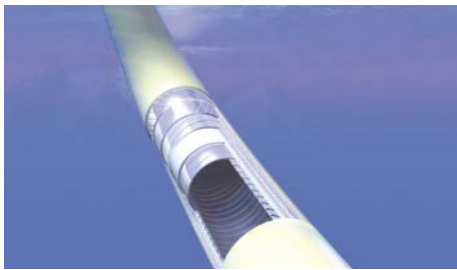


T W O - D A Y C O U R S E

# THE LIFE-CYCLE OF FLEXIBLE RISERS AND FLOWLINES

AWARENESS COURSE

ABERDEEN



## PROGRAMME AND REGISTRATION FORM

- The course is aimed at those who specify, purchase, approve, install, operate, manage the integrity of, or decommission flexible risers or flowlines, including jumpers.
- It should provide enough knowledge for them to feel comfortable with their responsibilities.
- It is likely to apply to both engineers and non-engineers at various stages in their careers.

The course has been developed by all three flexible pipe manufacturers, and key companies associated with system design, failure mode analysis, integrity management and decommissioning of flexible flowlines and risers, so that delegates will get the best possible grounding in the subject.

ORGANISED BY

**SOCIETY FOR UNDERWATER TECHNOLOGY**

INNOVATION CENTRE, ABERDEEN SCIENCE & ENERGY PARK, BRIDGE OF DON, ABERDEEN AB23 8GX

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# 'The Life-Cycle of Flexible Risers and Flowlines' Awareness Course

## PROGRAMME

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### DAY 1

09.00 – 09.15 *Registration & Coffee*

#### Welcome and Introduction

#### Design of Flexible Flowlines and Risers

- The structure of different types of flexible pipe
- Materials: plastics and their selection; corrosion considerations for steel
- Static flowline design issues, including flow assurance and impact protection
- Dynamic riser design issues, including dynamic analysis and fatigue analysis

12.15 – 1.15 *Lunch*

#### Design of Flexible Flowlines and Risers Cont.

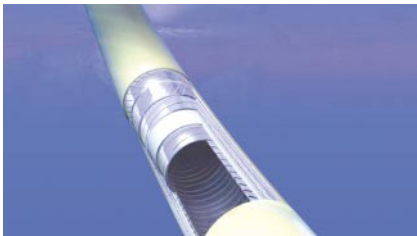
- How flexible pipe is manufactured
- Overview of ancillary equipment
- Future technology (including deep water issues)

#### Installation of Flexibles

- Installation equipment (reels, carousels, etc)
- Considerations for selection of method, equipment, installation vessel, etc
- Installation analysis: load prediction, sea state limitations, minimum bend radius, etc
- Tie-in operations

16.45 *Close*

19.00 *Course Dinner*



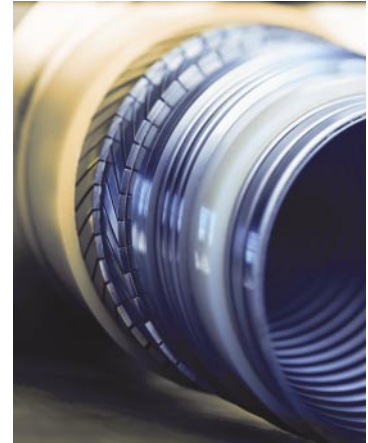
*Images courtesy of NKT Flexibles I/S and Technip Offshore UK Ltd.*

## DAY 2

09.00

### **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
- UKOOA Guideline on Flexible Pipe Integrity Management



### **Integrity Management – Operator’s Perspective**

- Legislative drivers
- Business drivers
- How flexibles are managed

12.30 – 1.30 *Lunch*

### **Integrity Management Techniques**

- Approach to risk-based assessments
- Assessing the impact of design, installation and operation on integrity
- Integrity monitoring techniques
- Inspection techniques
- Benefits of integrity management regarding re-use potential

### **Decommissioning**

- Regulatory requirements
- Leave in place versus removal, and residual liability
- Opportunities and considerations regarding re-use
- Case Study: Blenheim/Bladon

*Final Discussion*

16.30 *Close*

### **COMPANIES CONTRIBUTING TO THE COURSE:**

Boreas Consultants ▪ iicorr Ltd ▪ MCS  
NKT Flexibles I/S ▪ Talisman Energy (UK) Ltd  
Technip Offshore UK Ltd ▪ Venture Production Ltd  
Wellstream Ltd

## REGISTRATION INFORMATION

To register, simply complete the registration form and send your payment to SUT's Aberdeen office. Space is limited so early booking is advised.

### REGISTRATION FEES:

SUT Members: £700.00 + £122.50 VAT = £822.50

Non-Members: £900.00 + £157.50 VAT = £1057.50

*Included in the Fees:* All refreshments during the Course including a copy of the Course Notes.

### PAYMENT METHODS:

**Bank Transfer** (exclusive of transfer fees and currency exchange rates) to Bank of Scotland, 79 Ellon Road, Bridge of Don, Aberdeen AB23 8BY.

Account No. 00865948. Sort Code 80 05 11.

Account name: SUT Aberdeen Branch.

**Cheque:** Sterling only drawn on a UK Bank Account. An International cheque can be obtained from all major overseas banks. Please ensure any charges are met at source.

**Credit Card:** Mastercard and Visa ONLY. We cannot accept payment on any other card.

**VAT:** Our VAT No. is 242 3504 95. VAT must be paid on all registration fees, including those from overseas.

All EC country organisations must provide their VAT number in accordance with EC VAT regulations. A VAT receipted invoice will be sent in acknowledgment of all pre-paid registrations.

**JOINING INSTRUCTIONS:** Joining instructions will be sent direct to the registered delegate (as shown on the registration form) on receipt of their written confirmation of attendance.

**CANCELLATIONS:** Refunds will be made on written cancellations 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.

All queries for this event are being handled by the Aberdeen Office of SUT.

**VENUE:** To be arranged. Please contact SUT Aberdeen Office on 01224 823637.

**ACCOMMODATION:** Aberdeen has an enormous range of accommodation from luxury hotels to bed & breakfast. Please contact SUT Aberdeen Office for advice: 01224 823637 or [events@sut.org](mailto:events@sut.org).

**TRANSPORT DURING COURSE:** Delegates are responsible for their own travel arrangements at the beginning and end of each day.

**COURSE DINNER:** An informal dinner will be held in a local restaurant on the first night of the course (details with joining instructions).

# Registration Form

## 'The Life-Cycle of Flexible Risers and Flowlines' Awareness Course

Full Name \_\_\_\_\_

PLEASE PRINT. THIS IS HOW IT WILL APPEAR ON YOUR NAME BADGE.

Company \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Email \_\_\_\_\_

Phone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

Mobile No. \_\_\_\_\_

Your VAT No. \_\_\_\_\_

ALL EC COUNTRIES MUST PROVIDE THIS INFORMATION

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

Credit Card (✓)



ONLY THESE SYMBOLS ARE ACCEPTED. DO NOT ADD ANY OTHERS.

Card No. \_\_\_\_\_

Expiry Date \_\_\_\_\_

Card Holder's Name \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

Please complete and return, with your payment (see above for payment methods) to **SUT, Innovation Centre, Exploration Drive, Aberdeen Science and Energy Park, Bridge of Don, Aberdeen AB23 8GX**. To ensure that your application is processed would you please fax a copy of this form to SUT 01224 820236 **BEFORE** sending it to your accounts department.

**Only one delegate per form please. Please photocopy Registration Form and send completed version to SUT Aberdeen.**

**REGISTRATION FEES** *Included in the Fees: All refreshments during the Course and a copy of the Course Notes.*

*Please indicate:*

Non Member (*details of membership will be provided*)

Vegetarian Meal required

**SUT Members:**

£700.00 + £122.50 VAT = £822.50 \_\_\_\_\_

**Non-Members:**

£900.00 + £157.50 VAT = £1057.50 \_\_\_\_\_

**Cheque enclosed, inclusive of VAT but exclusive of bank charges, made payable to SUT for**

£ \_\_\_\_\_