Tuesday 7 November 2023

13:30–13:45 Opening session
Welcome - Eamon Chandler, Chair, Hazards 33 Technical Committee

13:45–14:30 Plenary presentation
Professor Rhona Fin
Developments in Human Factors and Behavioural Safety
Professor Rhona Fin, Emeritus Professor, University of Aberdeen and Professor of Industrial Psychology, Robert Gordon University, UK

Learning from Incidents
Hydrogen Hazards
Assurance
Modelling & Simulation
Workshops

15:15–15:45 Catastrophic Incidents – Prevention and Failure
Trevor Hughes, Hughes Consultancy and Research, UK
Assessment Techniques for Supporting ALARP
Dissolution for Energy Transition Projects
Richard Titley, E&K Technology, UK
Threshold Quantity for Process Safety Metrics for Special/ Coded Chemicals
Hema Dhyya Karna, University of Aberdeen, UK and Rahul Raman, Kaypee Engineering LLP, India
Development of a Practical Methodology for Assessing the Major Accident Risks Associated with Carbon Dioxide Pipelines in Areas of Topography
Robert Melville, Alison Thackery and Ian Lines, Kent PLC, UK

15:00-17:00 Human Factors in the Chemical and Process Industries
Presented by IChemE and The Keil Centre

15:45–16:15 Learning Effectively from Near-miss Reporting
Stuart King, Energy Institute; Tony Green-Jones; Stichting Hipol Foundation, and Ibrahim Khan, Energy Institute, UK
Guidance for UK Hydrogen Safety Case Development
Sean Balair and Nikhil Hardy, ERM, UK
Performing a Technical Audit With Some of the Findings
Robert Caraway, Sunrgove, UK
Data-Driven Gas Dispersion Modelling Leveraging Machine Learning and Artificial Intelligence
Kahinda Shaba, Anglo American, UK

16:15–16:45 Lessons Learned from Past Incidents/Near-misses – WestJet Flight 2652
Abbie Harvey, UK Civil Aviation Authority, UK
Hydrogen as a Fuel for Industry: Technical and Safety Challenges
Luke Buchter, E&K Technology and Graeme Court, Aecom, UK
Process Safety Management in Operation Readiness Assurance
Zuraida Wong Zulkifli, Petronas, Malaysia
CFD-based Evaluation of Inherently Safer FPSO Layouts
Etienne Guinot, SBM Offshore, Netherlands; Laurent Paris; Efecht France and Josue Quilliou, Gexcon France

16:45–17:15 Identifying and Managing Weak Signals – The Platypus Philosophy
Trish Karr, IChemE Safety Centre, Australia
Revise of Gaps and Needs in Data Collection and Definition of Equipment Classes, Failure Modes and Safety Equipment for Hydrogen Systems
Maria Ruscel and N.Padmanabhan, SINTEF Energy Research AS, Norway
Development of a Novel Risk Assessment Methodology to Assess and Communicate the Effectiveness of Risk Control Measures and Strategies Applied to a Covid-19 Scenario
Cathie Chambers, April Lockhart and Zoe Chaplin, Health and Safety Executive, UK
Statistical-based Maintenance for Above-Ground Gas Riser in Domestic High-rise Buildings
Simon Au and Pasindu Samarasingke, ERM, Hong Kong

17:15-17:30 Refreshment break with poster and exhibition viewing

17:30–18:00 Trevor Kletz Hazards Lecture
Trevor Kletz
New Energy and Sustainable Technology
Amir Gerges, Vice President, Group Safety, Shell, USA

18:00-18:15 IChemE update

18:15-19:45 Welcome reception

This is a draft programme and is subject to change.

www.icheme.org/hazards33
10:30-11:00 A Starts at the Top – The Effect of Human Factors and Leadership on Safety
Voyages
Lessons Learned from Experimental Tasks Concerning Liquid Hydrogen Releases
Fedele Tamburelli, Federico Ustini and Nicola Paltrinieri,
Norwegian University of Science and Technology, Norway,
Enrico Strappini, Valerio Guarini, University of Bologna, Italy
Alice Schrøder, Norwegian University of Science and Technology, Norway,
Giordano Enrico Scapinetti, University of Bologna, Italy, Christian Mata, Universitat Politècnica de Catalunya, Spain, Valerio Guarini, University of Bologna, Italy, and Federico Ustini, IFPEN, Norway
Artificial Intelligence in Safety, the Future or a Recipe for Disaster?
Craig Poonson and David Jamerson, Salix Technical, UK
Operational Risk Assessment: Sharing Good Practice for the Control of Major Accident Risk
Tom Downie, INEOS FPS, UK
Guidelines for Managing Abnormal Situations
Roger Stokoe, Baker Risk, UK

11:00-11:30 Engaging Leadership: Getting Better Insights from Incident Investigations
Stuart Kelly, Axiom, Tony Greenaway, Stirling Tripod Foundation, and Shahin Khan, Energy Institute, UK
Digital image Processing for the Estimation of the Heat Flux Entering a Liquid Hydrogen Tank Exposed to a Fire
Alice Schrøder, Norwegian University of Science and Technology, Norway,
Giordano Enrico Scapinetti, University of Bologna, Italy, Christian Mata, Universitat Politècnica de Catalunya, Spain, Valerio Guarini, University of Bologna, Italy, and Federico Ustini, IFPEN, Norway
Embedding IOPC Process Safety Fundamentals in the Frontline using AI
Kellan Bailey, Weca Energy (UK) Limited, UK
Facilitated discussion

11:30-12:00 Process Safety Safety Site Visit Toolkit
Ashley Hyde, UK
Quantification of Liquid Hydrogen-Induced Losses from Large Scale Experiments
Steven Bebbington, Shell, UK
Driving Process Safety Performance Through Intelligent Dashboard
Sai Vighna Krishna Malik, HNML, India
Pre Start-up Safety Review (PSSR): Significant Potential pitfalls and Insights for an Effective Review
Mohammed Musa, Saudi Aramco, Saudi Arabia

12:00-12:30 The Difference That Makes the Difference – Identifying and Applying the Key to Safety Leadership Excellence
Rachael Cowin, Legitimate Leadership, UK
Facilitated discussion

12:30-13:00 Lunch break with poster and exhibition viewing

13:00-14:00 Enhancing Process Safety
Caroline Myers and Simon Mugford, ExxonMobil, UK
Rationalising Ignition Probability Models for QRA of Hydrogen Supply Chain Facilities
Shirin Baghramian, Shell, India and Andrew Creedwell, Genel Global Solutions, UK
Developing the Skills for our World-class Process Safety Workforce:
Neil Smith and Justine Fows, Cognet Skills, UK
How to Carry Out Human Factors Assessments of Workforce Competencies:
Pippa Buckingham, HP Expertware, Lorraine Braban, Lorraine Braban Consulting, and Jamie Henderson, Human Reliability Associates, UK

14:00-14:30 Safety Culture in an Operating Environment
Ron Hamilton, Safety Management Solutions, UK
To Enclose or Not to Enclose? An Investigation on the Influence of Ventilation Arrangements on Hydrogen Explosion Hazards in Compressors
Karna Aminalaftar and Chris Gold, Gescom, UK
The Next Level in Process Safety with Intra- and Inter-Organisational Learning
André de Ros, Coen van Averbeke, Chris Williams, New Behavior, Netherlands
Using Outputs from Safety Critical Task Analyses to Support Rapid Identification of Human Factors Issues in Relation to Task Failure
Dominic Furmese, and Jamie Henderson, Human Reliability Associates and Karim Singh, Brander, Johnson Matthey, Ltd.

14:30-15:00 Transition of Engie Fertilisers from Compliance-based to Risk-based HSE Management System (Process Safety)
Qais Shafi, Lito Oil, Denis Hussay Seddi and Mohsin Malik, Engie Fertilisers Limited, Pakistan
Heard Assessment of Energy Storage Systems with a Focus on Hydrogen and Hydrogen Derivatives
John Evans, Thornton Tomasetti, UK
Facilitated discussion
How to Carry Out a Human Factors Review of Safety Critical Task Analyses
Toby Garner and Simon Layton, MES International, UK

15:00-15:45 Refreshment break with poster and exhibition viewing

15:45-16:15 How Much Chronic Disease is Enough?
Le Simun and Mohammad Shafii, Sandvik Corman, Sweden
Lessons Learned from Hydrogen System Integration
Graham Morrison and Korina Almeida, Gescom, UK
Development of a Safety Culture Model and Measure for Great Britain’s Nuclear Industry
Nick Shaw, Office for Nuclear Regulation, UK
Integration of Qualitative Human Factors-Critical Task Analyses with Modern Engineering Risk Assessments
James Henderson, Dominic Furmese, Human Reliability Associates, UK
Leak Testing When Renovating Plant – It’s More Complicated Than You Think
Michelle Cormack, Pexco UK and Andy Brander, All Risk, UK

16:15-16:45 Learning from Process Safety Events – a Culture Improvement Journey
Nazem Qaiser Shafi and Syed Asrar Ali, Mie Petroleum Company, Pakistan
Lessons Learned from Hydrogen System Integration
Graham Morrison and Korina Almeida, Gescom, UK
Responding to Climate Change – Improving Resilience to Changing Natural and External Hazards at a Nuclear Fuel Facility
David Threlfall, Rebecca Bettison, GRTgaz, France
Facilitated discussion
Engineering Substitution in the Nuclear Industry
Cathrin Davies, Selwood Ltd, Adam Marrin, EDF Energy and Tim Boland, Shell, UK
Facilitated discussion

16:45-17:15 Kick Starting Process Safety in the PulP and Pulp Industry in Western Canada
John Roberts and Francesca Apruzzese, Caldwell Process Safety Inc, Canada
Lessons Learned from Process Safety Events – a Culture Improvement Journey
Nazem Qaiser Shafi and Syed Asrar Ali, Mie Petroleum Company, Pakistan
Facilitated discussion

17:15-17:45 Facilitated discussion

19:00-22:00 Social event (ticket only)

Wednesday 8 November 2023

Sessions include:
- Safetys
- Hydrogen
- Digitalisation

This is a draft programme and is subject to change.
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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>09:00-09:15</td>
<td>Refreshment break with poster and exhibition viewing</td>
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<td>Human Factors Issues and Solutions When Undertaking Major Projects On Operational Sites</td>
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<td>Data Analysis of Behavior - Situational Awareness as a Factor</td>
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<td>Situation Awareness as a Factor in Accidents and Incidents</td>
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<td>Using Data Science to Identify Human Factors Affecting Process Safety</td>
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<td>Plenary presentation - Dr Faisal Khan - Process Safety Challenges from a North American Perspective</td>
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<td>16:15</td>
<td>Closing remarks</td>
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