

Hazards30

In association with the Mary Kay O'Connor Process Safety Center

30 November–2 December 2020,
Manchester, UK

Process safety conference

Find out what's going on



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Hazards 30

30 November–2 December 2020, Manchester, UK

Europe's largest annual process safety conference

Hazards 30 is an industry-focused event, exploring every major aspect of process safety and helping you to learn from the experience of others.

Join us to stay up to date with process safety good practice, discover new techniques and approaches, explore lessons learned from past incidents and near-misses, and network with the international process safety community.

2020 marks 60 years since the first *Hazards* conference was held, also in Manchester. Since then *Hazards* has grown in size and influence, continuing to be at the forefront of sharing new knowledge and disseminating good process safety practice across the process industries and beyond.

Key features

- 100+ oral presentations and posters from industry practitioners, researchers and regulators
- Inspirational plenary speakers
- Panel discussion
- Workshops exploring key topics in more depth
- Trade exhibition of process safety products and services
- Social events and networking opportunities

Who should attend?

If you are active in process safety and risk management for chemical process facilities, or other facilities dealing with hazardous materials, *Hazards 30* is the ideal event for you.

Process safety professionals working at all levels and across all industry sectors will benefit from attending.

Typical delegates include:

- Process safety practitioners in industry
- Process safety consultants and safety specialists
- Senior industry leaders accountable for process safety without day-to-day responsibility
- Academic researchers
- Regulators and representatives from industry bodies

“ If you want your business to stay safe, to avoid catastrophe, to improve its safety record, you need to learn what is good practice, and there's no better place for doing that than at Hazards. ”

Laurence Cusco, Health and Safety Executive
& Chair of the *Hazards 30* technical committee

Why attend Hazards 30?

Learn from experts

Over 100 specialists and industry peers working in all industry sectors will share their process safety knowledge and experience including lessons learned and latest research.

Review good practice in process safety

Presentations and posters will share lessons learned from what's worked well (and not so well) so that you can apply good practice to your own operations.

Get comprehensive technical insight

The programme will cover all the functional areas that are key to managing and reducing process risk effectively, including engineering and design, systems and procedures, knowledge and competence, human factors, assurance, culture, and environmental protection.

Get industry insights and benchmark your company

Hear presentations and view posters from industry practitioners, regulators and researchers. We're pleased to include contributions from [Atkins](#), [Health and Safety Executive](#), [Office for Nuclear Regulation](#), [Sellafield Ltd](#), [Shell](#), [Sygenta](#), [Total](#), [Wood](#) and many, many more.

Have your say

As well as Q&A at the end of every presentation, you'll have the chance to put questions to industry experts during a panel discussion on 2 December. Discussion will focus on how to learn effective lessons from the past.

Network with your peers and make new contacts

There will be plenty of opportunity to network with delegates, presenters, exhibitors and speakers during the event, including a free welcome drinks reception on 30 November and an informal social event on 1 December.

Find out what's new in process safety

Process safety is constantly developing and *Hazards 30* is a great opportunity to discover the latest research and developments in the field.

Discover new products and services

Make new contacts and discover products and services to support you in improving process safety performance at our extensive exhibition running alongside the conference. Visit www.icheme.org/hazards30 to see who's exhibiting.

Meet Continuous Professional Development (CPD) requirements

Attending *Hazards 30* is a great way to demonstrate commitment to your personal and professional development. What's more, if you have the Professional Process Safety Engineer registration (www.icheme.org/ppse) in your sights, then you'll be able to attend a free information session to find out more about it and how to start or progress your application.

Reflect on the process safety journey

The 60th anniversary of *Hazards* is a fitting time to reflect on the past, present and future of process safety. We'll be reflecting on the key milestones so far on the process safety journey, what's been achieved already, and the challenges that lie ahead.

Plenary speakers



Piper Alpha – an Accident or a Predictable Surprise?

Steve Rae, Step Change in Safety

Steve was one of only 61 survivors of the 1988 Piper Alpha disaster in which 167 perished. He will draw on his experience of the disaster to demonstrate why he feels it was no accident, rather a 'predictable surprise', and why many major accidents, near misses and incidents should be defined in the same way.



Hazards Management in a Climate Emergency: We're All in It Together!

Jo Nettleton, Environment Agency

Jo will discuss the challenges posed to existing major hazards industries from more extreme weather events, and the impact of adapting to a net zero economy.



Learning Lessons Today for Safety Tomorrow

Maureen Heraty Wood, Major Accident Hazards Bureau

Maureen will explain how we can use what we already know about chemical accident risk to help shape a strategy for chemical risk management in an unknown future.



Reflections on the Lessons from Longford and its Legacy

Margaret Donnan, IChemE Safety Centre

Margaret will explore the main lessons from the Longford gas plant explosion in 1988 and how they shaped a new major hazard regulatory regime in Australia.

Visit www.icheme.org/hazards30 to find out more about our plenary speakers and their presentations.

Agenda

Note: the programme may be subject to alteration

Monday 30 November 2020

11:30–12:30	Registration	
12:30–14:30	Workshops*	Understanding Global and Local Bowties
		ISC Case Study: Tank Farm–Simulating Operational Decisions
		Incident Investigation, Human Factors & Cause Tree Analysis
		Cyber Security and the Process Industries
15:00–17:00	Workshops	Risk-Based Decision Modelling
		ISC Case Study: Underground Pipeline–Managing Business Risk
		Introducing and Embedding Process Safety
		Human Factors in the Process Industries
17:30–19:30	Plenary session	Trevor Kletz Hazards lecture <i>Piper Alpha – an Accident or a Predictable Surprise?</i> Steve Rae, Step Change in Safety, UK
		Introduction to the poster presentations
19:30–21:00	Welcome drinks with poster and exhibition viewing	

* Visit www.icheme.org/hazards30 to find out more about the workshops

Tuesday 1 December 2020

09:00–09:40	Plenary presentations	<i>Hazard Management in a Climate Emergency: We're All in It Together</i>	Jo Nettleton, Environment Agency, UK
09:40–10:20		<i>Learning Lessons Today for Safety Tomorrow</i>	Maureen Heraty Wood, Major Accident Hazards Bureau, Italy
10:20–10:50	Refreshment break with poster and exhibition viewing		

AM	Human Factors		Dust Hazards		Lessons Forgotten		LOPA		Modelling and Experimental Flammability	
	Session chair: Trish Kerin		Session chair: Caroline Ladlow		Session chair: Rob Magraw		Session chair: Andy Crerand		Session chair: Diego Lisbona	
10:55–11:20	<i>Human Performance and the Fourth Industrial Revolution</i>	Roger Stokes, BakerRisk Europe, UK	<i>Visual Dust Hazard Analysis – Understanding Threats and Assuring Controls</i>	David Hatch, Process Safety Integrity, UK & Michelle Murphy, Mica, USA	<i>Learning from Creeping Changes</i>	Zsuzsanna Gyenes, IChemE Safety Centre, UK	<i>Calculating Yourself Into a Corner Using LOPA</i>	Stephen Beedle, ABB Consulting, UK	<i>Development of a Model for Spills of Liquids on Porous Surfaces (SLOPS)</i>	Rachel Batt, Health and Safety Executive, UK; Graham Tickle, GT Science & Software, UK; Matt Turner, Defence Science and Technology Laboratory, UK
11:25–11:50	<i>Making Sure Investigators Get It Right – Human Factors Considerations for Investigators</i>	James Bunn, The Keil Centre, UK	<i>Taming the Beast – Lessons Learned from Four Decades of Aluminium Dust Explosions</i>	S Gakhar & JM Butcher, DEKRA, UK; P Roberts, AMG Alpoco, UK	<i>A Toolbox to Help Frontline Personnel Learn from Incidents</i>	Stuart King, Energy Institute, UK	<i>Comparison of a Single Initiating Event Versus a Multiple Initiating Event Approach to Layer of Protection Analysis</i>	Dr Colin Chambers, Health and Safety Executive, UK	<i>Detailed Fire Scenario Assessment by CFD Simulation: Pool Fire Under Air-Cooled Heat Exchanger in Modularized LNG Plant</i>	Minoru Jimma, Hiroki Orihara & Masayuki Tanabe, JGC Corporation Oil & Gas Project Company, Japan
11:55–12:20	<i>Enhancing the Performance of Safety Critical Task Analysis: The Goldilocks Problem and Marginal Gains</i>	Dominic Furniss, Jamie Henderson, Mark Sujan & David Embrey, Human Reliability Associates, UK	<i>Modelling Self-Heating Solids</i>	Stephen Pearson, Syngenta, UK	<i>Stories to Keep Us Safe – Five Decades of the Loss Prevention Bulletin</i>	Fiona Macleod, Billions Europe, UK	<i>Driving Quality and Consistency in Barrier Management Through the Application of Best Practice Quality Rules and Corporate Standard Bow Ties in Developing Asset Specific Bow Ties</i>	Mark Boulton, Director, DNV GL, UK; Daniel Rowe, SBM Offshore, Monaco; Paul McCulloch, CGE Risk Management Solutions, The Netherlands	<i>Safe Operation of Combined Cycle Gas Turbine and Gas Engine Systems Using Hydrogen Rich Fuels</i>	Wayne Rattigan, Health and Safety Executive, UK
12:25–12:50	<i>Occupational Safety & Process Safety: Sisters, Cousins or Unrelated?</i>	Matt Clay, Maria Garcia & Mike Wardman, Health & Safety Executive, UK; Moray Kidd, University of Manchester, UK	<i>Effects of Melting Inert Particulate Additives on Ignition and Flame Propagation in Dust/Air Mixtures</i>	Katja Hüttenbrenner, Marco Stockinger & Harald Raupenstrauch, Montanuniversitaet Leoben, Austria; Hannes Kern, IRIS – Industrial Risk and Safety Solutions, Austria	<i>Analysis of Pipeline Incident Reports Using Natural Language Processing (NLP)</i>	Guanyang Liu, Mason Boyd & Noor Quddus, Mary Kay O'Connor Process Safety Center, Texas A&M University, USA	<i>Deriving Spurious Trip Rate Formulae</i>	Dr Fan Ye, ESC, UK	<i>An Investigation of LNG Permeability Within Perlite Insulation</i>	Steven Betteridge, Shell Research, UK

12:50–13:50	Lunch break with poster and exhibition viewing
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PM	Safety Leadership		Natural Hazards		DSEAR/ATEX		Hydrogen Hazards		Risk Management I	
	Session chair: Azzam Younes		Session chair: Tony Clayton		Session chair: Andy Mackiewicz		Session chair: Chris Tighe		Session chair: Andy Crerand	
13:55–14:20	<i>Islands of Excellence in Oceans of Mediocrity</i>	Graeme Dick & Mike Pollard, Reflekt AS, Norway	<i>Assessment and Enactment of Response to Severe Weather Hazards to Offshore Structures</i>	Joe Quinn, Atkins, UK & Matt Keys, Atkins, Australia	<i>How Do you Carry Out a DSEAR Risk Assessment? Experiences from Two of ABB's DSEAR/ATEX Experts</i>	Alison McKay & Peter Hodgson, ABB, UK	<i>An Investigation into the Change in Leakage When Switching from Natural Gas to Hydrogen in the UK Gas Distribution Network</i>	Andrew Garrison, Simon Gant, Mark Royle, Deborah Willoughby & Catherine Spriggs, Health and Safety Executive, UK; Russ Oxley, Northern Gas Networks (NGN), UK; Andrew Phillips, DNV GL, UK	<i>An Analytically Based Pressurised Pipeline Decompression Model</i>	Jiahuan Yi & Haroun Mahgerefteh, University College London, UK
14:25–14:50	<i>Resourcing Teams Based on Key Project Risks</i>	Louise Whiting, Barberton Limited, UK	<i>Wildfires - an Emerging Hazard for Industrial Installations in Europe?</i>	Hannes Kern, IRIS – Industrial Risk and Safety Solutions, Austria & Katja Hüttenbrenner, Montanuniversitaet Leoben, Austria	<i>Hydraulic Mist Hazards – a Discussion of the Practical Implications for a Nuclear Project</i>	Keith A Johnson, Joseph Hayward & Timothy Boland, Sellafield Ltd, UK; Anthony Ennis, Haztech Consultants, UK	<i>Quantification of the Risks Associated with a Hydrogen Gas Distribution Network</i>	MR Acton, A Halford & A Phillips, DNV GL, UK; A Cargill & D Evans, Northern Gas Networks (NGN), UK	<i>Confusion over Risk Criteria</i>	Carolyn Nicholls & Jordan Smith, RAS, UK
14:55–15:20	<i>Can the Wrong Form of Contract Be a Risk to Process Safety?</i>	Simon Lewis, ENGIE Fabricom, UK	<i>Risk to Water Resources and Life Safety from Hydraulic Fracturing</i>	S Medonos, Petrellus Engineering, UK & Robert Brewerton, Inoventech, UK	<i>Keeping Cool Under Threat of Fire – Managing the Risks of Flammable Refrigerants</i>	D Colbourne, Re-phridge, c/o HEAT GmbH, Germany & I Vince, ASK Consultants, UK	<i>Why Proactive Assessment of Hydrogen Fuelling Risks Is Essential</i>	Karen Vilas, BakerRisk, USA & Robert Magraw, BakerRisk Europe, UK	<i>On the 10⁻⁴ /Yr Criterion for Blast Overpressure – an Alternative Comparative Approach for Safer Design</i>	Steve Howell & Prankul Middha, Abercus, UK

15:25–15:50	Refreshment break with poster and exhibition viewing
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PM	Emergency Planning		Environmental Protection		Chemical Hazards		Process Safety Management	
	Session chair: Zsuzsanna Gyenes		Session chair: Tony Clayton		Session chair: Craig Williams		Session chair: Lee Allford	
15:55–16:20	<i>Behaviour in Emergencies on COMAH sites: Challenging Predictive Assumptions About Likely Fatalities Based on Actual Behaviours in Emergencies</i>	J Bell, S Raza & P Brockington, Health and Safety Executive, UK	<i>Learning from Application of the CDOIF Environmental Risk Assessment Method to Major Accident Hazard Plant</i>	Andrew Marsh-Patrick & Duncan Dodge, WSP, UK	<i>HSE Pilot Scale, Gassy System, Reactor Venting Experiments and Implications for Vent Sizing</i>	John Hare, Health and Safety Executive, UK	<i>The Nuts and Bolts of Process Safety Management</i>	Craig Anderson & Nick Procter, Wood, UK
16:25–16:50	<i>Industrial System for Mitigation of Vapour Cloud Explosions</i>	Dirk Roosendans and Pol Hoorelbeke, Total, France	<i>Potential for a Major Accident to the Environment in the Whisky Industry</i>	Euan Munro, SLR Consulting, UK & Carly Newton, The North British Distillery Company, UK	<i>A Strategy for Chemotoxic Safety on a Nuclear Licensed Site</i>	Timothy Boland, Keith A Johnson & Joanne Griffin, Sellafield Ltd, UK	<i>An Integrated Approach to Establishing the Hazards, Risks and Controls at a Major Copper Smelting Site in Southern Africa</i>	Roderick Prior, SHExcellence, South Africa
16:55–17:20	<i>Effect of Water Mist on the Dispersion of a Flammable Gas Inside Traffic Tunnels – an LPG Experimental Study</i>	MC Olde, WPW Wieling, D Mores & J Heuvelink, TNO, The Netherlands; AJM Snel & BBG Lottman, Witteveen+Bos, The Netherlands	<i>Are We Overlooking Something in the Context of Environmental Protection?</i>	James Park, Robert Ritchie & Carolyn Nicholls, RAS, UK	<i>Nitric Acid: It's Not Basic! Techniques for Consequence Modelling of Nitric Acid Releases</i>	Jack Davy, Wesley Tang & Helen Atherton, Wood, UK	<i>Using a Sprint Approach to Analyse Offshore Maintenance Records</i>	Chris Bell & Matthew Celnik, DNV GL, UK
17:30–18:30	Information session Professional Process Safety Engineer registration							
19:00–22:00	Social event							

Wednesday 2 December 2020

09:00–09:40	Plenary presentation	Reflections on the Lessons from Longford and its Legacy	Margaret Donnan, IChemE Safety Centre, Australia
09:40–10:20	Panel discussion	How Do You Learn from the Mistakes of Others Before You Make Your Own?	Panel members TBC
10:20–10:50	Refreshment break with poster and exhibition viewing		

AM	Safety Culture I		Risk Management II		Human Factors II		Fire and Gas Detection	
	Session chair: James Birch		Session chair: Paul Coleman		Session chair: Craig Williams		Session chair: Felicia Tan	
10:55–11:20	Protecting the Mental Health of Employees: How Issues from Film & TV Industry Survey Correlate with Similar Factors in Other Industries	Matt Longley, Finch Consulting, UK	Safe Reinstatement of Process Plant – Learnings from HSE’s Regulation of the UK Offshore Oil and Gas Industry	Ashley Hynds & Scott Templeton, Health & Safety Executive, UK	How Stressed Is Your Facility?	Trish Kerin, IChemE Safety Centre, Australia	How Do We Define Good Practice for Fire and Gas Detector Mapping?	Tim Jones, RPS Group, UK
11:25–11:50	The Impact of Safety Culture on Safe Operations	Andrew Laird & Esther Ventura-Medina, University of Strathclyde, UK	Improving the Value of Risk Engineering in Onshore Energy Insurance	Nigel Cairns, Aon Global Risk Consulting, UK	Assuring Reliability of Human-Computer Interactions in Process Control	Ned Hickling, UK	Guidance on Fire, Combustible Gas and Toxic Gas Detection System Philosophy	Jonathan Wiseman, Risktec Solutions, UK
11:55–12:20	Challenges in Promoting Process Safety Culture – Bridging the Power Distance	James Yii, Petronas, Malaysia	Addressing the Challenges of Quantifying Fire and Explosion Loss in Insurance	John Evans, Marc Lehmann, Mohammad Javanbarg, Jainendra Agarwal, Saurabh Prabhu & Ashish Singhal, AIG, UK	Making Permit to Work Work for Process Safety	Ken Patterson & Gillian Wigham, UK	BS60080:2020 – Guidance on the Placement of Permanently Installed Detection Devices Using Software Tools and Other Techniques. What is the Scope and Intention of the New Standard?	James McNay, Micropack (Engineering), UK
12:25–12:50	Abraham Lincoln as CEO of a Major Hazard Facility? How a Wider Understanding of Leadership Can Enhance Process Safety Leadership	Peter Webb, Beyond Risk, UK	Strengthening Regulatory Oversight of Declining Safety Performance	PF Ilizastigui, Todus Advisors, Cuba	Safe Staffing Levels: Latest Energy Institute Guidance	Michael Wright, Greenstreet Berman, UK & Stuart King, Energy Institute, UK	A Revised Method for Dropped Object Risk Analysis	AG Rushton & JM White, ESR Technology, UK

12:50–13:50	Lunch break with poster and exhibition viewing		
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PM	Safety Culture II		Inherent Safety		Regulation		Asset Integrity	
	Session chair: James Birch		Session chair: Andy Mackiewicz		Session chair: Rob Magraw		Session chair: Arvinder Saimbi	
13:55–14:20	The Importance of Process Safety Management in Post-Merger Integration	Glenn Pettitt, Guy Roberts, Rob Jeffries, Doug Anderson & Richard Rowe, ERM, UK	Incorporating Inherently Safer Technology into a Corporate Risk Management Programme	Tony Downes, David Prior, Pascal Bolomey & Noel Misa, Honeywell (Performance Materials & Technologies), USA	Regulation of UK Nuclear Legacy Facilities	Anthony McFadden, Office for Nuclear Regulation, UK	Selection and Deployment of Non-Destructive Testing for Through-Life Integrity Assurance of Composite-Repaired Pipes	Adam Bannister, Aneta Nemcova, David Johnson & Matthew Blackburn, Health and Safety Executive, UK
14:25–14:50	The Chernobyl Incident: a Case Study for Organisational Process Safety	John Butcher, DEKRA, UK & Arturo Trujillo, DEKRA, Spain	Liquefied Gas Terminals – Designed with Safety at Heart	Karina Almeida Leñero & Sarah Fiedler, TGE Gas Engineering, Germany; Richard Collitt & Yet Th ng Lee, TGE Gas Engineering, UK	How China is Establishing a New COMAH System	Pat Swords, PM Group, Ireland & Robert Liang, PM Group, China	Can Damage Mechanism Assessment Improve Both Efficiency and Safety?	Brad Eccles, ABS Consulting, UK; Randal Montgomery, David Whittle & Sayed Termah, ABSG Consulting, USA
14:55–15:20	Brain-Centred Performance: the Final Frontier in Workplace Safety	Sebastian Blair, DEKRA, UK	Explosion Relief Panels for Hazard Reduction in Gas Compressor Buildings and Hydrogen Refuelling Stations	Robert Brewerton & Christopher Norris, UK	A Three-Decade Review of Risk Management Efforts in Hong Kong	Ying Yin Hung & Eddie Lee, Environmental Protection Department of HKSAR, Hong Kong	Use of Consequence Modelling for Meticulous Risk Based Inspection Calculations of Offshore Topsides Static Mechanical Equipment	Chetan Birajdar, Monaco Engineering Solutions, UK; Bahram Fada, Monaco Engineering Solutions, Oman; Shreya Kochar, Monaco Engineering Solutions, UAE

15:25–15:40	Plenary session	Closing session to include the poster prize presentation	
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As well as oral presentations, there will be wealth of process safety knowledge and experience shared in poster form, available to view throughout the conference. Poster titles will be published on the conference website as authors confirm their attendance.

Practical information

Venue

Manchester Central
Petersfield, Manchester M2 3GX, UK

Location

Manchester Central is located in the heart of Manchester and is easily accessible by rail, road or air. Visit www.icheme.org/hazards30-venue for more travel information.

Accommodation

Accommodation is not included in the conference fee and you will need to make your own arrangements. If you need any help finding a hotel in Manchester, follow the link provided at www.icheme.org/hazards30

How to register

Register online at www.icheme.org/hazards30

Contact us

Contact us on +44 (0)1788 534496 or email hazards@icheme.org

Conference fees

IChemE Member – £975 + VAT

Non-member – £1150 + VAT

Presenting author – £600 + VAT

Student – £275 + VAT

Social event – £65 + VAT

What's included:

- workshop attendance on 30 November
- plenary sessions
- technical presentations and information sessions
- access to the exhibition area on 30 November–2 December
- welcome drinks on 30 November
- lunches and refreshment breaks on 1–2 December

Attendance at the social event is optional, at an additional fee.

Interested in sponsoring or exhibiting at Hazards 30?

We have sponsorship and exhibition packages to suit all budgets, all providing excellent opportunities to:

- highlight your brand
- present your products and services
- network and make new contacts
- expand your process safety knowledge
- understand the issues and concerns in the industry

Visit www.icheme.org/hazards30 to find out more and to see who's already on board.

Thank you to our exhibitors:



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