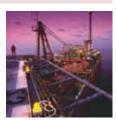
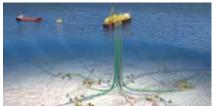
FPSO/Floating Production Technology







This 2 day training course examines key components of floating production systems including FPSO design, system & safety requirements, field layouts, operational practicalities, subsea systems & topsides processing

I most liked John's style, expertise, and broad knowledge... Very comprehensive course notes which are essential for a course of this level

OHS Inspector, NOPSA

Well presented with mixture of media used. Easy to stay engaged CEO, Otto Energy Ltd

2012 2 Day Course Dates

Perth 30 April – 1 May





Expert Course Director

Dr John Preedy has over 40 years experience in research, engineering & production & instruction including 28 years with BP & offshore oil & gas production

Key Learning Outcomes

- Learn the basis of offshore floating production systems and field layout requirements
- Analyse the functions and types of FPSO/subsea building blocks
- Understand the design and operational factors of FPSO vessels
- Risers their requirements, designs and how to monitor integrity
- The functions, processes and layouts of topside systems
- Review FPSO safety requirements and safety case regulations
- Learn from cases of various deepwater systems issues that have been managed
- A 45 minute video case study of a full field development with an FPSO





About the Expert Course Director

Across the world, oil and gas is being found and produced in ever-deeper waters.

Here, water depth, ocean currents and harsh weather conditions may all influence the decision on which type of production installation to use. A fixed installation may not be technically feasible in a particularly challenging location where a floating unit would offer the best solution.

The offshore oil and gas industry has been using floating production, storage and offloading systems, or FPSOs, since the mid-1970s. This course examines key components of FPSO design, systems development, subsea engineering, operations and topsides processing systems with a feature on the latest safety case requirements for FPSOs.

In addition to the extensive notes and figures, DVDs and CDs of field development, and various vessels and equipment will be included throughout the course.

The course style is interactive, and participants will be encouraged to share ideas, problems and benchmark against lessons learnt.

Who Should Attend

Engineers, geophysicists, managers and production personnel in the petroleum industry who need to understand the intricacies of designing and operating a floating production vessel and how it is integrated with subsea systems and topsides processing

Dr John Preedy



John worked for BP for 28 years as a Research Associate and Team Leader, working on feasibility studies and acting as a "trouble shooter" covering all aspects of BP's businesses.

These covered field development projects in the North Sea and several novel resource recovery techniques, which were taken from concept to field

pilot trials in Canada. His specific work in the offshore area covered subsea robotics/automation, seabed production concepts, seabed excavation methods, underwater repair techniques, flexible riser studies and maintenance cost reductions.

After leaving BP in 1992, he has continued working in the offshore oil industry through Azur Offshore Ltd, including activities in the assessment of emerging and novel technologies, technical and economic audits, deepwater studies, production sharing agreement evaluations, safety and environmental issues. Clients have included Chevron UK, BP Exploration, British Gas, Technomare, Trident Consultants, Fina UK and Cameron France.

In addition, John is responsible for co-ordinating and is the Course Director and Principal Lecturer for the oil industry training courses that Azur Offshore Ltd provides to professional engineers in Europe, USA, SE Asia, Australia and Africa.

Past projects have included Chevron North Sea – safety reviews, Nigeria – production sharing contract reviews, Total's Otter Field – Subsea Team with FPSO and Tie-Back options, Ivory Coast FPSO – technical reviews, BP Greater Plutonio, Angola – training and operations instruction.



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2 Day Intensive Course Outline



Introduction and review of floating production systems

- Background and general trends in offshore production
- Review of fields developed with floaters and subsea production systems
- Influence of pressure, temperature and field chemistry on production system
- Geographic requirements
- Typical field development contracts
- · Global energy review

FPSO system requirements

- · Functional requirements
- Monohull, semi-submersible, deep draught semi-sub, SPAR and TLP options
- · Lavout and safety
- Newbuild or conversion
- New developments (Sevan)

FPSO field layout requirements

- · Field layout requirements
- Subsea wells
- Mooring patterns
- Operations and vessel movements in the field
- Drilling issues
- Seabed/geohazards
- Workovers

FPSO monohull design requirements and model testing

- Design requirements
- Hydrodynamic studies
- Wave tank model testing
- · Wind tunnel testing
- Computational fluid dynamics (CFD)
- Response amplitude operators (RAO)
- FPSO motions and current forces

Mooring systems

- Typical systems
- Components
- Analysis/design and safety factors
- Materials
- · Anchors and piles
- Installation
- New system

Turret design

- Definition of functions
- FPSO layout (external and internal turrets)
- · Vessel motions and mooring forces
- Turret size vs capacity
- · Disconnectable systems
- Bearing systems
- Mooring lines and riser connections and handling
- Fluid transfer systems swivels and drag chains

FPSO operational issues

- What to do with the gas
- Alternative technology FLNG and gas conversion
- FPSO and tanker sizing and selection
- FPSO tanker conversion
- FPSO deck operations cranes
- FPSO power generation

Summary of subsea production building blocks

- Main building blocks
 - > Well completions and Xmas trees
 - > Manifolds and templates
 - > Flowlines and pipelines
 - > Subsea control systems
 - > Umbilicals

Risers (flexible dynamic/towers/steel catenary)

- Systems requirements
- Flexible dynamic risers design and fabrication
- Computer models
- Integrity monitoring
- Deepwater requirements
- Integrated production bundle risers
- Hybrid risers and riser towers
- · Steel catenary risers

Introduction to FPSO topsides processing systems

- Function of process and utility plant (reservoir interaction, typical reservoir fluids, product specifications, environmental constraints)
- Processing facilities (separation, compression, produced water, water injection, utilities)
- Effect of motion
- · Process equipment examples

Θ Case study no 1: Alba field FSO (North Sea) – Detailed Analysis of an FSO

- Field layout
- FSO vessel
- Turret/swivel
- Deck piping system
- Export system

Shuttle tanker and export options

- Types of tankers (shuttle tankers with DP thrusters, standard trading tankers, capacities)
- Loading/offloading rates
- Operational schedules
- Offloading transfer systems (direct or remote)
- · Metering systems
- · Safety records

FPSO safety requirements

- Offshore safety incidents
- Safety case regulations
- Design and safety assessment for floating installations
- Certification/verification/classification
- Discussion with examples
- Environmental issues

Θ Case study no. 2: Deepwater fields

- Deepwater issues and range of production systems
- Current worldwide status Brazil, Gulf of Mexico, North Sea, West Africa, South East Asia and Australia

⊙ Case study no. 3: Anasuria FPSO

 Video of a full field development with an FPSO



FPSO/Floating Production Fundamentals

LOCATION AND DATES

Venue details will be confirmed with participants 2 weeks prior to the event via email

Perth

30 April - 1 May 2012

*If the date or location are not suitable, please contact us and we will endeavour to meet your needs

3 EASY WAYS TO REGISTER



WEE

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Individuals	\$2,495.00	\$249.50	\$2,744.50	\$330.00	\$2,695.00	\$269.50	\$2,964.50	\$110.00	\$2,795.00	\$279.50	\$3,074.50	-
4+ participants discount	\$2,156.00	\$215.60	\$2,371.60	\$702.90	\$2,156.00	\$215.60	\$2,371.60	\$702.90	\$2,156.00	\$215.60	\$2,371.60	\$702.90

REGISTER ONLINE NOW FOR FPSO/FLOATING PRODUCTION FUNDAMENTALS



Use your QR Reader App on your smartphone and scan this code to take you directly to the website.

Course Details

Course registration 8:15am
Course commencement 8:30am
Course conclusion 5:00pm
Break times customised to suit
participant requirements

Registration Fees Include

Entrance to the course that you have purchased, lunch, refreshments and course documentation. Hotel accommodation or travel costs are not included.

Cancellation Policy

Should you be unable to attend, a substitute participant is welcome at no charge. Alternatively, a full refund, less an administration fee of \$550 (inc. GST), will be made for cancellations received in writing up to 2 weeks prior to the event. Regrettably, no refunds can be made if a participant fails to attend or cancels within 15 days before the course. For any event cancelled by IIR, registration fees are fully refundable. IIR Executive Development is not responsible for participant flights or accommodation if a course is cancelled.

Discounts

One discount per person applies. IIR Executive Development MUST receive payment by the early bird date to claim the early bird discount. For those companies with a complex account payable system, a credit card payment is advised to ensure your discount. For the group discount to apply, all bookings must be made at the same time.

Course Outline

IIR Executive Development reserves the right to alter the venue and/or instructor(s). The course outline/details advertised are to be used as a guide only. The outline/details advertised may be changed at any time during the course delivery.

Customised Approach

The course times advertised act as a guide and may change slightly depending on the depth of interactive class discussion and case analysis.

Dress Code

Smart casual wear is suggested along with a jacket as room temperatures vary.

Course Suitability

If clarification is needed for course suitability/relevance, please contact us.

Privacy Policy & Updating Your Details

Please visit us online at www.iired.com.au/privacy for a full privacy policy. Database amendments can be sent to database@iir.com.au or by calling +61 2 9080 4050 asking for the database department.

Payment Terms

Full payment must be made upon receipt of the invoice and at least 10 working days prior to the course. Only those participants whose fees have been paid in full will gain admittance to the course. A tax invoice and confirmation letter will be emailed to the participant upon completion of a valid registration. Payment may be made by EFT, credit card or cheque. Credit card payments will not be accepted by email or fax and must be made via our secure credit card gateway.

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