



CCPS  
MIDDLE EAST  
PROCESS SAFETY  
CONFERENCE

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# 3<sup>rd</sup> CCPS MIDDLE EAST PROCESS SAFETY CONFERENCE

Virtual Event | 24 - 26 Oct 2021

## Organizers



## Supporting Organization



# ABOUT THE EVENT



Organized by AIChE's Center for Chemical Process Safety, CCPS-MEPSC is the Middle East forum for stakeholders in process industries who recognize the business value of process safety in all their operations.

Focusing on operational excellence, this collective industry experience, the engineering practices and leadership traits that drive the industry to a zero harm culture.

**A must-attend, this event provides greater insights and strategic views into applied functional safety and chemical reaction hazard management, benefitting process safety and risk management teams at all levels.**

## EVENT HIGHLIGHTS



Presentations from industry practitioners and process safety subject matter experts



Live Q&A



Insights from plenary speakers



Panel discussion

**VIRTUAL PLATFORM**



## Day 1 - Sunday, 24 Oct 2021

Sheraton Dammam, Saudi Arabia

08:30 - 08:40 **Conference Opening and Welcome Address**

Speaker

**Shakeel Kadri** Executive Director & CEO, CCPS

08:40 - 09:05 **Keynote Session**

09:05 - 09:10 **Break**

09:10 - 10:10 **Strategic Panel Discussion - How Leaders Drive Process Safety in Your Organization**

Moderator

**David Moore** President & CEO, AcuTech Group

Speakers

**Ghassan Abulfaraj** Chief Loss Prevention Engineer, Aramco

**Khalid Al Beshr** Vice President, HSE Policy & Governance, HSE Policy & Governance Division, ADNOC - Abu Dhabi National Oil Company

**Abdel Hadi Al Suhaimi** Executive President, Saudi Chevron Phillips (S-Chem)

10:10 - 10:30 **Sponsors Showcase**

10:30 - 11:25 **Technical Sessions - Process Safety Leadership and Safety Culture**

Session Chair

**Mohammad Nashwan** Process Safety Group Leader Technical Services Unit, Loss Prevention Department, Aramco

Pre Incident Plan Development Emergency Response Plan Requirement-SABIC Success Story	Dynamic Barrier Management	Process Safety Management Governance
Speaker will share how company developed PIP guidelines for all facilities. Involvement of multidisciplinary team plays important role for the successful deployment of PIPs. Speaker will share high level structure of PIPs, Process Safety Information to be included in the PIPs including periodic drills involving Emergency Response team and operation team.	In this session, the presenter will discuss various aspects of dynamic barrier management such as, 1-concept of barrier degradation in real-time, 2-data for determining the active status of barriers, 3-data required for verification of performance standards.	Speaker will share how the organization developed a governance structure around process safety management where the company assured 2-way communication from the top of the organization to the bottom. This was done by identifying several KPIs (70+) both leading and lagging in line with API 754. Later, these KPIs were addressed at different levels depending on how critical they were. Company went down to operation levels and developed system to monitor Standard operation conditions and Safe operating limits as part of the shift hand over report. The company also shared a dashboard of key critical KPIs to assure organizations have visual feedback on PSM performance. This was all part of changing the culture to a more PSM focused culture to identify issues within the organization and address them

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through the right communication channel.

Speaker

**Mohammed Ali Al-Zahrani**  
Sustainability Manager, Sipchem

11:25 - 11:30 **Break**

11:30 - 12:25 **Technical Session - Process Safety Throughout Asset Life Cycle**

Session Chair

**Andrew P. Bartlett** Solutions Consultant Global Solution Engineering , Sphera

Stuck in the Status Quo, Real Data on Business and Line Ownership of Process Safety	Increase the Value of Your Hazops: Add a Relief Systems SME to the Team	Best Practices Occupied Building Risk Assessments for Refinery and Chemical Plants
<p>The speaker will share the results of the PSM/ORM Survey was conducted online by Sphera Consulting. The survey uncovered that while companies are big proponents of a strong safety culture, they still need to simultaneously manage and improve productivity, environmental pressures and costs while reducing risk in today's complex operating environment. The 2019 survey, the industry fourth, shows how companies are big proponents of a strong safety culture. Still, there is a large gap between Process Safety intent and what occurs during everyday operations.</p>	<p>The recent experiences have shown that identifying major causes and consequences with the help of a relief systems subject matter expert (SME) before the HAZOP workshop will reduce the workshop duration and cost involved significantly, and more importantly, will add a level of confidence that the analysis of the HAZOP team accurately reflects the relief device capabilities as a safeguard, compared to simply checking the relief device report. Afterwards, the workshop team can concentrate more on operational and maintenance issues which are often sidelined, due to inadequate time in workshop. Details of these recent HAZOP experiences will be discussed by speaker in this session.</p>	<p>Consequence and risk-based assessments of occupied buildings can be carried out in several levels of detail, depending on the potential hazards of the process units present on site. Performing those assessments in a consistent manner across the petrochemical industry is challenging. This presentation contains an overview of the best practices used in occupied building risk assessments carried out by DNV GL in recent years for refinery and chemical plants.</p>

12:25 - 12:30 **Closing Remarks**

## Day 2 - Monday, 25 Oct 2021

Sheraton Dammam, Saudi Arabia

08:30 - 08:40 **Welcome Address**

Speaker

**Abdel Hadi Al Suhaimi** Executive President, Saudi Chevron Phillips (S-Chem)

08:40 - 09:05 **Keynote Session**

Speaker

**Ibrahim Al-Rushoud** President - Affiliates, Sipchem

09:05 - 09:10 **Break**

09:10 - 10:10 **Technical Panel Discussion - Drivers and Enablers for Excellence in Process Safety**

Speakers

**Dr. Anil Gokhale** Senior Director, CCPS Projects, CCPS

**Mohammed Ali Al-Zahrani** Sustainability Manager, Sipchem

**Abdullah Hassan Al-Qahtani** Chief Engineer, Process Risk Management, SABIC

**Jamal Al-Ghamdi** Corporate Process Safety Director, Sadara Chemical Company

10:10 - 10:30 **Sponsors Showcase**

10:30 - 11:25 **Technical Sessions - Asset Integrity Management**

Storage Tank Failures Analysis Using Swiss Cheese Model	The Impact on Relief Device Pressure Drop Due to Pipe Roughness Changes over Long-Term Gas Plant Operation	Closed-Loop Model for Management of Change
The speaker will talk about the importance of Swiss Cheese model in storage tank system. It can be an important aid to organization's operation & engineering leaders to understand low-pressure storage tank risk. The speaker will share a case study of high potential near miss related to storage tank system & will address different levels of human error including unsafe acts, preconditions for unsafe acts, unsafe supervision and recommendation for adequate layer of protection.	In this presentation, speaker will discuss impact of different theoretical roughness factors on pressure relief device outlet pressure drop and will provide guidance for considering the optimum roughness factor during early design phase. The presentation specifically consider impact of change in the relief device outlet pipe roughness factor in gas plants during plant operation over the years and shows the subsequent effects on flare hydraulics.	

11:25 - 11:30 **Break**

11:30 - 12:25 **Industry Process Case Studies and Best Practices**

Anatomy of an Attack: Two Real-World Industrial Control System Attack Vectors and How to Defend Against Them	Lessons Learned from Scenarios Found during PHA of Startup, Shutdown, and Online Maintenance	How to Assess and Investigate High Potential Consequence Incidents
Speaker will briefly talk about increasing regulatory focus on PHA procedures for evaluating hazards	In this presentation, speaker will share company's efforts to identify, assess and investigate high potential	

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during non-routine modes of operation & human factors in general. Speaker will explain an approach for fully addressing Human Factors in Hazard Evaluations (PHAs) with four case studies on PHA of non-routine Operating Modes.

consequence events. Speaker will discuss how such near misses are assessed, tools used and the level of investigation and screening applied for such high potential consequence events

12:25 - 12:30 **Closing Remarks**

## Day 3 - Tuesday, 26 Oct 2021

Sheraton Dammam, Saudi Arabia

08:30 - 08:40 **Welcome Address**

Speaker

**Dr. Abdul Aldeeb** Head of Technology & Consulting – Process Safety, Siemens

08:40 - 09:05 **Keynote Session**

09:05 - 09:10 **Break**

09:10 - 10:10 **Technical Session - Managing PSM Institutional Knowledge**

Session Chair

**Dr. Anil Gokhale** Senior Director, CCPS Projects, CCPS

Guidelines for Managing Process Safety Knowledge	Plant Safety Override Assessment: an Effective Step Towards Zero-Override at Kuwait Oil Company	Experimental Learning of Process Safety
<p>Safety Overrides are a key element of the safe operation of every facility and have substantial impact on the overall operational safety of facility. Safety override management can be difficult due to long-term overrides emerging out of project activities, frequent process upsets, certain design issues, production throughput demand. The presenter will share practices followed to overcome above concerns. Presenter will talk about the company's initiative of conducting "Multi-Team Comprehensive Surveys" through a collaborative approach at various facilities at North Kuwait Directorate of Kuwait Oil Company, Kuwait. This presentation will describe how assessment was carried out for seven different facilities in three-phased manner by integrating the expertise capability with the operational aspects.</p>	<p>Company have established "Experimental Process Safety Training Center" In this process safety center the employee was able to visualize and understand how the process safety incident will take place by experimental demonstration of the incident in small scale. The presenter will share the experience of establishing such center and briefly talk about the experiments designed for learning.</p>	

10:10 - 10:30 **Sponsors Showcase**

10:30 - 11:25 **Technical Sessions - Process Safety Big Data and Digitalization**

How AI Improves Safety	Moving Beyond Concept - Overcoming Barriers to ORM Digital Twin Adoption	Energy Institutes Process Safety Performance Monitoring (EIPSPM) Application
<p>Condition-based maintenance is the goal of most process plants. In this presentation presenter will go into the detail on how AI can be utilized to accurately track and predict</p>	<p>An ORM Digital Twin is still an evolving space; however, industry leaders have identified it as a key area of attention for improving Process Safety performance at their</p>	<p>Speaker will talk about the live intuitive data application tool for effective processes, informed decisions and real results. The speaker will share the experience of</p>

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equipment condition. Presenter will show and briefly discuss successful examples of applying AI to increase plant reliability.	assets. The success of these programs is not just a decision driven for technology adoption; business process and management decisions have a key role to be play as well. The presenter will offer tips on how companies can accelerate their digital vision for Operational Risk Management through ORM Digital Twin technology.	using such tool in several case studies for the Metals industry, oil and gas industry and energy industry in the UK.
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11:25 - 11:30 **Break**

11:30 - 12:25 **Technical Session - Human Factors**

Session Chair

**Andrew P. Bartlett** Solutions Consultant Global Solution Engineering , Sphera

Planning for Human Factors Engineering in Projects	Everything You Need to Know about Human Reliability for Process Safety	The Human Factor in Process Safety Management
Speaker will summarise the suggested approach for HFE screening and planning presented in Report 454- 'Human Factors Engineering in Projects' (2nd Edition) published by UK EI & IOGP. The presentation will cover various topics- HFE Integration within the Project Design Lifecycle, HFE Screening and Planning Process, Preliminary and Detailed screening and HFE Strategy & Implementation Plan.	The presenter will discuss 10 primary human factors and will describe what we know about their relative importance in accident causation. The data presented will be from basic research by the authors on the root causes of more than 15,000 accidents and near misses; and based on the review of thousands of accidents analyzed by others and on summary data from many companies. The speaker will share where focus should be placed (i.e., which human factors tend to be key) and will provides proven ways to optimize these human factors so that the base human error rate at a site is as low as possible.	In this presentation speaker will provide an overview and summary of experiences acquired over the years in the different phases of the lifecycle of projects and incidents analysis. Speaker will elaborate more on two different views (Dekker, 2002) on human error and the human contribution to accidents and illustrate complexity of the interactions between human activities, system organization and equipment.

12:25 - 12:30 **Conference Closing Remarks**

Produced 27 September 2021



# WHO SHOULD ATTEND

- CEOs
- Technical VPs, SVPs in HSE, Security & Process Safety
- Process Safety Engineers and Leaders
- Manufacturing and Operations Leaders
- Compliance Officers & Inspectors
- Process Industry Professionals
- Managers, Scientists and Educators interested in Process Safety and Process Industry issues
- Senior Leaders whose role involves operations

**USD 169**  
for non-members

**USD 135**  
for CCPS members

**FREE**  
for undergraduates  
& graduate students

## WHY ATTEND?

- Review good practice in process safety
- Find out what's new in process safety
- Get comprehensive technical insight
- Learn from the experience of industry leaders and subject matter experts
- Round table discussion on how process safety management was affected during and post COVID-19 and consider implications post pandemic
- Understand how operational teams are coping with remote work

This year's process safety series focuses on the more widespread use of digital solutions for process safety.

**REGISTER NOW**

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# SPONSORSHIP MENU

	PLATINUM	GOLD	SILVER
BENEFITS	\$15,000	\$10,000	\$5,000
<b>Pre Event Benefits</b>			
Logo placement on the event website homepage	✓	✓	✓
Logo and company profile listing on event website	✓	✓	✓
Dedicated email campaign	1	0	0
Logo placement on marketing collateral (print & digital)	✓	✓	✓
Special sponsorship announcement on social media platforms	MULTIPLE	MINIMUM 2	MINIMUM 1
Special sponsorship announcement on dedicated email campaign	✓	✓	✓
Special Press release on sponsorship announcement	✓		
<b>During Virtual Symposium</b>			
Opportunity for pre-recorded interview (Technical content) <small>*upto 2 minutes videot to be shared by 30th September 2021</small>	✓	✓	✓
30 seconds corporate video during networking breaks	✓	✓	✓
Exclusive logo recognition during the Technical Sessions	✓	✓	✓
Complimentary registrations	Upto 100	Upto 50	Upto 20
<b>Post Event Benefits</b>			
Logo recognition on post event report (print & digital)	✓	✓	✓
Exclusive email sent on behalf of sponsor to all attendees (optional)	✓	✓	
Logo placement on "thank you" emails to all attendees	✓	✓	✓
Access to event analytics	✓	✓	✓

## PROGRAM

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