

A unique opportunity to attend the widely acclaimed 3-day training course on Floating Production, Storage and Offloading Systems

“Very informative about the overall FPSO project from planning to completion”
BP

FPSO

Training Course

A comprehensive and up-to-date review of FPSO projects, taking delegates through the pre-design phase, available technology and solutions, design, fabrication, installation, operation and maintenance.

Monday 12th - Wednesday 14th November 2007
Sheraton Rio Hotel, Rio de Janeiro, Brazil

Attend this course and gain a thorough understanding of:

- Key regional differences and trends
- FPSO design and technology
- Regulatory regimes and legal considerations
- Developing a contracting and execution strategy
- Hull structure, design and maintenance
- Design issues for FPSO topsides
- Interface management challenges
- Turrets and swivels
- Riser and mooring systems
- FPSO conversion considerations
- Field installation, operations and preparations for start-up
- Safety engineering

*previously sold out!
book early - places are
strictly limited*

For further information or to register online please visit the course website at

www.ibcenergy.com/fpsobrazil

or register by calling the Bookings Hotline on

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Course approved for CPD Accreditation by:

IMAREST

Institute of Marine Engineering, Science and Technology



Royal Institution Of Naval Architects

In Association with:



FPSO Training Course

Are you new to the FPSO Industry?
In need of a refresher course on the fundamentals of FPSO Technology?

If so, then this course is for you!

Following the success of the widely acclaimed FPSO Courses in Houston, London, Paris, Perth and Oslo, IBC Global Conferences is delighted to bring the 12th updated version to Brazil, giving you the opportunity to attend a detailed and intensive course designed specifically for those involved in the floating production business.

The FPSO Training Course is a detailed and intensive training course designed specifically for those involved in the floating production business. In just three days you will gain a comprehensive insight into the FPSO selection, development and operational process.

The course covers the full spectrum of issues that relate to FPSO projects. This allows technical personnel to obtain training in the commercial and contractual areas and the commercial/contractual personnel to better understand the technical challenges and risk areas associated with FPSO projects.

The course contents have been designed to equip delegates with some of the basic tools needed to find answers to these questions and make appropriate decisions to progress future projects.

This course is approved for CPD Accreditation by:

- The Institute of Marine Engineering, Science & Technology (IMarEST)
- Royal Institution of Naval Architects (RINA)

Course Director

Duncan Peace, Managing Director, Crondall Energy Consultants Ltd

Day 1 – Monday 12th November 2007

08.30 Registration and Coffee

09.00 Session 1.1 – Course Introduction

The introduction will review the overall course objectives and summarise the overall course content. The course will focus on a number of key technical and commercial questions that an FPSO project team need to address as part of the overall development. The course contents have been designed to equip delegates with some of the basic tools needed to find answers to these questions and make appropriate decisions to progress future projects. The introduction will also include:

- FPSO market overview
- Basic characteristics of FPSOs – advantages and disadvantages compared to other technologies

Duncan Peace
Crondall Energy Consultants Ltd

10.30 Break

10.45 Session 1.2 – Introduction to FPSO Design and Technology

This session will provide an outline of key design and technology elements of FPSOs including regional differences in FPSO design, technology and project execution. The session will cover:

- Terminology
- Technical building blocks: hull, mooring and station-keeping, topsides, ship to sub-sea interface, storage and offloading
- Major design considerations and decisions for overall FPSO configuration
- Typical examples: A review of 3-4 FPSOs from different regions of the world
- New technology developments

Duncan Peace
Crondall Energy Consultants Ltd

11.45 Break

12.00 Session 1.3 – Development of an Execution Strategy

This session will examine the options available to the project team in the development of a suitable contracting strategy for projects in different regions and with different levels of technical complexity. The review will consider key commercial considerations, expected field life, risk mitigation strategies and regional and market considerations.

- Developing a project strategy – the importance of creating good project definition
- Contracting options
- Lease vs purchase
- New build versus conversion
- Redeployment – the potential for re-use and realising value
- Future trends in the market

Duncan Peace
Crondall Energy Consultants Ltd

13.00 Lunch

14.00 Session 1.4 – Regulatory Issues, Class, Regional Requirements and Verification Activities

FPSOs are challenging in the way that they represent a combination of maritime and offshore regulatory regimes, technologies and practices. This session considers relevant technical and regulatory issues that arise in connection with floating production. These include relationships between coastal state authorities, maritime flag authorities and class societies, varying local practices, a brief description of the class approach to FPSO quality assurance and compliance management, as well as challenges and lessons learnt related to design, fabrication, operation and regulatory compliance of FPSOs.

Claudio Oliveira
Head of Section of Offshore Units in Operation
DNV Brazil

15.30 Break

15.45 Session 1.5 – Key Regional Differences and Trends

- Key regional drivers
- Vessel size storage and configurations (what do FPSOs look like in different regions)
- Metocean conditions
- Different technology solutions e.g. moorings
- Regional offloading/trading parcels sizes and the impact on vessel storage
- Regional operating differences
- Local content issues

David Llewelyn
Engineering and Management Consultant (FPSOs)
David Llewelyn Consult ENK

17.15 Close of Day 1 followed by Drinks Reception

Day 2 – Tuesday 13th November 2007

08.30 Session 2.1 – Commercial Considerations

This session will look at the overall commercial aspects of the project, building on the developing of a suitable executive strategy (from Session 1.3), and look at key aspects of managing project risks.

- Overall planning from concept to first oil
- Commercial considerations and options
- Cost and schedule expectations and drivers
- Capital costs and lease rates
- Evaluating and managing project risks
- Risk management tools during project execution
- Key lessons learned
- Examples of different execution methodologies

Duncan Peace
Crondall Energy Consultants Ltd

09.30 Break

09.45 Session 2.2 – Safety Engineering and the FPSO

Timely and appropriate safety engineering input to the design of any offshore facility is now crucial in order to ensure that the facility meets regulatory requirements. The session will address key areas of design based on experience from concept and detailed design, through construction/conversion to installation and operations. In each area, examples from practical experience of many FPSO projects will be given, which together will demonstrate influence that safety considerations can and should have on the final operating facility. Examples include:

- Accommodation layout
- Mechanical handling arrangements
- Power generation and emergency power
- Topsides facilities layout and potential interactions with other features
- Offtake arrangements
- Operating Philosophy
- Cargo pumping arrangements
- Mooring design

Anthony Sipkema
HSE Manager, BC-10 Project
Shell International EP

11.15 Break

11.30 Session 2.3 – FPSO Hull Structure, Design and Maintenance

- General introduction
 - Development alternatives
 - Hull strength and fatigue design – contributory factors
 - Hull structure design for specified service
 - In-service survey and maintenance
 - Some lessons (hopefully) learnt
- Speaker under invitation

13.00 Lunch

Expert speakers from the following supporting organisations



- 14.00 **Session 2.4 – FPSO Turrets and Swivels**
This session will examine key issues related to the design of turret mooring and fluid transfer systems including:
- Key functional requirements and drivers
 - Different turret mooring types
 - Permanent and disconnectable turret types
 - Interfaces with sub-sea
 - What is going on inside a swivel?
- Duncan Peace**
Crondall Energy Consultants Ltd
- 15.00 Break
- 15.15 **Session 2.5 – FPSO Conversion Experience**
This session will look at key issues related to the conversion of tankers into FPSOs and will focus on some of the key scope areas, key risks, and some valuable lessons learned.
- Structural repair refurbishment and life extension
 - The refurbishment of marine systems
 - New marine systems requirements
 - Integration of hull and marine system with topsides utilities
 - Turret installation challenges
 - Topside installation
 - Construction logistics and planning
- Duncan Peace**
Crondall Energy Consultants Ltd
- 16.45 Break
- 17.00 **Session 2.6 – Risers & Mooring Systems**
- Types of mooring and riser systems
 - Analysis methodologies
 - Key drivers for selecting and designing FPSO mooring systems for different environments
 - Mooring and riser system integration
 - Current trends in mooring system design for deepwater FPSOs
 - Materials and installation issues for deepwater moorings and risers
 - Moorings and risers in situ inspection
- Christopher Carra**
Director
AMOG Consulting
- 18.00 Close of Day 2
- 19.00 Meet and depart for Dinner

Day 3 – Wednesday 14th November 2007

- 08.30 **Session 3.1 – Design Issues for FPSO Topsides**
This session identifies and examines the design issues specific to FPSO topsides based on alternative contract strategies and different risk profiles and lessons learned from a range of FPSO projects. In order to allow successful management of these risks, industry best practice and lessons learned for selected key design issues will be considered in more detail using representative case studies. As a key design issue, the development of the topsides layout will feature in the detailed discussion. Relevant FPSO topsides processes and technologies will be overviewed.
- Tom Arne Kristiansen**
Director, Technical Division
BW Offshore
- 10.00 Break
- 10.15 **Session 3.2 – Interface Management for FPSO Projects – Tools, Procedures and Key Lessons Learned**
This session will cover a range of interface issues that have historically proved problematic in FPSO projects
- Overview of key interface areas on FPSOs – why do interfaces always result in problems in FPSO projects
 - Interface management systems – guidelines for successful interface management systems
 - Topsides-hull system interfaces – review of key systems and associated interface issues
 - Topsides-hull structural interfaces – review of some alternative philosophies
 - Turret system interface checklist
 - Sub-sea system interface checklist
 - General interface issues
 - Risk management – interface management strategies to minimise overall project risk
 - Lesson learned – key interface issues from previous projects
- Tom Arne Kristiansen**
Director, Technical Division
BW Offshore
- 11.45 Break

12.00 **Session 3.3 – The Selection of Oilfield Export Systems**

- Export option considerations
- Storage issues
- Dedicated vs. non-dedicated storage systems
- EWT/marginal field options
- Future developments

Peter Webb

Vice President, Offshore Business Development
Teekay Shipping (Australia) Pty Ltd

13.30 Lunch

14.30 **Session 3.4 – FPSO Field Installation**

- Management and planning
- Safety
- Anchor and mooring installation
- Riser installation
- FPSO installation and hook-up

Max Rochereau

Senior Technical Manager, South America
Acergy Brazil S.A.

16.00 Break

16.15 **Session 3.5 – FPSO Operations and Preparations for Field Start-up**

The importance of operations involvement in a project and in preparation for start-up is often underestimated. This session covers selection of an operating strategy, manning considerations, participation in design, construction and commissioning and the tasks needed to prepare an FPSO and its crew for operations. Examples of best practice developed during several recent project start-ups are included.

David Llewelyn

Engineering and Management Consultant (FPSOs)
David Llewelyn Consult ENK

16.45 **Session 3.6 – Debriefing Session**

17.00 Close of Course

COURSE DIRECTOR

Duncan Peace is Managing Director of Crondall Energy Consultants Ltd, a company specialising in the commercial and technical aspects of field developments utilising floating production systems technology. Until the end of 2000 he was a Vice President with Norwegian FPSO operator Navion, and latterly, a Director of the Pierce Production Company, the company responsible for operation of the Pierce field FPSO. Prior to joining Navion, he was with Brown & Root for 12 years where he was involved in a number of FPSO projects and initiatives (UK, Canada & Brazil). He is a naval architect with a Masters degree in offshore engineering, and a Masters degree in business administration. Since starting Crondall Energy in January 2001, he has undertaken a number of consulting assignments for clients in the UK, Norway, West Africa, Australasia and South East Asia. Assignments include supporting operators with FPSO developments from concept definition to first oil, assisting with the creation of suitable FPSO field development and contracting strategies, concept studies, project reviews and providing banks and investors with market and commercial information in support of various investment evaluations. His current activities include support to major FPSO projects in Norway for Marathon Petroleum Company (Norway), in Australia for BHP, plus projects in the Middle East and Philippines.

LECTURERS

Christopher Carra is a Mechanical Engineer with 20 years experience in the design and testing of floating production systems. He began his career with BHP Petroleum and was involved in the conceptual and detail design of FPSO facilities including Challis, Skua, Griffin, Dai Hung and Buffalo. He also spent two years working in the Gulf of Mexico on deep water projects. Over the last 5 years, Christopher has led the Marine & Structures team for AMOG Consulting and has worked on a wide range of floating production projects from concept through to execution, including permanently moored, disconnectable and DP FPSO developments.

Tom Arne Kristiansen is the Director, Technical Division with BW Offshore.

David Llewelyn's background is in Drilling and Subsea with BP and he was appointed Operations Manager for the Schiehallion FPSO in 1994. Thereafter, he became the Startup co-ordinator for Exxon's Jotun field. This was followed by a similar role in Brazil for Shell/Enterprise Bijupira Salema project. David is the facilitator for the OLF (Norwegian Joint Industry Association) FPSO and Subsea networks and is also consulting for BP, providing advice on FPSO projects in the North Sea and Angola, and for Shell's Flawless Start-up initiative.

Claudio Oliveira. Naval Architect graduated in 1997, Federal University of Rio, post graduated in Petroleum Engineering and MBA. From 1995-2001 he worked in DNV as Ship and Offshore Surveyor. For the period 2001-2005 joined Diamond and SBM, returning to DNV to the position of Project Manager Field of the Floating Production Unit newbuilding P-51. Nowadays Claudio is the Head of Section of the DNV Offshore Units in Operation in Brazil.

Max Rochereau is Senior Technical Manager with Acergy South America. He studied hydraulic engineering at the Grenoble (France) university. He first worked with irrigation and drainage on various projects in the Middle East and Asia. He joined the Acergy (France) group mid 1972 and had the opportunity to work on construction yards and vessels. He was involved in the deep sea works since the mid 90's, accompanying evolution of the art of fabricating and installing permanent structures in deep environment. He was involved in particular with the Girassol and Bonga developments offshore West Africa. Presently detached to the Brazilian branch to provide support to the technical director and transfer knowledge into the newly developed technical department.

Anthony Sipkema has been a HSE professional for 19 years with Shell with assignments in many countries around the world, including China, Oman and Venezuela. Since 1997 he is actively involved in FPSO projects for Shell, as Technical HSE Engineer and since 2006 as HSE Manager for the leased FPSO project for BC-10.

Peter Webb is a qualified Petroleum Engineer, with over 30 years in the oil industry, most of which has been with operators in the North Sea and Australia. He has worked in both large and small oil and gas developments, in technical roles ranging through exploration, development and operations. Currently he is working with Teekay as their VP of Business Development expanding their offshore business unit in the Australasian region with access to their large fleet of high quality oil tankers.

To register please book online at www.ibcenergy.com/fpsobrazil or call +44 (0)20 7017 5518



FPSO Training Course

Monday 12th – Wednesday 14th November 2007

Sheraton Rio Hotel, Rio de Janeiro, Brazil

Terms and Conditions

FEE: 3 Day Course Fee - US\$3200

Fee includes 3 day course, course documentation, lunch, refreshments, drinks reception and the FPSO Dinner on the evening of Day 2.

Payment is required prior to the event.

CANCELLATIONS: Cancellations received in writing before and on Monday 29th October 2007 will be subject to a service charge of US\$200. The full course fee remains payable on and after Tuesday 30th October 2007. Substitutions are welcome at any time.

It may be necessary for reasons beyond the control of the organiser to alter the content and timing of the programme or the identity of the speakers. In the unfortunate event that an event is cancelled Informa UK Ltd are not liable for any costs incurred by delegates in connection with their attendance. This contract is subject to English law.

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November 28 & 29, 2007 – Café Royal, London

This is your opportunity to attend the annual event for the floating production business which continues to attract senior representatives from this exciting yet challenging sector of the oil & Gas industry.

Make sure your company is part of THE floating production event of the year!

For further information contact Wing Yan Lee at wing.yan.lee@informa.com or visit the website at www.ibcenergy.com/fps

VENUE DETAILS

Sheraton Rio Hotel & Resort, Avenida Niemeyer 121, Leblon, Rio de Janeiro 22450-220, Brazil Telephone: +55 (21) 2274 1122

DELEGATE DETAILS (for ease, attach your business card) – Please photocopy form for multiple bookings!

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Name of Company

Department Address

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VAT Reg No Nature of Company Business

PRICES & PAYMENT INFORMATION

Please tick option

☐ 3 Day Course Fee - US\$3200 £
(Fee includes the FPSO Dinner on the evening of Day 2)

TOTAL £

Proof of Payment – Delegates who do not pay with their booking are requested to provide a copy of bank transfer/credit card/cheque details to help payment allocation. Staff at the event will request a credit card guarantee for delegates without proof of payment.

Yes, I agree to the Terms and Conditions as stated on this form

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