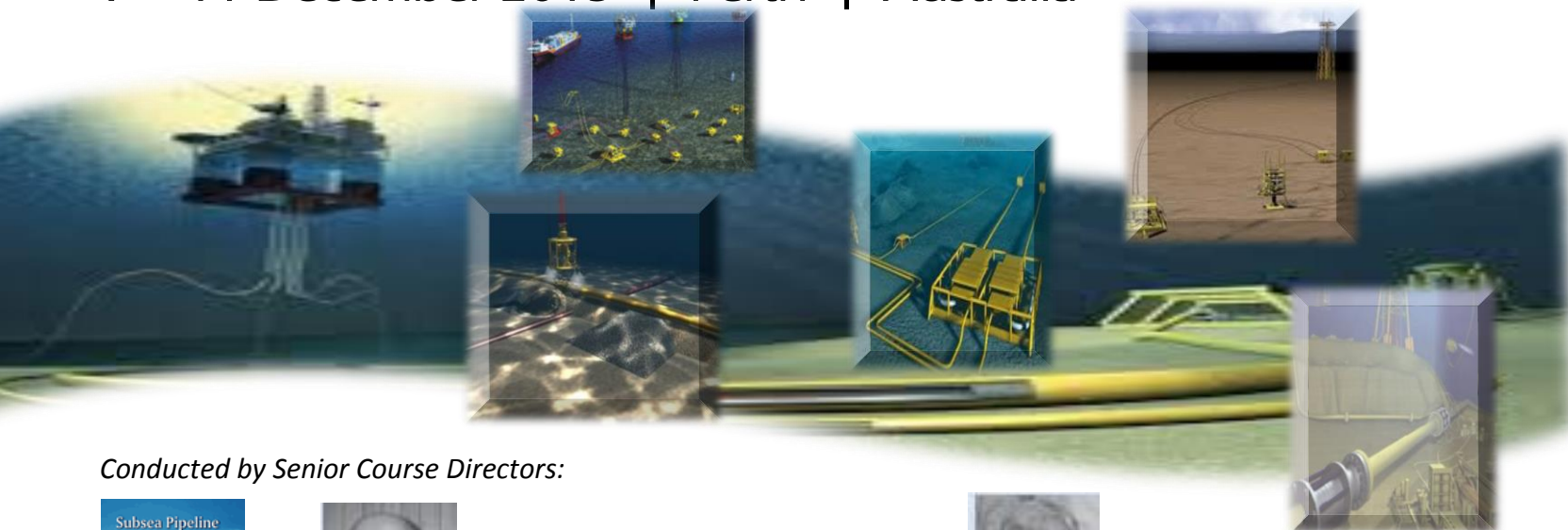


SUBSEA PIPELINE ENGINEERING

30 November – 4 December 2015 | Kuala Lumpur | Malaysia

7 – 11 December 2015 | Perth | Australia



Conducted by Senior Course Directors:



Dr. Andrew Palmer



Dr. Roger King

Authors of Subsea Pipeline Engineering,
Published by PennWell Books, ISBN: 978-1-59370-133-8

Here are what past participants have to say about this training: -

"Excellent course. I was very impressed with the knowledge and professionalism of the speakers. I would definitely recommend this course to others." **Shell Global Solutions (US), Inc.**

"Very informative. There was a great deal to take in, and the overall coverage of the subject matter was excellent." **Worley International Inc.**

"Good course for awareness on pipeline design theory" Materials & Corrosion Engineer, **Shell**

"This course has been beneficial towards my knowledge on subsea pipeline engineering" Project Engineer, **Baker Hughes**

"Overall the course was very beneficial" Project Engineer, **Baker Hughes**

"Highly beneficial, educative and well organised. I would like to attend more of the courses in the future" Project Engineer, **Brunei Shell Petroleum**

"Considering the duration training was good and quite useful. It will help me in my career. Thanks to trainers & organizer for their effort during training" Pipeline Engineer, **Tebodin Middle East**

"Good material and topic at this subsea pipeline engineering" Project Leader, **PT Pertamina Hulu Energi – ONWJ**

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COURSE OBJECTIVES

Subsea pipelines are the arteries of the offshore industry, and around the world more than 18,000km are in service. Part of almost every project, they often form a large component of project cost. This course will provide a complete and up-to-date overview of the area of Subsea Pipeline Engineering, taking delegates through the pre-design phase, design, construction, installation, operation and maintenance.

It will give a complete picture of the work of design engineers and pipeline construction companies, using actual case studies from around the world to highlight the topics discussed. While the course requires no previous experience, this is not a superficial overview. The lecturers bring to the course a long experience of industry projects, in many parts of the world and under varied conditions. The technology is far from being static, and the trainers will discuss new developments and ideas for the future.

WHO SHOULD ATTEND

Engineers from oil & gas companies, construction companies, pipe and service suppliers and regulatory authorities, who are newly qualified, have recently moved into pipeline engineering or hold broad responsibilities that include pipelines.

COURSE DOCUMENTATION



Participants receive a sturdy ring binder containing more than 700 pages of text and illustrations supporting the lectures and providing an invaluable reference source after the course.

In addition, each participant will receive a copy of the newly published 650pp. reference book **Subsea Pipeline Engineering** by Andrew Palmer and Roger King, worth over US\$ 170 per copy.

ABOUT YOUR COURSE DIRECTORS:

DR ANDREW PALMER



Dr. Palmer has been engaged with pipelines since 1970. His background is in civil engineering and applied mechanics. He was initially at Cambridge University, then at R.J. Brown and Associates, then founder and director of Andrew Palmer and Associates, a company of consulting engineers involved in pipeline projects in every continent, latter as Research Professor of Petroleum at Cambridge University, as a Visiting Professor at Harvard University, and now as Keppel Chair Professor in the Centre for Offshore Research and Engineering at the National University of Singapore. He has written three books and more than 180 research papers. He has an extensive consulting practice, and is in demand as an expert witness.

DR ROGER KING



Dr. King has been engaged with pipelines since 1969. He is a chemical engineer and now specialises in oilfield corrosion, cathodic protection and materials selection and retains particular expertise in microbiological corrosion. He was a founder of CAPCIS (Corrosion and Protection Industrial Services), a consulting and research centre within the University of Manchester Institute of Science and Technology. He too has an extensive consulting and expert witness practice.

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5 DAY COURSE SYLLABUS

- Overview – Marine Pipeline System Configuration (Palmer)

Introduction to design sequence and its interaction with the different topics covered in the course. Film on construction and connection of an offshore pipeline

- Route Selection (Palmer)

Principles of route selection. Constraints imposed by oceanographic, geotechnical, environmental, safety and political factors. Case studies from Canada, Spain, England.

- Shore Approaches (Palmer)

Influence of coastal topography, geotechnics, tides and waves. Alternative construction techniques. Horizontal drilling and tunnels. Case studies.

- Marine Pipeline Construction (Palmer)

Construction methods. Laybarge, S-Lay and J-Lay. Reelship. Mid-depth tow, bottom tow and surface tow. Advantages and disadvantages of different methods.

- Hydraulics and Flow Assurance (Palmer)

Single-phase flow, oil and gas; calculation of pressure drop and effect on optimal line size; influence of compressibility, temperature change and profile, two phase flow; flow regimes, correlations, profile effects, terrain-induced slugging, slugging in risers. Surge. Hydrates and wax.

- Introduction to Design Exercise (Palmer/King)

- Design exercise phase 1

- Presentations of conclusions of design exercise phase 1

- Materials Selection (King)

Fabrication of API pipe. Increasing the strength of pipeline steel. Balancing strength, toughness and weldability. Pipeline steels for sour service: sulfide stress cracking and HIC. Appropriate specification of pipe material.

- Increasing Corrosion Resistance (King)

Methods of improving corrosion resistance. Available solid corrosion resistant alloys. Evaluating corrosion resistance. Methods of fabrication of clad pipe. Welding of clad pipe. External protection.

- Flexible Pipe (King)

Fabrication. Carcass. Liner. Pressure containment. Armoring. Sheath. Connectors. Lengths of pipe sections. Internal corrosion. External corrosion. Failure modes of flexible pipes. General failure mechanisms. Inspection of flexible pipes.

- Pipeline Structural Analysis (Palmer)

Internal pressure, code requirements. External pressure; bending; bending buckling; collapse and buckle propagation; denting and gouging; allowable strain design; impact damage.

- Pipeline Materials for Sour Service (King)

Pipeline steels for sour service: sulfide stress cracking and HIC. Appropriate specification of pipe material.

- Design for Stability (Palmer)

Hydrodynamic forces on pipelines in steady and unsteady flow. Lateral resistance. Design for stability; RPE305 recommended practice. Interaction with seabed instability

- Internal Corrosion and Its Prevention (King)

Sweet corrosion mechanisms: pitting and mesa attack. Evaluating a suitable corrosion allowance. Effects of flow on corrosion. Moderators of corrosion. Corrosion inhibition and its relation to flow morphology.

- Project History: Design and Installation of the Mardi Gras Transportation System

- External Corrosion and Its Prevention (King)

Coating for submarine pipelines: enamels, FBE, triple coats, extruded coatings and elastomers. Inspection of coating integrity. Concrete weight coatings. Field Joints and infills.

Registration begins at 0830hr daily, with training commencing at 0900hr and end at 1730hr daily. Stipulated timing is subject to change accordingly to the progress of each day's session. Lunch with 2 refreshment breaks will be provided daily.

You may also be interested in: -

Pipeline Defect Assessment | 19 - 21 Oct 2015 | Kuala Lumpur

Pipeline Integrity Management | 21 - 23 Oct 2015 | Kuala Lumpur

Pipeline Risk Management and Assessment | 20 - 21 Oct 2015 | Kuala Lumpur

Designing for Transient Operations in Oil, Gas & Water Pipelines | 20 - 24 Apr 2015 | Kuala Lumpur

Flow Assurance for Offshore Production | 13 - 17 Apr 2015 | Kuala Lumpur

Engineering of Subsea Production Systems | 8 - 11 Dec 2014 | Singapore *includes site visit

FPSO Design and Technology - Level 2 / FLNG | 19 - 22 May 2015 | Singapore

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REGISTRATION FORM

	EARLY BIRD	✓	NORMAL	✓	petroEDGE recognises the value of learning in teams. Group bookings at the same time from the same company receive the following: 3 or more at 5% off 5 or more at 7% off 8 or more at 10% All other promotions including early bird are exclusive of the group discount.
KUALA LUMPUR MALAYSIA 30 NOVEMBER – 4 DECEMBER 2015	SGD 4,699		SGD 4,899		
PERTH AUSTRALIA 7 – 11 DECEMBER 2015	USD 4,999		USD 5,099		

In-House Training
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DELEGATE DETAILS

DELEGATE 1

☐ Mr ☐ Ms ☐ Mrs ☐ Dr ☐ Others: _____

Name : _____

Job Title : _____

Department : _____

Telephone No. : _____

Email : _____

Head of Dept. : _____

PAYMENT METHODS

By Cheque/ Bank Draft
Make Payable to Asia Edge Pte. Ltd.

By Direct Transfer
Please quote your invoice number with the remittance advise
Account Name: **Asia Edge Pte. Ltd.**
Bank Code: **508**
Account Number: **762903-001**
Swift Code: **OCBCSGSG**

All bank charges to be borne by payer. Please ensure that Asia Edge Pte Ltd receives the full invoiced amount.

DELEGATE 2

☐ Mr ☐ Ms ☐ Mrs ☐ Dr ☐ Others: _____

Name : _____

Job Title : _____

Department : _____

Telephone No. : _____

Email : _____

Head of Dept. : _____

Company : _____

Address : _____

Country : _____ Postcode: _____

Attention Invoice to : _____

Telephone No. : _____

Fax No. : _____

PAYMENT POLICY

Payment is due in full at the time of registration. Full payment is mandatory for event attendance. By submitting this registration form, you have agreed to Asia Edge Pte Ltd's payment terms

CANCELLATIONS & SUBSTITUTIONS

You may substitute delegates at any time. ASIA EDGE PTE LTD does not provide refunds for cancellations. For cancellations received in writing more than seven (7) days prior to the training course you will receive a 100% credit to be used at another ASIA EDGE PTE LTD training course for up to one year from the date of issuance. For cancellations received seven (7) days or less prior to an event (including day 7), no credits will be issued. In the event that ASIA EDGE PTE LTD cancels an event, delegate payments at the date of cancellation will be credited to a future ASIA EDGE PTE LTD event. This credit will be available for up to one year from the date of issuance. In the event that ASIA EDGE PTE LTD postpones an event, delegate payments at the postponement date will be credited towards the rescheduled date. If the delegate is unable to attend the rescheduled event, the delegate will receive a 100% credit representing payments made towards a future ASIA EDGE PTE LTD event. This credit will be available for up to one year from the date of issuance. No refunds will be available for cancellations or postponements.

ASIA EDGE PTE LTD is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. ASIA EDGE PTE LTD shall assume no liability whatsoever in the event this training course is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, unforeseen occurrence or any other event that renders performance of this training course impracticable or impossible. For purposes of this clause, a fortuitous event shall include, but not be limited to: war, fire, labor strike, extreme weather or other emergency.

PROGRAM CHANGE POLICY

Please note that speakers and topics were confirmed at the time of publishing; however, circumstances beyond the control of the organizers may necessitate substitutions, alterations or cancellations of the speakers and/or topics. As such, ASIA EDGE PTE LTD reserves the right to alter or modify the advertised speakers and/or topics if necessary. Any substitutions or alterations will be updated on our web page as soon as possible.

4 EASY WAYS TO REGISTER	
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💻 Online: www.petroedgeasia.net	✉ Email: info@asiaedge.net

Please note

- Indicate if you have already registered by Phone +Fax +Email +Web
- If you have not received an acknowledgement before the training course, please call us to confirm your booking.

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