Sdn Bhd, where they will have a guided tour of the facility by Technip staff. During the tour delegates will be shown the different machinery used during the fabrication process of flexible pipe (spiralling machine, armouring machine, etc.), they will also have the opportunity to visit the warehouse/packing/testing areas of the facility.

Delegates will return by coach to the Hotel Jen at the end of the visit.



### Friday 26th

09.00 Coffee

#### Damage, Degradation and Failure Modes

- ◇ How design takes account of failure modes
- ◇ Practical experience – use, damage and failure
- ◇ Flexible pipe failure modes, and their mechanisms
- ◇ How integrity management is linked to failure modes
- ◇ Guideline on Flexible Pipe Integrity Management

#### Tea/Coffee

#### Codes & Standards

- ◇ Which Codes & Standards are relevant
- ◇ Key issues relating to interpretation
- ◇ Ongoing developments in the Codes & Standards

12.00 – 13.00 Lunch

#### Integrity Management

- ◇ Integrity versus Asset management, what is the difference?
- ◇ What are the requirements of an IM system?
- ◇ How do you apply IM?
- ◇ A currently operating asset - study of an actual IM system in action

#### Tea/Coffee

#### Applications of Flexible Pipe

- ◇ Typical applications
- ◇ Site specific design and installation issues
- ◇ Case studies

16.00 Certification and Course Close

## Registration Information – The Life-Cycle of Flexible Risers and Flowlines - An Awareness Course - Singapore 2015

To register, please complete the registration form and send to Joyce Bremner on [j.bremner@sut.org](mailto:j.bremner@sut.org)

### Registration Fees

SUT Members S\$ 1500.00

Non Member S\$ 1700.00

Please note that all payments will be charged in British Pound Sterling, an exchange rate of 2.0 Singapore \$ to £1 will be used.

*Included in the Fees:* All refreshments during the Course, a copy of the Course notes in handout format and a USB containing PDF versions of the presentations, Travel to and from AsiaFlex Facility in Johor Bahru, Malaysia

### Preferred Payment Methods:

**Credit Card:** Mastercard or Visa ONLY. We cannot accept payment by any other card

**Invoice:** Full details must be supplied ie. PO No. address to which the invoice should be sent and contact name.

**Bank Transfer:** (exclusive of transfer fees and currency exchange rates) Bank account details will be provided on request.

### Joining Instructions:

Joining instructions will be e-mailed to the registered delegate (as shown on the registration form). Details of Venue, lecturers and updates to the programme will be included in the joining instructions.

### Networking:

An ice breaker will be held 5pm–6pm on the first day of the course (details with joining instructions)

### 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 Hotel Jen each day. Transport will be provided for the site visit to Asiaflex Products Sdn Bhd, Technip's manufacturing facility in Johor Bahru

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

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## Registration Form

Please e-mail completed form to Joyce Bremner on [j.bremner@sut.org](mailto:j.bremner@sut.org)

SUT Member No. \_\_\_\_\_

Please tick to indicate your preferred payment method:

Credit Card \_\_\_\_\_ (Visa or MasterCard) Invoice (PO No.) \_\_\_\_\_ Bank Transfer \_\_\_\_\_

Delegate Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

E-mail address \_\_\_\_\_ Tel No. \_\_\_\_\_

Credit Card No: VISA or MASTER CARD ONLY. \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

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

Name on the card \_\_\_\_\_

Billing Address if not as above \_\_\_\_\_

E-mail address where receipt to be sent for credit card payment \_\_\_\_\_

Amount to be charged \$ \_\_\_\_\_ Signature \_\_\_\_\_