



Society of Petroleum Engineers

# Workshop

# Process Safety & Integrity

**Important Deadlines:**  
Super Early Bird: 9 September 2015  
Early Bird: 9 October 2015  
Registration: 9 November 2015  
**Savings up to USD 200 for Early Birds!**

7 - 9 December 2015 | Aloft Hotel, Kuala Lumpur, Malaysia

## Workshop Description

Maintaining and managing the safety integrity of operating systems and processes to the highest possible standards is a key concern for the process industries including the oil and gas, petrochemical and chemical sectors. How does one demonstrate that the emphasis of process safety and asset integrity is maintained to prevent unplanned releases which could result in a major incident?

## Workshop Objectives

The key aim of the workshop is to provide a platform to all participants to discover innovative measures on how to achieve process safety excellence in a globally competitive environment, which remains a major test for the process industry.

## Who Should Attend?

This workshop will be of interest to engineering managers, projects managers, project engineers, reservoir engineers, production managers, HSE managers, operation engineers, loss prevention engineers, service companies and consultants.

## Why You Should Attend?

This workshop presents a unique opportunity for participants to broaden their understanding into the current thinking around the important topic of Process Safety and Technical Risk Assessment to share best practices with our discussion leaders, program committee and fellow participants.



## Workshop Venue:

### Aloft Hotel Kuala Lumpur

No. 5 Jalan Stesen Sentral  
50470 Kuala Lumpur, Malaysia  
Telephone: +603.2723.1188 Fax: +603.2723.1588  
<http://www.aloftkualalumpursentral.com>

## Documentation:

- Proceedings will not be published; therefore, formal papers and handouts are not expected from speakers.
- Work in progress, new ideas, and interesting projects are sought.
- Note-taking by participants is encouraged. However, to ensure free and open discussions, no formal records will be kept.

## Workshop Deliverables:

- The committee will prepare a full report containing highlights of the Workshop discussions. This report will be circulated to all attendees.
- PowerPoint presentation materials will be posted on a specific SPE URL site and made available to attendees after the Workshop. Provision of the materials by discussion leaders will signify their permission for SPE to do so.

## Commercialism:

In keeping with the Workshop objectives and the SPE mission, excessive commercialism in posters or presentations will not be permitted. Company logos must be limited to the title slide and used only to indicate the affiliation of the presenter and others involved in the work.

## Attendance Certificate:

All attendees will receive an attendance certificate attesting to their participation at the Workshop. This certificate will be provided in exchange for a completed Workshop Attendee Survey Form.

## Continuing Education Units:

This Workshop qualifies for SPE Continuing Education Units (CEU) at the rate of 0.1 CEU per hour of the Workshop.

## Transportation/Visa:

Delegates are advised to book their international or domestic airline tickets early from their country/city to Kuala Lumpur, Malaysia. Delegates travelling to Malaysia must be in possession of passports valid for at least six (6) months with proof of onward passage, either return, or through tickets. Contact your local travel agent or the Malaysian Embassy for information on visa requirements to Malaysia before your departure.

## Dress Code:

Casual clothing is recommended. The Workshop atmosphere is informal.

The Society of Petroleum Engineers (SPE) is a not-for-profit organization. Income from this event will be invested back into SPE to support many other Society programs. When you attend an SPE event, you help provide even more opportunities for industry professionals to enhance their technical and professional competence. Scholarships, certification, the Distinguished Lecturer program, and SPE's energy education program Energy4me are just a few examples of programs that are supported by SPE.

## Workshop Registration Fees (Inclusive of 6% GST):

### Super Early Bird Registration submitted on/before 9 September 2015

SPE MEMBER : USD 1,750.00/person  
NON MEMBER : USD 1,950.00/person

### Early Bird Registration submitted on/before 9 October 2015

SPE MEMBER : USD 1,850.00/person  
NON MEMBER : USD 2,050.00/person

### Registration after 9 October 2015

SPE MEMBER : USD 1,950.00/person  
NON MEMBER : USD 2,150.00/person

## Fee includes the following:

- Two and a half (2.5) day registration fee for all Workshop sessions;
- Welcome Reception/Dinner on Monday evening;
- Daily coffee breaks and luncheons;
- Workshop Workbook and Certificate of Continuing Education Units (CEU).

## Registration Policy:

- Registration fee MUST be paid in advance for attending the Workshop.
- Full fixed fee is charged regardless of the length of time registrant attends the Workshop.
- Fixed fee cannot be prorated or reduced for anyone (Workshop chairpersons, committee members, speakers, discussion leaders, students and registrants).
- Attendees are expected to attend all Workshop sessions and are not permitted to attend on a partial basis.

## Notes:

- **Registration fee does not include hotel accommodation.** However, SPE will provide hotel recommendations upon receipt of your registration.
- Registration fee does not include meal costs for additional family member(s).
- Substitutions will not be accepted without prior Programme Committee approval.
- No refund will be issued if a registrant fails to show up at the Workshop on-site.

## Attention to Non-Members

### Join Our Worldwide Membership!

Non-member registrants are eligible for one (1) year SPE Membership at no additional cost. To take advantage of this offer, you must fill out the membership application form onsite.



Society of Petroleum Engineers

# Workshop

## Process Safety & Integrity

7 - 9 December 2015 | Aloft Hotel, Kuala Lumpur, Malaysia

### Technical Programme Committee

Co-chairperson  
**Haslina Abdullah**  
Head, Operations Integrity  
**PETRONAS**

Co-chairperson  
**Christina Phang**  
Managing Partner - Asia Pacific, Global Risk  
**Environmental Resources Management (ERM)**

**Claude Labrie**  
Technical Director, Global Risk  
**Environmental Resources Management (ERM)**

**February Yoon**  
HSSEAI MS Lead / BMS Project Leader  
**Petrofac Malaysia**

**Irlan Amir**  
HSE VP for AP Region  
**Schlumberger**

**King Lee**  
Product Development Manager  
**Lloyd's Register**

**Leong Weng Fei**  
Director Upstream Process Safety - AP & ME  
**Baker Hughes**

**Michael Johnson**  
Senior Principal Consultant  
**DNV GL**

**Nur Atikah Abu Bakar**  
HSE Risk Management Manager  
**PETRONAS**

**Peter Harris**  
Contractor  
**Independent**

**Shi-Song Ngiam**  
Operational Integrity & Engineering Manager  
**Petrofac Malaysia**

**S L Sreedhar**  
Principal Engineer – Process Safety Management  
**Santos Ltd.**

Workshop Advisor  
**Ash Stanley**  
HSEQ Director - AP & ME  
**Subsea 7 Singapore**  
SPE Regional Technical Advisory Committee (RTAC)

### Preliminary Daily Activities and Technical Agenda

For updated technical information, visit [www.spe.org/events/15ala2](http://www.spe.org/events/15ala2)

#### Monday, 7 December 2015

0800 – 0900 hours SPE Registration/Poster Setup/Welcome Breakfast & Networking

0900 – 1000 hours **Session 1: Introduction/Opening & Keynote Address**

1000 – 1030 hours Group Photo/Coffee Break

1030 – 1230 hours **Session 2: Process Safety Management Systems**

While the importance of Process Safety Management (PSM) is widely-recognised in the oil and gas industry, and its key elements are relatively well-defined during design and engineering stages, the implementation of an effective PSM system during the operational phase still remains a challenge for many operators. Majority of past process safety related incidents, including recent ones, are attributed to deficiencies identified in the usual suspects, e.g. commitment, control of work, culture, competency management, change management and mechanical integrity management. This session will discuss the challenges and strategies to ensure successful implementation of PSM programs, including looking into the way it is cascaded in the organizations, monitored and aligned with other business processes. We aim to discuss the current initiatives and challenges faced by industry to enable us to draw lessons to address any perceived shortfalls.

1230 – 1330 hours Luncheon

Register Online at <http://www.spe.org/events/15ala2>



1330 – 1530 hours

### **Session 3: Technical Risk Assessment**

Risk assessment is a critical element to enable our industry to implement a risk based approach to process safety risk management. This session will focus on developments and advances in process risk assessment. With the evolution of process safety in the oil and gas and related industry, emphasis will be given towards application of practical process risk assessments for the various development phases of a project as well as during operations. The discussions will cover key issues from identification of hazards, use of appropriate failure frequencies and deployment of different consequence modelling approaches.

1530 – 1545 hours

Coffee Break

1545 – 1745 hours

### **Session 4: Accidental Loads and Response Assessment**

The rationalisation of risk mitigation features and their performance assurance are deliverables critical to project schedule and are sensitive to change, imposing the requirement for an effective multiple-discipline and multiple-party collaboration for project success. With the advances in computational modelling techniques, the process is becoming more sophisticated, and as such more dependent on effective methodologies. This session will present and discuss methodologies applied for the specification of Design Accidental Loads (DAL) addressing fire and explosion hazards. It will also present and discuss methodologies and study cases for the assessment of the response of safety critical elements such as structures and pressure containment parts to the specified accidental loads, addressing the optimisation of means required to assure continued integrity.

1745 – 1830 hours

### **Poster Session**

1830 hours

Welcome Reception/Dinner

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## **Tuesday, 8 December 2015**

0830 – 1030 hours

### **Session 5: Technical Integrity Assurance - Part 1**

“Maintaining it right” will be the key topic of this session, focusing on the management of safety critical element (SCE) in preventing/mitigating major accident events, especially in managing ageing assets with the current economic climate. Part 1 of the discussion will be centered on identification of SCE, the challenges in establishing detailed operations performance standards and verification/validation processes as part of assurance process to ensure continuous technical integrity assurance.

1030 – 1045 hours

Coffee Break

1045 – 1245 hours

### **Session 6: Technical Integrity Assurance - Part 2**

Part 2 of this discussion will expand into sharing by operators on the challenges, lessons learnt and success stories on SCE management.

1245 – 1345 hours

Luncheon

1345 – 1545 hours

### **Session 7: Risk Reduction Strategies – Breakout Session**

Cost optimisation could potentially have an impact on process safety and getting this wrong can result in adverse consequences for a business up to a point of threatening its reputation and survival. There is a clear need however to continually demonstrate that process safety risks associated with a project or operating facility are reduced to a level that is As Low As is Reasonably Practicable (ALARP). The expenditure of implementing risk reduction measures however should be commensurate with the risk reduction that is achievable. Participants will review several case studies from industry and will have an opportunity to discuss what strategies to implement by considering the cost benefit of proposed risk reduction measures.

1545 – 1600 hours

Coffee Break

1600 – 1800 hours

### **Session 8: Human Factors**

Human factors influence the interactions of individuals with Plant, People and Process. Human factors contribute significantly to the success or failure of process safety programs in the process industries and represent an area needing the significant attention to reduce risk. Incidents caused by human errors will be greatly reduced with an effective design, competence management, improved operating procedures and efficient management structure.



Human factor engineering is also one of the important elements that has recently become a focus in the industry as the failure to incorporate effective human interface into the design has contributed to the occurrence of several major incidents. This session will elaborate the efforts implemented by the industry towards managing human factors for example designing it right the first time - integrating human factors into the design, and also covers the challenges for implementing effective human factors initiatives in the existing facilities.

Evening

Dinner on own

## Wednesday, 9 December 2015

0830 – 1030 hours

### Session 9: Emergency Response

This session will present a summary of the risk registers from the process risk assessment and how the emergency response planning is built on different risk scenarios. Real disaster that involved fatalities and trace the event through the investigation and Coronial Inquest where the inadequacy of planning, standards interpretation and execution led the Coroner to recommend legislation to be re-written to be in-line with contemporary risk based thinking. It will continue with speakers, expert in planning and executing offshore medical emergency response and Crisis and Business Continuity in the offshore oil and gas environment. The session is structured to foster discussion into planning for tangible emergency situations and executing drills of the arrangements at the site, in the office and in the Boardroom.

1030 – 1045 hours

Coffee Break

1045 – 1245 hours

### Session 10: Key Performance Indicators

Based on the truism that “you cannot manage what you cannot measure”, one critical element in process safety management is the establishment of meaningful KPIs for measuring PSM performance and drive improvements in the short to long term. Process Safety Key Performance Indicators (PSKPIs) provide an indication of how well the barriers or hazard controls related to preventing process safety incidents and the mitigation measures preventing escalation are working. This session will discuss the leading and lagging indicators of process safety that are established across the industry, explore how they are interpreted and be used more efficiently and effectively, the challenges in implementation and how their use can be encouraged.

1245 – 1315 hours

### Session 11: Summary and Wrap-up

1315 – 1430 hours

Luncheon

1430 hours

**Workshop Concludes**

## Poster Solicitation and Information

All participants are encouraged to prepare a poster for the Workshop. Posters will be presented at an assigned time and open to frank discussion and presentation of unconfirmed or partial results. Posters will be on display for the entire Workshop period. Presentations on both research and field experience are solicited.

When preparing your poster:

- Avoid commercialism. No mention of trademarks/product name.
- Poster size should be approximately 0.8m x 1.2m (W x H) or size A0 in portrait layout.
- Identify topic by title, presenter, affiliation, address, and phone number.
- Include a brief abstract that summarizes the technology to be addressed.
- Make the display as self-explanatory as possible.
- Place the information sequentially; beginning with the main idea or problem, method used, result, etc. (Draw a plan keeping the size and number of illustrations in mind).
- Keep illustrations simple by using charts, graphs, drawings, and pictures to create interest and visually explain a point.
- Use contrasting colours.
- Use large print for narrative materials. (We suggest a minimum of 24 points or 3" high letters for the title).

Note that the Workshop Programme Committee will review all poster abstracts/materials prior to display, and reserves the right to refuse permission to display any poster considered by the committee to be commercial in nature.

If you are interested in participating, please email your proposed topic with a short abstract (between 200-300 words) to **SPE Event Coordinator, Ruth Dass at [rsdass@spe.org](mailto:rsdass@spe.org) by 9 October 2015.**



# SPE Workshop: Process Safety & Integrity

7 – 9 December 2015 | Aloft Hotel, Kuala Lumpur, Malaysia

Society of Petroleum Engineers

## Registration Form

SPE Member:  Yes Membership No. \_\_\_\_\_  No

Name: \_\_\_\_\_  
(First/Forename) (Middle) (Last/Family Name)

Position: \_\_\_\_\_ Company: \_\_\_\_\_

Address: \_\_\_\_\_ Town/City: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Would you be willing to give a brief (10-15minutes) presentation \_\_\_\_\_ (Yes/No)? If yes, please attach the topic with a short abstract of your proposed presentation. One of the Programme Committee members will contact you to discuss your presentation.

*Important: Registrants for SPE Workshops are accepted on the basis of information submitted by each registrant.*

**Technical Disciplines (Check One)**

- Drilling and Completions  Health, Safety, Security, Environment and Social Responsibility  Management and Information  
 Production and Operations  Projects, Facilities and Construction  Reservoir Description and Dynamics

**Primary Responsibility (Check One)**

- Drilling  Economics  Geology  Geophysics  Management  
 Operation  Production  Reservoir  Surveillance  Other \_\_\_\_\_

**List background and experience. (Use additional paper if required).**

**List your expectation for the Workshop, so that the committee can tailor a portion of the Workshop to answering attendees' concerns. (Use additional paper if required).**

Non-Residential Registration Fees: (Inclusive of 6% GST)	Super Early Bird Registration on/before 9 September 2015	Early Bird Registration on/before 9 October 2015	Registration after 9 October 2015
<b>Workshop Only</b> (Fee includes all workshop sessions, workbook, certificate, 1 welcome reception / dinner, 3 luncheons and daily coffee breaks.) <b>Registration does not include hotel accommodation.</b>			
(Please select appropriate box)			
<input type="checkbox"/> SPE Member	USD 1,750.00	USD 1,850.00	USD 1,950.00
<input type="checkbox"/> Non member	USD 1,950.00	USD 2,050.00	USD 2,150.00

**Payment by Telegraphic Transfer**

Telegraphic Transfer (Bank details will be provided on the tax invoice).

**Payment by Credit Card**

Credit Card Payment will be in U.S. Dollars only

- American Express  MasterCard  Visa  Diners Club

Card Number:  /  /   
Expiration Date (mm/yy)

Security Code (3 digits on back of card / 4 digits on the front of Amex):

Credit Card Billing Address & Zip/Postal Code

Name of Card Holder

Signature

**Note: Forms will not be processed and space cannot be guaranteed unless accompanied by payment for total amount due.**

**Cancellation Policy:**

- a) A processing fee of **US\$150.00** will be charged for cancellations received before the registration deadline of **9 November 2015**.
- b) Cancellation received after the registration deadline of **9 November 2015**, a 25% refund will be made to the registrant.
- c) No refund on cancellation received seven (7) days, **30 November 2015**, prior to the starting of the Workshop date.
- d) Substitutions will not be accepted without prior approval from the Programme Committee.
- e) **No refund** will be issued if a registrant fails to show up on-site.

**This form may be used as a company invoice.**

Mail completed registration form with remittance and any supporting material to:

**Society of Petroleum Engineers**

Level 35, The Gardens South Tower, Midvalley City  
 Lingkaran Syed Putra, 59200 Kuala Lumpur, Malaysia.  
 Tel : 60.3.2182.3000 Fax : 60.3.2182.3030 Email : [spekl@spe.org](mailto:spekl@spe.org)