

FPSO Training Course

Radisson Blu Boulogne Hotel, Paris ~ December 2016

Session 1.1 Course Introduction and Objectives

Ian Parsons – Crondall Energy Consultants Ltd.

Agenda

- ☐ Safety briefing
- ☐ Objectives of the course
- ☐ Summary of Course Content
- ☐ Speakers
- ☐ "Round-the-room" introductions

Safety briefing & safety moment

Safety moment – learning from industry experience

The Incident

- ☐ 3 members of Heerema Balder DCV crew enter ballast tank for inspections
 - No job safety analysis or toolbox talk carried out
 - No safety harness used
 - 1 man remained adjacent to hatch on manhole watch
- ☐ On exit, crew's gas detector gets stuck in ladder and on trying to free himself falls 10 metres
- ☐ Man was severely injured. Escape from the tank took 4 hours but casualty died after 2 hours

What lessons can be learned

- ☐ No equipment to be carried while climbing on ladders between body and ladder (Working on ladder procedure)
 - All equipment/note pads to be in pockets or clipped to belt away from obstruction
- ☐ Working at height disciplines to be observed in ballast and cargo tanks
 - Safety harnesses and life lines to be used
- ☐ Work permit, Job Safe Analysis, toolbox talk, rescue equipment and rescue plan must be complete and understood before work commence
- ☐ Do not proceed with entry unless you are happy with the situation/precautions

Objectives of the course

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1. To take course delegates through the various key steps, processes and decisions required to deliver an FPSO project:
 2. Use focussed workshop sessions to facilitate discussions around key strategic and technical configuration decision topics.
- ✓ The course will provide a **solid foundation** in all aspects of FPSO projects;
 - ✓ The course **cannot** provide all the answers in the space of three days, - many issues will require project specific consideration & solutions;
 - ✓ However, the course will provide context and a framework to **formulate the right questions** – and will explore the way these questions have been approached and answered during previous analogue projects;
 - ✓ Course speakers will share a wealth of experience on **lessons learned** from a wide range of different projects;
 - ✓ By the end of the course, delegates should be equipped with an **understanding of key FPSO issues** and able to offer **significantly greater value** to any future FPSO projects.

"I found the course to be very well organised and full of interesting and useful information on how to run a successful FPSO development.

Having just finished a project that included a conversion and start-up of an FPSO I can only blame myself for not having participated in this course 3 years ago.

Almost all the mistakes we (and the main contractor) made during the project were clearly highlighted as "don't" during the course; at least now I can say I know the right way forward"

Andrea Vecchi, ENI E&P

Summary of Course Content

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□ Day 1

- Market overview
- Introduction to FPSO design and technology [parts 1 and 2]
- Strategy and commercial considerations
- Interface management

□ Day 2

- Fuel, heat, power and gas strategy
- Design issues for FPSO topsides
- Offshore loading
- Topsides modules and layout
- Safety and environmental issues for FPSO projects
- Safety Issues within topsides design

□ Day 3

- FPSO turrets and swivels
- Regulatory issues
- Legal considerations for FPSO projects
- FPSO hull structures
- Integrity management and life extension strategies
- Key regional differences and trends

□ Day 4

- FPSO conversion experience
- Riser and mooring systems
- FPSO commissioning
- Preparations for start-up and effective operations
- FPSO field installation

**Plus workshops
to put what you
are learning into
practice**

Speakers



Speakers



- ❑ Speakers are all active industry practitioners – they are all working in some capacity within the FPSO sector; they are not full time teachers!
- ❑ They have experience from projects all over the world:
 - North Sea (UKCS & NCS) and Europe;
 - Brazil;
 - Australia,
 - SE Asia & China;
 - West Africa.
- ❑ Speakers come from a wide range of backgrounds and hence perspectives;
- ❑ Opportunity to discuss current topics and learn from experts with years of industry experience on a variety of projects.

Introductions



Round the room introductions



- ❑ Round the room introductions ~ Prepare to stand up and give a brief summary of:
 - Company and your role within the Company and/or project...
 - Experience - related to oil and gas generally – and FPSOs specifically....
 - Involvement in an FPSO project:
 - Past...
 - Present...
 - Future...
 - Expectations of the course....

Course leader – Ian Parsons, Crondall Energy Consultants



I'm a Process Engineer with over 25 years' experience in the upstream oil and gas industry.:

- ❑ Initially with British Gas, I worked in Research and Technology on a variety of projects including the Armada and Rough Fields. Subsequently he worked for BG Exploration and Production as Field Process Engineer for the Rough and Amethyst Fields.
- ❑ Subsequently with Fantoft Process Technologies, WS Atkins & Kongsberg Maritime; I was Lead Process Simulation Engineer for a number of upstream projects. These included floating solutions for the Varg, Terra Nova, Girassol, Atlantis, Na Kika, Rosa Lirio and Bohai Bay developments.
- ❑ I joined Crondall Energy in 2009 and I'm involved with the technical and commercial aspects of many field developments using floating production systems.
- ❑ I'm a chartered engineer & scientist, a Fellow of the IChemE and I have a BSc and PhD in Chemical Engineering.



Crondall Energy?



Independent technical & strategic consulting organisation

Global service from offices in Europe, Asia, Australia and USA

Focussed on floating production and subsea solutions

Facilities development; strategic and commercial processes

Global perspective

Experience of projects on a worldwide basis

Experienced team

Concept & front end engineering to delivery support

Comprehensive technical and economic knowledge base

Extensive networks within floater & subsea marketplace

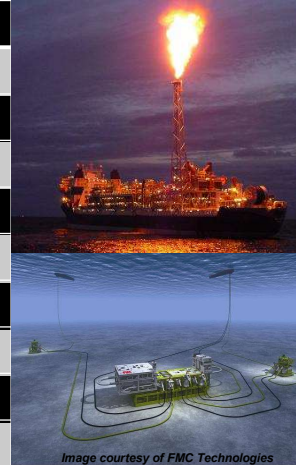


Image courtesy of FMC Technologies

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For further information on our services go to:

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Any questions?

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