

Process Safety Management Best Practices

This two-day training will assist production, technology and safety management professionals of process industry to understand activities covered by Process Safety Management, including process hazard analysis, change management, Pre-startup Safety Review, to control major accident risk.

Shanghai, China

15th&16th, December, 2011



Your International Facilitator:

John Zhao

Senior Process Safety Consultant

Shagle is a specialized independent consulting company to provide process safety consulting, providing customers with process safety technology and process safety technology management services, including: HAZOP, LOPA, SIL, consequence analysis, PSM auditing, etc.

John's experience:

- Provided HAZOP Leader training to more than 100 engineers and technicians in 2010.
- Provide a number of PSM audits for subsidiary companies of Sinochem, China National Petroleum Group in 2010.
- Clients include China National Petroleum, Sinochem, CNOOC, China Guangdong Nuclear Power Engineering, Guangdong LNG, Oriental Petrochemical, SinoLegend, Roquette, etc.

Course Description:

In order to meet the increasingly fierce competition, the device in process industry is becoming increasingly large, complex and flexible. Major accident risk management from the process and technology becomes a huge challenge. How to effectively and efficiently manage major accident risks, to ensure profitability and competitiveness while control risks at the same time, risk-based Process Safety Management becomes a tool must be mastered by production, engineering and safety management personnel in process industry.

This course will explore how to use globally recognized Process Safety Management methodologies and real case studies to manage major accident risks of process.

What the Seminar Will Help You Achieve:

- Understand the necessity and importance for Process Safety Management
- Understand the elements of Process Safety Management
- Understand the definition of safety culture
- Understand the basis of safety culture
- Understand the principles ACARP
- Understand measurement of safety culture
- Understand the process of hazard analysis
- Master simple HAZOP analysis
- Understand the requirements and regulations on operating procedures
- Understand the implementation of SOP project
- Grasp good SOP developing methodology
- Understand risk-based PSSR
- Choose different PSSR tools based on risks
- Understand device integrity management
- Learn changes and RIK
- Grasp the difference between change and RIK
- Master the development of change management processes

Pre-Course Questionnaire

In order to tailor this course precisely to your needs, the course leaders would value information on your knowledge, experience and requirements.

Day 1

Module 1 - Process Safety Introduction:

Understand the necessity and importance of Process Safety Management from risk perspective; simply understand the elements of Process Safety Management

- Question one: what is risk?
- Question two: which industry is the most dangerous?
- Question three: is chemical industry a safe industry?
- Question four: which are at greater risk?
- Question five: why a major accident would happen?
- Question six: how to avoid major accidents?
- Question seven: what is Process Safety?
- Process Safety Management system

Module 2 - Process Safety Culture

Understand the definition of safety culture; understand the basis of safety culture; understand ACARP principle; understand safety culture measurements.

- Example 1-3
- What is culture, business culture, safety culture
- Case - decision making of spacecraft
- Business culture vs. Safety culture
- Basis of safety culture
- ALARP vs. ACARP
- Safety culture model and measurement

Module 4 - Process Hazard Analysis

Understand the process hazard analysis; master simple HAZOP analysis

- HAZOP features
- HAZOP procedure

Module 5 - Operating Procedures

Understand the regulatory requirements for operating procedures; understand implementation of SOP projects; grasp good SOP developing methodology.

- Regulations and standards requirement to operating procedures
- Operating mode covered
- Process Safety Management System - 4P model
- Procedures and protective layer
- The benefits of operating procedures
- How to implement SOP
- SOP format
- Example 1-7: good operating procedures

Day 1 Summary

About Martin Linking

Martin Linking Business Consulting plans to produce more than 80 trainings and conferences and works with senior executives from the majority of the world's top 1000 companies to improve their business strategy and match their learning and training needs in one year. And we continue to grow.

We also invite the leading business practitioners, industry decision makers and innovators to share insights, best business practice, and new technology at our forums. **We are dedicated to give attendees cutting edge information they can use immediately.** We constantly research and listen to all industry sectors to ensure that the business intelligence we provide is timely and cutting-edge.

Workshop Schedule - Day One & Two

0830 Registration and coffee
0900 Workshop commences
1045 Morning refreshments
1115 Workshop re-commences
1200 Luncheon
1300 Workshop commences
1500 Afternoon refreshments
1530 Workshop re-commences
1730 Workshop concludes

In-House Training Solutions:

If you have a number of delegates with similar training needs, then you may wish to consider having an In-House training solution delivered locally on-site. Course can be tailored to specific requirements.

Please contact **Whitney Shen** on **+86 28 8532 7678** or email whitney.shen@martinlinking.net to discuss further possibilities.

Day Two

Module 8 - PSSR

Understand risk-based PSSR; choose different PSSR tools according to risks

- What is PSSR
- OSHA requirements to PSSR
- PSSR benefits
- Risk-based PSSR process
 - Risk Matrix
 - Risk Questionnaire
 - PSSR Summary
 - PSSR Table

Module 9 - Mechanical Integrity

Understand equipment integrity management, including: failure modes, quality assurance, Predictive Maintenance, risk-based inspection, analysis and verification of safety integrity level.

- LOC statistics - offshore
- Discussion 1
- Failure modes
- OSHA requirements for IM
- Quality assurance accident
- The development of maintenance management
- Risk-based asset management
- Preventive Maintenance
- State detection and Predictive Maintenance
- RBI
- SIL analysis and confirmation
- Discussion 2-5

Module 11 - Change Management

Understand changes and RIK; grasp the difference between change and RIK; master developing change management process.

- Discussion - alcohol ketone device
- Leading change vs. MOC
- OSHA requirements for MOC
- What is change
- Discussion - Change vs. RIK
- How to determine change & RIK
- Types of changes
- Discussion - the impact of changes 1-5

Summary and end of the training

Course Format:

Martin Linking trainings are developed based on in-depth experience, best practices and real companies' case studies.

The trainer will use interactive case studies and group discussions to enable participants to acquire practical knowledge and capabilities for implementation.

About your facilitator

John Zhao is a senior process safety consultant; he has **16 years of chemical industry, production, design and safety experience**. He has much experience on HAZOP analysis, LOPA analysis, SIL analysis, accident consequences analysis, PSM system establishment and improvement, PSM auditing, etc. His wide range of clients include: China Petroleum, Sinochem, CNOOC, China Guangdong Nuclear Power Engineering, Guangdong LNG, Oriental Petrochemical, SinoLegend, Roquette, etc.

Who should attend?

Anyone interested in improving health, safety and productivity will benefit from this training, include:

President, vice president, director, department leader and managers of:

- Plant
- Manufacturing
- Health and safety professionals
- Industrial Engineering
- Process Engineering

工艺安全管理最佳实践

这是一个为期两天的培训，以协助流程工业生产、技术及安全管理专业人士理解工艺安全管理所涵盖的各项活动，包括工艺危害分析、变更管理、开车前安全检查等，以控制重大事故风险。

中国上海

2011 年 12 月 15-16 日



您的国际培训师：

赵建民 John Zhao
资深工艺安全咨询师

Shegle 是一家专门提供工艺安全咨询的独立咨询公司，为客户提供工艺安全技术及工艺安全技术管理服务，包括：HAZOP、LOPA、SIL、后果分析、PSM 审计等。

John 的经验：

- 2010 年为超过 100 位工程技术人员提供了 HAZOP Leader 的培训。
- 2010 年为中化集团、中国石油天然气集团下属企业提供了多次 PSM 审计。
- 我们的客户包括中国石油、中化集团、中海油、中广核工程、广东 LNG、亚东石化、SinoLegend、Roquette 等。

课程描述：

为了适应日益激烈的竞争，流程工业中的装置正在变得越来越庞大，越来越复杂、越来越灵活。来自流程、技术的重大事故风险管理，成为一个巨大的挑战。如何有效、高效管理重大事故风险，保证风险得到控制的同时，保证盈利和竞争力，基于风险的工艺安全管理成为流程工业生产、工程技术及安全管理人员的一个必须掌握的工具。

这一培训课程将探讨如何通过全球公认的工艺安全管理方法和实际案例分析来管理流程重大事故风险。

这次培训将在以下方面给您帮助：

- 了解工艺安全管理的必要性和重要性
- 了解工艺安全管理的要素
- 了解安全文化的定义
- 了解安全文化的基础
- 了解 ACARP 原则
- 了解安全文化的测量
- 了解工艺危害分析
- 掌握简单的 HAZOP 分析
- 了解法规对操作程序的要求
- 了解实施 SOP 项目
- 掌握良好的 SOP 编制方法
- 了解基于风险的 PSSR
- 根据风险选择不同的 PSSR 工具
- 了解设备完整性管理
- 了解变更及 RIK
- 掌握变更和 RIK 的区别
- 掌握变更管理流程的制定

课程预问卷

为了确保这一课程正是适应了您的需求，培训师将通过它来评估您的知识，经验和需要。

2011 年 12 月 15 日 星期四

第一天

模块 1-工艺安全简介:

从风险的角度, 了解工艺安全管理的必要性和重要性; 简单了解工艺安全管理的要素

- 问题一、什么是风险?
- 问题二、哪个行业最危险?
- 问题三、化工是一个安全的行业?
- 问题四、哪个风险更大?
- 问题五、为什么会发生重大事故?
- 问题六、如何避免重大事故?
- 问题七、什么是工艺安全?
- 工艺安全管理体系

模块 2-工艺安全文化

了解安全文化的定义; 了解安全文化的基础; 了解 ACARP 原则; 了解安全文化的测量。

- 示例 1-3
- 什么是文化、商业文化、安全文化
- 案例-航天飞船决策
- 商业文化 vs. 安全文化
- 安全文化的基础
- ALARP vs. ACARP
- 安全文化模型及测量

模块 4-工艺危害分析

了解工艺危害分析; 掌握简单的 HAZOP 分析

- HAZOP 的特点
- HAZOP 步骤

模块 5-操作程序

了解法规对操作程序的要求; 了解实施 SOP 项目; 掌握良好的 SOP 编制方法。

- 法规及标准对操作程序的要求
- 涵盖的操作模式
- 工艺安全管理体系 - 4P 模型
- 程序与保护层
- 操作程序带来的收益
- 如何实施 SOP
- SOP 格式
- 示例 1-7: 好的操作程序

第一天总结

关于马汀令可

马汀令可商务咨询计划每年组织超过80场的培训和会议, 与全球1000强公司的高层经理一起提高他们的商业战略, 满足他们的学习和培训需求。并且我们在不断成长。

我们邀请领先企业的管理者, 决策者和创新者在我们的活动中分享他们的思想观念, 最佳商业实践和新技术。

我们致力于为我们的客户提供即刻可用的前沿信息。我们不断地研究和聆听所有行业的声音来保证我们提供商业信息的及时性和前沿性。

培训时间表 - 第一天和第二天

0830 签到及早茶
0900 培训开始
1045 上午休息
1115 培训继续
1200 午餐
1300 培训开始
1500 下午休息
1530 培训继续
1730 培训总结

内训方案

如果贵公司有许多人有类似的培训需要, 那么你不妨考虑内部培训的解决方案。培训将在贵公司现场举行。并且培训可以根据您具体的要求来进行。

请联系**Whitney Shen**来讨论合作的可能:

电话: +86 28 8532 7678

电邮: whitney.shen@martinlinking.net

2011 年 12 月 16 日 星期五

第二天

模块 8-PSSR

了解基于风险的 PSSR；根据风险选择不同的 PSSR 工具

- 什么是 PSSR
- OSHA 对 PSSR 的要求
- PSSR 带来的益处
- 基于风险的 PSSR 流程
 - 风险矩阵
 - 风险问卷
 - PSSR 简表
 - PSSR 详表

模块 9-机械完整性

了解设备完整性管理，包括：失效模式、质量保证、预测性维护、基于风险的检测、安全完整性等级分析及验证等。

- LOC 统计 - offshore
- 讨论 1
- 失效模式
- OSHA 对 IM 的要求
- Quality assurance 事故
- 维修管理的发展
- 基于风险的资产管理
- 预防性维护
- 状态检测与预测性维护
- RBI
- SIL 分析及确认
- 讨论 2-5

模块 11-变更管理

了解变更及 RIK；掌握变更和 RIK 的区别；掌握变更管理流程的制定。

- 讨论 - 醇酮装置
- Leading change vs. MOC
- OSHA 对 MOC 的要求
- 什么是变更
- 讨论 - 变更 vs. RIK
- 如何判断变更 & RIK
- 变更的种类
- 讨论 - 变更的影响 1-5

关于咨询师

赵建民是资深工艺安全咨询师，他有**16年化工行业生产、设计及安全的经验**。他在HAZOP分析、LOPA分析、SIL分析、事故后果分析、PSM体系建立及改善，PSM审计等方面有着较多的经验。他的客户非常广泛，包括如中国石油、中化集团、中海油、中广核工程、广东LNG、亚东石化、SinoLegend、Roquette等。

谁应参加？

任何有兴趣提高健康、安全和生产力的人将从本次培训中获益，包括：

总经理，副总经理，总监，部门领导和经理：

- 工厂
- 制造业
- 健康和安全生产专业人员
- 工业工程
- 流程工程

培训总结及结束

培训形式：

马汀令可的培训是在丰富的经验，最佳做法和真实公司的案例研究的基础上制定的。培训将采用互动的案例分析和小组讨论，使学员能掌握实践知识和实施能力。

Process Safety Management Best Practices

SH20111215-Sales Contract-Please Complete in Capital Letters and Black Ink

Sales Contract

Please complete this form immediately and fax back to

Whitney Shen

Fax No: +86 28 8532 6768

Fee Per Delegate

☐ Two Day Training Fee RMB 6995 per person

All the registered delegates are entitled for a set of documentation free of charge

☐ DOCUMENTATION RMB 1000

If you are unable to attend the conference/training but wish to receive copies of the conference/training documentation, please complete the sales contract, tick this box and return the contract with payment details.

Full Payment is required within 5 working days

Name: _____

Position: _____

Email: _____

Name: _____

Position: _____

Email: _____

Name: _____

Position: _____

Email: _____

Organisation: _____

Address: _____

Town: _____ State: _____ Postcode: _____

Tel: _____ Fax: _____

Nature of Business: _____

Company Size: ☐ 1-99 ☐ 100-249 ☐ 250-499
☐ 500-999 ☐ 1000+

Authorization

(Signatory must be authorized to sign on behalf of contracting organization.)

Name: _____

Position: _____

Signature: _____ Date: _____

This booking is invalid without a signature.



Register Now

Contact: Whitney Shen

Tel: +86 28 8532 7678

Fax: +86 28 8532 6768

Email: whitney.shen@martinlinking.net

Business Opportunities

An exhibition space is available at the conference. Sponsorship opportunities covering lunch, evening receptions and advertising in documentation packs are also available. Please contact Ms. Whitney Shen at +86 28 8532 7678.

Payment Method

Our payment terms are 5 working days on receipt of invoice and full payments can be made by bank transfer.

开户名: 成都马汀令可商务咨询有限公司

开户行: 中国工商银行成都市暑袜南街支行

账 号: **4402928009022523952**

CONFIRMATION DETAILS: After receiving payment, a receipt will be issued. If you do not receive a letter outlining the conference details two weeks prior to the event, please contact the Conference Coordinator at Martin Linking.

Terms & Conditions:

1. Fees are inclusive of program materials and refreshments.
2. Payment Terms - Following completion and return of the registration form, full payment is required within five (5) working days upon the issuance of invoice. Payment must be received prior to the conference/training date. A receipt will be issued on payment. Due to limited conference/training seats, we advise early registration to avoid disappointment. We reserve the right to refuse admission if payment is not received on time.
3. Client's Cancellation/substitution - Provided the total fee has been paid, client's cancellation must be received in writing by MAIL or FAX four (4) weeks prior to the event in order to obtain an 85% credit to attend for any future **Martin Linking** Events. Under such circumstances, **Martin Linking** will retain the other 15% service fee to cover expenses for prior cost that has already been incurred upon the acceptance of registration. All bookings carry a 50% cancellation liability immediately after a signed sales contract has been received by **Martin Linking**.
4. If, for any unexpected circumstances or reasons that **Martin Linking** decides to postpone this event, the client hereby indemnifies and holds **Martin Linking** harmless from any cost incurred in by the client. The event fee will not be refunded, but can be credited to future **Martin Linking**'s events. **Martin Linking** reserves the right to change the content without notice.
5. Copyright etc. - All Intellectual Property rights in all materials produced or distributed BY **Martin Linking** in connection with this event is expressly reserved and any unauthorized duplication, publication or distribution is strictly prohibited.
6. Important note: In the event that **Martin Linking** permanently cancels the event for any reason whatsoever, (Including, but not limited to any force majeure occurrence) and provided that the event is not postponed to a later date nor is merged with another event, the client shall receive a refund for the amount that the Client has paid to such permanently cancelled event.