PETROSYNC
Synchronize Your Petroleum Skills

Investigating Offshore & Marine Incidents to Root Cause

Prevent unsafe incidents through effective investigation and cause analysis
25TH to 29TH MAY 2015 at KUALA LUMPUR, MALAYSIA

PetroSync Distinguished Instructor
PETER BANTICK, Class 1 Marine Engineer
Marine Safety Consultant & Director
PSB Marine Consulting

Case Studies, Discussions, & Practical Exercises!

- Accomplished safety consultant with over 45 years of experience in marine operations, specifically in process safety and HSE
- Class 1 qualified Marine Engineer with 37 years with BP Shipping and the BP Group Managing, Promoting and Developing Safety, HSE and Loss Control in Ship Operation, Ship Repair, Ship Build, Exploration, and Downstream Operations
- Notable experience in developing, introducing, monitoring and improving HSE Management and Control Systems. Key achievements include:
  - Radically modernised the BP Shipping Incident Investigation System to require all incidents to be reported and investigated to Basic Cause with Corrective Action Plans detailing responsibilities and time scales
  - Directed the project to deliver a Total Loss Control philosophy to the Management of BP Shipping oil and gas tanker fleet

Masterclass Benefits

- PLAN effective incident investigation by understanding the key requirements, the significance of timeline, and the importance of involving all parties during the investigation
- EXECUTE investigation with the right techniques during stages of onsite investigation, evidence gathering, interview, and data analysis
- IDENTIFY direct and indirect causes of the incident through effective data processing, skills gap analysis, and utilization of investigation systems
- LEARN from the best practices in incident investigation and lessons learnt from maritime accidents
- UNDERSTAND how to investigate to root causes and so to gain insights to prevent repeat accidents

Specially Designed For

The course is designed for, but not limited to PSM, HSE, Process Managers/Engineers, and those who have roles in investigating or evaluating safety-related incidents.

- Ship & Vessel Owners, Managers, & Superintendents
- Deck & Engine Officers, Marine Engineers
- PSM & HSE Managers/Engineers
- Operations Managers/Engineers
- Process Managers/Engineers
- Control, Monitoring, Emergency Response
- Legal Advisors & Insurance Execs

Supported by

INVESTIGATING OFFSHORE & MARINE INCIDENTS TO ROOT CAUSE

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Course Overview

Offshore and marine operations are exposed to higher risks and hazards, which have led to major disasters in the Oil and Gas industry. These disasters are products of recurring minor incidents unprevented due to poor investigation practices, which have not been able to address the root causes of such incidents.

This program aims to provide the attendees the key skills in conducting effective INCIDENT INVESTIGATION at the same time identify the underlying ROOT CAUSE to prevent unsafe accidents to recur. The first part of the program covers the investigation principles, workflow, key techniques , and data processing. While commercial investigation systems are discussed, the program will prompt and lead users to an investigation thought process. This will enable attendees to further improve the data input and the utilization of any existing commercial programs used. The program also examines ROOT CAUSE ANALYSIS across multitude of situational incidents and case study discussions. After attending this program, attendees will be confident to conduct and lead investigations. It shall also link Incident Investigation process to a step further of Root-Cause Analysis, to provide insights on safety system gaps. Comprehensive investigation techniques shall be provided alongside with a variety of offshore and marine case studies and simulated group exercises throughout all sessions. Attendees are encouraged to bring along their Incident Reports for discussion by the course and evaluation as to were the correct Causes and Action Plan identified.

Course Content

DAY ONE: INCIDENT INVESTIGATION PRINCIPLES & PREPARATION

Why Investigate
Crime / Discipline / Safety
Code for Investigation for Marine Casualties (Flag State)
Protection of Seafarers and the Environment
ILO Conventions
IMO Conventions, SOLAS, MARPOL, Loadline, STCW
ISM Code
Prevent Recurrence
Learn Lessons ?? Correct Mistakes

CASE STUDY: The following incidents will be used to highlight the quantum changes they brought to the O&M industry. In small groups attendees will discuss the incidents and present their conclusions on the changes they brought about their merits and demerits.
- Herald of Free Enterprise (Ferry rollover at Zeebrugge - 6th March 1987)
- Exxon Valdez (Grounding and Oil Spill)

GROUP DISCUSSION: What are the requirements that need to be met to set up an investigation into a variety of actual offshore operation incidents.

Preparing to Investigate
Appointment & Authority • Qualification Knowledge • How Many • Equipment • Getting There • Message to Ship • Preserving Site and Evidence • Risk Assessment of Site • When to Start •

DAY TWO: INCIDENT INVESTIGATION WORKFLOW & TECHNIQUES

incident investigation Workflow
Definitions of the Process
Who Should Investigate
Where and When to Start
Team Approach
Pros and Cons of "Individual" v "Team"
Onsite Risk Assessment **(with Practice)**
Evidence Gathering and Recording
Interview Technique **(with Practice)**
Understanding the Evidence
Actions at the Scene
    Preserving - Clean Up - Making it Safe
Initial Analysis
    Time Line / Conflicts in Data / Re-interview / Re-check Evidence

GROUP EXERCISE:
Onsite Risk Assessment - Working small groups attendees will conduct a brief Risk Assessment of a part of the course venue, with feedback to the course and comparison with the course leaders findings

Interview Techniques - Using actual offshore incident attendees will be given some detail on the incident and working in small groups prepare their questions to ask of the characters involved in the incident. The course leader will play all the character parts adjusting his answers to reflect how the questions are asked to simulate investigation challenges.

DAY THREE: DATA PROCESSING AND INVESTIGATION SYSTEMS

Processing Data
Is All Data collected • Identify gaps in individual or Team Skills or Knowledge and obtain same • Revisit Interviews • Rebuild Time Line • Compile Initial Report for CEO • Prioritise Further esearch - Get Authorisation and Finance •

GROUP EXERCISE: Processing the Data in Classic Incidents to put it all into practice. Using Exxon Valdez incident the course leader will lead a discussion to uncover the "hidden" detail behind the headline stories of these events.

CASE STUDY (Analysis of Offshore Incidents):
Piper Alpha - North Sea Oil Production Platform - fire & total loss - 6 July 1988 - 167 deaths and 61 survivors. Deepwater Horizon (Macondo) - well blow out and environmental pollution disaster - 20th April 2010 - 11 deaths. BP Thunderhorse - Semisubmersible production platform - Mid July 2005 hurricane Dennis passed through GoM. Staff returned to the rig on July 12th to find it listing at 20 to 30 degrees. Now in production at 250,00 bpd.

Safety Investigation Systems (Commercial or Bespoke)
Core Analytical Technique - *Event & Causal Factor Analysis, Event Charting & Analysis, Barrier Analysis, Change Analysis*
Complex Analytical Techniques - *Fault Tree Analysis, MORT (Management Oversight and Risk Tree), PET (Project Evaluation Tree Analysis)*
Specific Analytical Techniques - *Human Factors, Integrated Accident Event Matrix, Failure Modes & Effect Analysis, Common Cause Failure, 72 Hour Profile, Materials & Structure, Scientific Modellig Root Cause Analysis)*

Commercial investigation systems are generally based around a computer program into which the user plugs the data. This session will dissect various commercial systems noting unique components and similarities. Attendees will be prompted and led to an "investigation thought process." By further analyzing what the philosophy of Incident Investigation is, attendees will gain a better understanding of what their commercial investigation system is doing with the data they input.

ILCI - International Safety Rating System • DNV - GL ISRS • Kelvin - TOP SET • Tap Root • Dupont - 8 Point Actions • Forensic Investigation •

DAY FOUR: REPORT WRITING || INTRODUCTION TO ROOT CAUSE

Compiling Full Report • Report Writing for Mariners • Fact or Fiction • Hindsight • Who is Report for - Company of Flag State • Report Format (Summary Outline, Set Scene of Location, Describe Site, Circumstances, Events in Lead Up, Analyses on FACTS, Conclusion and Recommendations)

Root Cause • Incorporating Root Cause • When to Use Full System • Types of RCA • Potential for Higher Learning • Facilitation • Cause and Effect Tree Diagram/Chart • Causal Factor Charts • Root Cause Maps • Root Cause Critical Factors • Group Exercise • Utilise new knowledge to Investigate•

Working in small groups attendees will identify where and the type of incident(s) that require a different approach. CASE STUDY: The incidents Herald of Free Enterprise and Exxon Valdez will be re-evaluated to move from initial causes to deeper Root and Systemic Causes.

DAY FIVE: FUNCTIONS AND PROCESS OF INVESTIGATION

Root Cause (2)
Investigating Procedures
Investigating Management System
Investigating Outside the Box
Don't Stop Investigating too Soon
Accident Causation Model
Accident Investigation Model
Events Charting
Barriers to Investigating and Reporting

CASE STUDY: The incidents Piper Alpha, Deepwater Horizon and Thunder Horse will be re-evaluated to move from initial causes to deeper Root and Systemic Causes.

Getting it Right
Incident Response • Fact Finding • Good Interviews • Use Experts if not in Team • Use Manufacturers • Use Facilitator• Analyse the FACTS • Produce Conclusions and Recommendations on Proven FACTS

GROUP EXERCISE: The session will pull together all the information put forward to the course and present it as a model. Attendees will be asked to challenge this model and justify the variances required for their business stream.

GROUP DISCUSSION: Attendees are welcome to bring their own safety data and incident reports for analysis and improved methodological evaluation.

PetroSync Distinguished Instructor

PETER BANTICK, Class 1 Marine Engineer

Marine Safety Consultant & Safety Manager
PSB Marine Consulting

Peter Bantick is a recognized safety consultant with over 45 years of experience in marine operations, specifically in process safety and HSE. He has spent the majority of his career with BP shipping, having served various positions in safety management. Peter was with BP for 37 years before running his own consultancy firm, PSB Marine Consulting, which provides consulting and training solutions to various global marine operating companies.

With his extensive experience of safety system in marine operations, he has helped developed and launched safety systems for difference companies. His recent projects as a consultant include the following:

- **BP Exploration (Azerbaijan Marine & Subsea)**

Developed HSE procedures, promoted HSE awareness, developed & provided internal training, and conducted subcontractor audits and reviewed their HSE documentation. Lead and coordinated HAZID, HAZOP and Risk Reviews.

- **Albwardy Marine Engineering LLC (Dubai)**

Developed a new Company HSE Management system to OHSAS 18001 format.

- **MODEC International LLC (Houston and Singapore)**

Prepared HSE Management System for FPSO Conversion Project. Conducted subcontractor auditing, shipyard HSE bid evaluation, HSE Officer Selection, and Training Program Development.

Aside from the above experience, Peter's time with BP proved to be of great ground for his extensive knowledge in marine safety operations. Peter started as a Safety Engineer who coordinated a company-wide program of Technical Total Loss Control Audits. After which he was the BP Shipping Safety Superintendent for Fleet Operations. During this time, he directed a project to deliver Total Loss Control philosophy to the HSE Management reporting the oil and gas fleet. From that program, a historical record of the company's serious accidents was collated as a learning tool. Peter's career with BP has also designated him to several international projects in Turkey, Korea, China, and Japan. He has worked intensely with HSE Vessel teams in developing safety management systems and safety improvement according to BP Group Standards.

During his time with BP, he has achieved and contributed to the improvement of the safety protocols in BP Shipping:

- **Modernized the BP Shipping Incident Investigation System** to require all incidents to be reported and investigated to Basic Cause level with Corrective Action Plans detailing responsibilities and time scales
- **Directed the project to deliver a Total Loss Control philosophy t**o the Management of BP Shipping oil and gas tanker fleet, resulting in the reporting of high levels of Property Damage and Near Miss Incidents
- **Coordinated a program of Technical Total Loss Control Audits for BP Oil UK** at refineries, lubricating oil manufacturing sites, oil terminals, oil depots and retail sites.

TESTIMONIALS:

"Able to interact with industry expert and share experiences and best practice" - Sembawang Shipyard Pte Ltd
"Extremely knowledgable and experienced instructor" - Arab Shipbuilding and Repair Yard (ASRY) Bahrain
"What I have learnt will help us with implimention of systems in our facility" - Great Offshore Ship Repairs (India, Malaysia and UAE)

Course Details

Title : INVESTIGATING OFFSHORE AND MARINE INCIDENTS TO ROOT CAUSE
Date : 25th - 29th May 2015
Location : Kuala Lumpur, Malaysia

INVESTMENT PACKAGES

Investment Package	Deadline	FULL MASTERCLASS
Standard Price	22nd MAY 2015	SGD $ 5,995
Early Bird Offer	24th APR 2015	SGD $ 5,795
Group Discount (3 or more Delegates)	22nd MAY 2015	10% discount for groups of 3 registering from the same organization at the same time

Group Discount is based on Standard Price

* To enjoy the promotion & discount offer, payment must be made before deadline
* For 7 or more delegates, please inquire for more attractive package.
* Prices include lunches, refreshments and materials. Promotion & discount cannot be combined with other promotional offers.
* Important: Please note that registration without payment will incur a SGD 200 administration fee.

DELEGATES DETAILS

1st Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐
Direct Line Number: _____ Email: _____
Job Title: _____ Department: _____
Head of Department: _____

2nd Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐
Direct Line Number: _____ Email: _____
Job Title: _____ Department: _____
Head of Department: _____

3rd Delegate Name _____ Mr ☐ Mrs ☐ Ms ☐ Dr ☐ Others ☐
Direct Line Number: _____ Email: _____
Job Title: _____ Department: _____
Head of Department: _____

INVOICE DETAILS

Attention Invoice to: _____
Direct Line Number: _____ Fax: _____
Company: _____ Industry : _____
Address: _____ Postcode: _____
Country: _____ Email: _____

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

PAYMENT METHODS

☐ By Credit Card :
Please debit my credit card: ❑ Visa ❑ MasterCard ❑ AMEX Security Code: ☐☐☐
Card Number: ☐☐☐☐-☐☐☐☐-☐☐☐☐-☐☐☐☐ Expiry Date: ☐☐☐☐
Name printed on card: _____

☐ By Direct Transfer : Please quote invoice number(s) on remittance advice
PetroSync Global Pte Ltd Bank details:
Account Name: PetroSync Global Pte Ltd
Bank Name : DBS Bank Ltd
Bank Code : 7171 • Bank Swift Code : DBSSSGSGXXX • Branch code : 288
Account No : • SGD : 288-901898-0 • USD : 0288-002682-01-6
Bank Address : 12 Marina Boulevard, Level 3. Marina Bay Financial Centre Tower 3. Singapore 018982

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

PROGRAMME CONSULTANT

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TERMS AND CONDITIONS

DISCLAIMER

Please note that trainers and topics were confirmed at the time of publishing; however, PetroSync may necessitate substitutions, alterations or cancellations of the trainers or topics. As such, PetroSync reserves the right to change or cancel any part of its published programme due to unforeseen circumstances. Any substitutions or alterations will be updated on our web page as soon as possible.

DATA PROTECTION

The information you provide will be safeguarded by PetroSync that may be used to keep you informed of relevant products and services. As an international group we may transfer your data on a global basis for the purpose indicated above. If you do not want us to share your information with other reputable companies, please tick this box ☐

CANCELLATION POLICY

You may substitute delegates at any time as long as reasonable advance notice is given to PetroSync. For any cancellation received in writing not less than fourteen (14) working days prior to the training course, you will receive **credit voucher** less a SGD $200 administration fee and any related bank or credit card charges.

Delegates who cancel less than fourteen (14) working days of the training course, or who do not attend the course, are liable to pay the full course fee and no refunds will be granted.

In the event that PetroSync cancels or postpones an event for any reason and that the delegate is unable or unwilling to attend in on the rescheduled date, you will receive a credit voucher for 100% of the contract fee paid. You may use this credit voucher for another PetroSync to be mutually agreed with PetroSync, which must occur within a year from the date of postponement.

PetroSync is not responsible for any loss or damage as a result of the cancellation policy. PetroSync will assume no liability whatsoever in the event this event is cancelled, rescheduled or postponed due to any Act of God, fire, act of government or state, war, civil commotion, insurrection, embargo, industrial action, or any other reason beyond management control.

DETAILS

Please accept our apologies for mail or email that is incorrectly addressed.
Please email us at registration@petrosync.com and inform us of any incorrect details. We will amend them accordingly.

CHARGES & FEE(s)

- For Payment by Direct TelegraphicTransfer, client has to bear both local and oversea bank charges.

- For credit card payment, there is additional 4% credit card processsing fee.

Course Confirmation

I agree to PetroSync's terms & conditions,payment terms and cancellation policy.

Authorized Signature : _____

PAYMENT TERMS : **Payment is due in full at the time of registration. Full payment is mandatory for event attendance.**