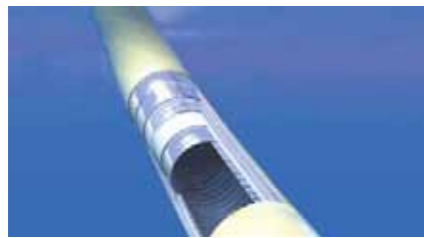
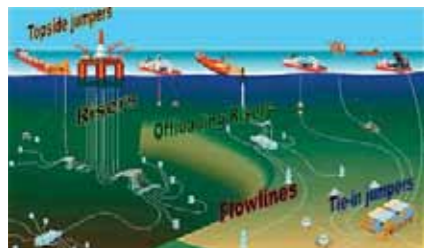


The Life-Cycle of Flexible Risers and Flowlines Course



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

PROGRAMME

DAY 1

09.00

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

12.30 – 13.15 *Lunch*

Design of Flexible Flowlines and Risers Cont.

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

Corrosion Mechanisms

- Stainless steel (pressure vault)
- Carbon steel (armour wires)

Integrity Management – Operator's Perspective

- Legislative drivers
- Business drivers
- How flexibles are managed

16.45 *Close*

19.00 *Course Dinner*

DAY 2

09.00

Installation of Flexibles

- Installation of 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

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

12.45 – 13.30 *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:

Acergy ▪ Atkins Boreas ▪ Fairfield Energy ▪ iicorr Ltd
MACAW Engineering ▪ MCS ▪ NKS Flexibles I/S
Talisman Energy (UK) Ltd ▪ Technip UK Ltd ▪ Wellstream Ltd

REGISTRATION INFORMATION

To register please complete the registration form and send to SUT's Aberdeen office SUT, Innovation Centre, Exploration Drive, Aberdeen Science and Energy Park, Bridge of Don, Aberdeen AB23 8GX.
Telephone: + 44 (0)1224 823637.
Fax: + 44 (0)1224 820236. Email: michele.ross@sut.org.
Space on the course is limited so early booking is advised.

REGISTRATION FEES

SUT Member Rate:
GBP £700.00 + £122.50 VAT = £822.50

Non Member Rate:
GBP £900.00 + £157.50 VAT = £1,057.50

All refreshments and copy of the course notes included in the fees.

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. Sort Code No: 80 05 11. Account No: 00865948, Account Name: SUT Aberdeen Branch.

Cheque: Please make payable to "Society for Underwater Technology". 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: Please provide details below. We do not accept American Express Cards.

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 acknowledgement of all pre-paid registrations.

JOINING INSTRUCTIONS Joining instructions will be sent direct to the registered delegate (unless otherwise advised) on receipt of their written confirmation of attendance.

ACCOMMODATION Aberdeen has a wide range of accommodation; please contact the SUT Aberdeen office for information.

TRANSPORT 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 will be with the joining instructions).

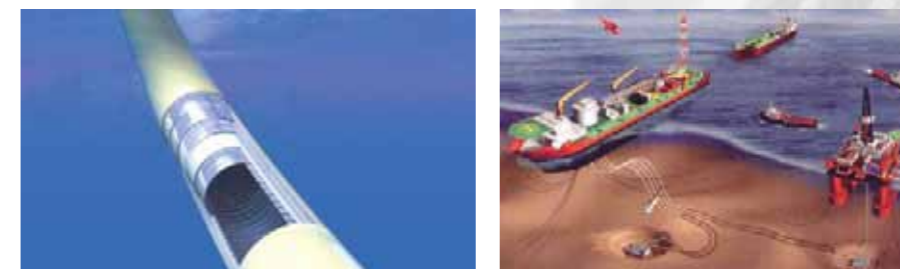
CANCELLATIONS Refunds will be made on written cancellations received up to ten working days in advance of the event but will be subject to a 15% handling charge. 50% will be deducted up to three working days in advance and 100% thereafter up to the start of the event. No refund will be given for non-attendance. Delegates may wish to nominate a substitute in their place.

TWO-DAY COURSE

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.

Registration Form

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

Please complete and either email to michele.ross@sut.org or print off a copy and fax to + 44 (0)1224 820236

Name	Credit Card Payment (Not American Express):
Company	Amount £
	Card No. / / /
Address	Start Date
	Expiry Date
	Security No. (last 3 digits on back)
Postcode	Name on Card
	Billing Address
Email	
Phone No.	
Fax No.	
SUT Member No.	

Please indicate your preferred payment method:

- Credit Card (details above)
 Cheque enclosed, made payable to
Society for Underwater Technology
 Please Invoice quoting PO No. _____



ORGANISED BY

SOCIETY FOR UNDERWATER TECHNOLOGY

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