
TECHNICAL MEETING REVIEW 1

Active Explosion Suppression Systems

TITLE OF PRESENTATION	SPEAKER	COMPANY
Gas Detection Systems	Jeff Markely	Sieger Ltd
Deluge Effectiveness	John Gregory	Mobil North Sea Ltd
High Rate Discharge Systems	Philip Robertson	Kidde Fire Protection
Blast Relief Systems	Hugh Bowerman	SCI

TECHNICAL MEETING REVIEW 2

Jet fires

TITLE OF PRESENTATION	SPEAKER	COMPANY
What ignited leaks do we consider?	Mr Emmanuel Mavromatakis	Vectra Technology Ltd
What is the effect of the jet fire on the structures?	Mr Sava Medonos	Vectra Technology Ltd
How do we determine the adequacy of protection?	Mr Ragnar Wighus	SINTEF NBL
How do we determine jet fire size and intensity?	Dr Denis Cook	British Gas plc
What jet fire protection is required?	Mr Alan Blake	Mandoval Coatings Limited
What constitutes a jet fire test?	Mr Les Shirvill	Shell Research Limited

TECHNICAL MEETING REVIEW 3

Bang: A Historical Overview of Hydrocarbon Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Pre 1988 – Early Work on Explosions	Martin Vasey	British Gas plc
1988 to Current – Explosion Phenomena	Jan Roar Bakke	Statoil
1988 to Current – Experimental & Numerical	Martin Vasey	British Gas plc
HSE Assessment of Explosion Assessment	Philip Brighton	Health and Safety Executive
1994 to the Future – Experimental & Numerical	Jonathon Puttock	Shell Research Limited
1994 to the Future – Experimental & Numerical	Mr Kees van Wingerden	Christian Michelsen Research
1994 to the Future – Design Trends	Martin Vasey	British Gas plc
1994 to the future – Phase 2	Jurek Tolloczko	SCI

TECHNICAL MEETING REVIEW 4

Major European Hazards Related Research

TITLE OF PRESENTATION	SPEAKER	COMPANY
EU Research & Legislation in Industrial Safety	Steve Cole	CEC
EU Work on the Evaluation of Consequence Models	Rex Britter	Cambridge University
MERGE – Assessment of CFD Based Explosion Codes	Nilesh Popat	British Gas
Optimised Fire Safety of Offshore Structures	Jacek Gierlinski Navil Shetty	WS Atkins Consultants Limited
Foam and Water Deluge Systems for Offshore Platforms	Antonio Lancia	TRI
JIVE - An Overview	Nijs Jan Duijm	TNO
JIVE – Jet Fire Interaction with Pressurised Vessels	Terry Roberts	Health and Safety Executive

TECHNICAL MEETING REVIEW 5

Guidance, Codes and Regulations for the Design of Offshore Structures against Fire and Explosion

TITLE OF PRESENTATION	SPEAKER	COMPANY
Framework of the International Activities in Guidance, Codes and Standards in the Field of Fire and Explosion Hazards	Jurek Tolloczko Sava Medonos	SCI
Fire and Explosion Aspects of the UK PFEER Regulations	John Clegg	Health and Safety Executive
UKOOA Guidelines on Fire and Explosion Hazards Management	Graham Dazell	BP Exploration
Norwegian Petroleum Directorate's Regulations on Fire and Explosion Hazards	Einar Ravnaas	Norwegian Petroleum Directorate
Standard on Technical Safety	Jan Reier Huse	Norsk Hydro
An Overview of Fire and Explosion Hazards as Addressed in the Forthcoming Version of the API Code	Pat O'Connor	AMOCO Production Company
Work of ISO/TC67/SC6/WG1 Related to Fire and Explosions	Nigel Savage	Shell UK Exploration and Production
Explosion Engineering Aspects of the ISO Offshore Standards	Doug Angevine	Mobil Research & Development
Fire Engineering Aspects of the ISO Offshore Standards	Rupert Hunt	Shell Oil Company

TECHNICAL MEETING REVIEW 6

Safety Case Preparation, the Industry Responds

TITLE OF PRESENTATION	SPEAKER	COMPANY
Introduction	Gordon Thomson	Health and Safety Executive
Liverpool Bay Development Design Safety Case	Matthew Fitzpatrick	BHP Petroleum Ltd
Clyde (Existing Installation)	John Beaumont	BP Exploration
Seillean Floating Production Storage and Offloading	John Beaumont	BP Exploration
Semi Submersible Mobile Offshore Drilling Unit (MODU)	Andy Grieve	Dolphin Drilling
Flotel	Andy Grieve	Dolphin Drilling
AH001 Semi Submersible Production Vessel	Steve Lewis	Amerada Hess/EQE
Comments on Safety Cases	Ian Thomson Conrad DeSouza Graham Morrison	Health and Safety Executive

TECHNICAL MEETING REVIEW 7

Performance Standards Approach in Offshore Installations (Prevention of Fire and Explosion, and Emergency Response) Regulations (PFEER)

TITLE OF PRESENTATION	SPEAKER	COMPANY
What HSE Expects from Industry as a Response to PFEER	Ian Thomson	Health and Safety Executive
Performance Standards, One Interpretation	Richard French	British Gas Exploration & Production
Impact of PFEER on the Design Process	Ed Terry	Brown & Root Ltd/BCECA
Performance Standards and Written Schemes, Recent Practical Experience	Jerry Lane	Lloyds Register of Shipping
Integrated Performance Standards – Safety Case PFEER, DCR	Fraser Pritchard	Det Norske Veritas
Design Tool for Fire Performance of Structures	Jørgen Amdahl	SINTEF/The Norwegian Institute of Technology

TECHNICAL MEETING REVIEW 8

Explosion Mitigation with Water Deluge

TITLE OF PRESENTATION	SPEAKER	COMPANY
The History of Water Deluge for Mitigating Gaseous Explosions	Mike Johnson	British Gas Research & Technology
Safety and Operational Factors to be Considered When Using Deluge	Nigel Savage	Shell UK Exploration & Production
An Operators Approach to Adopting Water Deluge	John Gregory	Mobil North Sea Limited
The Relationship Between Water Deluge for Fires and Explosions	Geoff Chamberlain	Shell Research Limited
The Way Forward with Water Deluge	Kees van Wingerden	Christian Michelsen Research

TECHNICAL MEETING REVIEW 9

Inherently Safe Design

TITLE OF PRESENTATION	SPEAKER	COMPANY
Legal Requirements	Tariq Al-Hassan	Health and Safety Executive
Anticipating and Coping with Growth of Explosion Pressures Through the Project Design Phase	Bob Brewerton	Natabelle
The Use of Hazard Identification to Optimize Inherent Safety in a Conceptual Design	Graham Dalzell	BP Exploration
A Pilot Study into the use of Inherently Safer Design in the UK Offshore Oil and Gas Industry	David Mansfield	AEA Technology
Structural Design	David Galbraith	Mobil North Sea Limited
Process Design	Richard Tilsen	Granherne Limited
Development of Tools on the INSIDE Project Solutions	Robin Turney	ICI Eutech Engineering Solutions
He who Pays the Piper (Cost Effective Safety?)	Keith Gugan/ Alan Carter	AMEC Process and Energy

TECHNICAL MEETING REVIEW 10

Fire and Explosion Aspects of FPSO's

TITLE OF PRESENTATION	SPEAKER	COMPANY
Fire and Explosion Issues for FPSO's	Paul Renwick	Health and Safety Executive
Risk Based Design for Fire and Explosion Hazards	Gerry Brennan	Lloyds Register
Explosion Modelling of an FPSO Turret	David Piper	Vectra Technologies
Modelling Aspects	Vincent Tam	BP Exploration
Inherently Safe Design of FPSO's	Alistair Warwick	WS Atkins

TECHNICAL MEETING REVIEW 11

Blast Resistant Design of Topside Structures

TITLE OF PRESENTATION	SPEAKER	COMPANY
FABIG Technical Note No. 4: Explosion Resistant Design – Purpose and Content	Bob Brewerton	Natabelle
Review of Technical Note No.4	David Ward-Gittos	Brown & Root Energy Services
Blast Response – Dynamic Effects and Loads	Steve Walker	SLP Engineering
Response to Real Explosions and Simplified Methods for Membrane Effects	Rob Harwood	Shell UK Exploration and Production Limited
Some Considerations in Design for Blast Resistance	Brian Corr	BP Exploration
Recent Research at City University into Blast Response of Offshore Topsides	Luke Louca	City University
Gas Explosion Engineering Joint Industry Project (GEEJIP)	Jurek Czujko	Offshore Design

TECHNICAL MEETING REVIEW 12

Extended Modelling and Experimental Research into Gas Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Introduction to and Overview of EMERGE & Experiments	Bert van den Berg	TNO Prins Marits Laboratory, Holland
Practical Models for Vapour Cloud Explosions	Phil Cleaver	BG R & T Division
Loading on Obstacles Located Within the Combustion Zone	Ivar Øyvind Sand	Christian Michelsen Research
Turbulence and Drag in Complex Flows	Bjørn Hjertager	Tel-Tek, Norway/ Aalborg University Esbjerg, Denmark
Investigation of Gas Explosions After Jet Release	Ashok Rastogi	Battelle, Germany
The Effects of Obstacles and Pre-Ignition Turbulence and Further Development of Numerical Sub-Modes and Theoretical Support	Peter Lindstedt	Imperial College
Unconfined Vapour Explosions – Predictive Tools and Validation	Jonathan Puttock	Shell R & TS

TECHNICAL MEETING REVIEW 13

Gas Dispersion

TITLE OF PRESENTATION	SPEAKER	COMPANY
Introduction to Gas Dispersion and Full Scale Dispersion Experiments	Thanos Moros	BP Explosion
Measure of Ventilation Offshore	Graham Buss	Shell, Thornton Research Centre
Gas Dispersion Modelling	Kees van Wingerden	Christian Michelson Research
High Pressure Gas Releases in Confined Volumes	Phil Cleaver	BG plc
Transfer of Experiences from Onshore Research	Steve Porter	Health and Safety Executive

TECHNICAL MEETING REVIEW 14

Explosion Model Evaluation

TITLE OF PRESENTATION	SPEAKER	COMPANY
Overview of the EME Project	Bassam Burgan/ Chris Selby	SCI
A Background to EI Activities on Model Evaluation	Kurt Petersen	Danish Council of Road Safety Research, Denmark
Explosion Loading and Response - Models and Model Evaluation	Paul Renwick	Health and Safety Executive
Model Evaluation Methodology	Peter Lindstedt	Imperial College
Model Details Questionnaire	Brian Worth	JRC Ispra
Test Cases and Experimental Details Questionnaires	Gary Shale/ Phil Cleaver	BG Technology
Received Loading Test Cases	Ivar Øyvind Sand	Christian Michelsen Research AS
Structural Response Test Cases	Rolf van Wees	TNO - PM
Evaluation Exercise: Application of Methodology to Test Cases	Ashok Rastogi	Battelle
Feedback on the Model Evaluation Documents and Procedures	Jan Roar Bakke	Statoil

TECHNICAL MEETING REVIEW 15

Interpretation of the Phase 2 Explosion Test Results

TITLE OF PRESENTATION	SPEAKER	COMPANY
Interpretation of the Phase 2 Explosion Test Results	Mike Johnson	BG plc

TECHNICAL MEETING REVIEW 16

Risk Based Design

TITLE OF PRESENTATION	SPEAKER	COMPANY
The Development of Design Philosophy Guidance for Fires and Explosions	Derek Stirling	Marathon Oil
Risk Based Decision Making	Ian Tope	Shell Expro
Some Case Studies of Risk Decision Making Within the Design Process	Ed Terry	Brown & Root
A Safer Design Culture	Graham Dalzell	BP Exploration
Development of Design Performance Indicators for Improved Safety Offshore	John Sharp	Cranfield University
Risk Based Design in Practice, Possibilities and Challenges	Jan Erik Vinnem	Consultant
Uncertainties in QRA – How to Minimise the Impact on Risk Management	Erik Skramstad	DNV
Risk Based Design – Practical Approach	David Allen	Granherne

TECHNICAL MEETING REVIEW 17

Fire – Phase 2 and Beyond

TITLE OF PRESENTATION	SPEAKER	COMPANY
Unconfined Fires	Barbara Lowesmith	BG Technology
Enclosed Jet and Pool Fire Tests at Large Scale	Ragnar Wighus	SINTEF Energy
Lessons Learnt from Large Scale Confined Fires	Geoff Chamberlain	Shell Research Limited
Fire Modelling	Simon Webb	BP Amoco

TECHNICAL MEETING REVIEW 18

Safety Aspects of Recent Offshore Projects

TITLE OF PRESENTATION	SPEAKER	COMPANY
The Shearwater Project	Nigel Savage	Shell UK Exploration & Production
Elgin/Franklin Project: Managing Safety by Design	Kombiz Hashemi/ Phil Shorrocks	Elf Exploration UK Plc
The TRITON FPSO: Fire & Explosion Prevention & Control from the Designer's Viewpoint	Robin Heels	Kvaerner Oil & Gas

TECHNICAL MEETING REVIEW 19

New Data on Materials for Use Offshore

TITLE OF PRESENTATION	SPEAKER	COMPANY
Stainless Steel Subjected to Fire and Explosions	Ed Yandzio	SCI
Ultra-High Strength Stainless Steel and the Prinox Sandwich	Dr H Groth	Avesta, Sheffield
A New Steel/Concrete/Steel Sandwich for Fire, Blast and Impact	Hugh Bowerman/ Mike Gough	SCI
The Elevated Temperature Strength Properties of Structural Steels for use in Offshore Fire Engineering Design	Dr B Kirby	Corus Group
The Effect of Strain Rate on the Mechanical Behaviour of Offshore Steels	Mr S Webster	Corus Group
Fire Resistance of Composites in Offshore and Infrastructure Applications	Prof G Gibson	University of Newcastle

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Mitigation

TITLE OF PRESENTATION	SPEAKER	COMPANY
Verifying the Suitability of Control and Mitigation Measures	Mr P Renwick	Health and Safety Executive
The Effectiveness of Area Water Deluge in Mitigating Offshore Fires	Mr A Gosse	BG Technology
Benefits and Practical Issues Related to the Use of Deluge for Mitigating Gas Explosions	Mr M Johnson	BG Technology
An Active Soft Barrier for Explosion Control – Testing of the Micromist Device	Vincent Tam	BP

TECHNICAL MEETING REVIEW 21

Verification

TITLE OF PRESENTATION	SPEAKER	COMPANY
Verification of the Shearwater Project – A Second Party Approach	William Schumm	Shell UK Exploration & Production
Implementation of the Shearwater Verification Scheme	Jeff Baker	Lloyds Register
The Verifier's Perspective	Ian Wright	Det Norske Veritas
The Regulator's Perspective	Peter Griffiths	Health and Safety Executive

TECHNICAL MEETING REVIEW 22

Human Factors Engineering Vs. Design of Offshore Structures

TITLE OF PRESENTATION	SPEAKER	COMPANY
Overview and HSE Perspective	Bob Miles	Health & Safety Executive
Integrating Human Factors into the Offshore Design Process	Ian Randle/ Ed Terry	Hu-Tech Associates Ltd/ Sauf Consulting
Design Safety Performance Indicators & Organisational Capability Maturity	John Sharp	Cranfield University
Human Factors Integration into the Offshore Design Process – Lessons Learnt from the Defence Industry	Amanda Widdowson/ Monica Sen Gupta/ David Carr	BAE Systems

TECHNICAL MEETING REVIEW 23

Fire and Blast Issues on Deepwater Platforms

TITLE OF PRESENTATION	SPEAKER	COMPANY
MMS Technology Assessment & Research Program	Charles E Smith	Minerals Management Service
Fire & Explosion Guidance Update	Roland Martland	Health and Safety Executive
Explosion & Fire Analysis for FPSO Girassol, off Angola	Henri Tonda	TotalFinaElf
Gas Explosion Issues for Deep Water Development	Vincent Tam	BP International
Design Features of FPSO Units	Glenn Andrews	Lloyds Register

TECHNICAL MEETING REVIEW 24

Process Integrity and its Role in Mitigating Fire and Blast

TITLE OF PRESENTATION	SPEAKER	COMPANY
An Overview of Fire & Blast Related Research	Richard Grant	Nova Scotia Offshore Petroleum Board
Reducing Hydrocarbon Releases – An HSE Perspective	Neville Edmondson and Derek Pratt	Health and Safety Executive
Hydrocarbon Leak Reduction in the North Sea Oil Industry	Ron Boyd	Shell (UK) Exploration and Production
Doing it Right and Keeping it Tight	Ramsay Frazer	AMEC
A Risk Based Approach to Process Integrity	John Morgan	RISX Limited

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Blast Response Analysis Methods

TITLE OF PRESENTATION	SPEAKER	COMPANY
The Role of Simplified and Advanced Analysis in Codes and Regulations	Jørgen Amdahl	Norwegian University of Science & Technology
Advanced Finite Element Analysis for Topside Structures Subject to Blast	Jurek Czujko	CorrOcean
Simplified Methods for Dynamic Response Analysis	Bassam Izzuddin	Imperial College
Simplified Methods for Response Analysis to Dynamic Loading – Implementation and Demonstration	Fadi Hamdan	SCI

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Fire and Blast Aspects for the COMAH Safety Case

TITLE OF PRESENTATION	SPEAKER	COMPANY
Demonstration and ALARP	Tom Maddison	Health and Safety Executive
COMAH – An Operators Perspective	Steve Turner	Shell UK Exploration and Production
Occupied Buildings – An Operators Experience	Alastair Mudie	Shell UK Exploration and Production
Risk Based Estimation of Design Explosion Load	Stian Hoiset	Norsk-Hydro
Demonstration in COMAH Safety Reports	Mike Considine	BP
CIMAH to COMAH – From Information to Demonstration	Martin Goose	Health and Safety Executive
Control of Major Hazard by Legislation	Ake Persson	Swedish Rescue Services Agency
SEVESO II – A Norwegian Perspective	Jan Raknes	Directorate for Fire and Electrical Safety
Communication of Complex Safety Issues Barrier Diagrams	Robert Selig	COWI Consulting Engineers and Planners
Hydrogen Risk Management in Nuclear Power Plants	Ashok Rastogi	Becker Technologies
Use of TNO Games Methodology for Vapour Cloud Explosion Modelling	Simon Gakhar	ABB
Modelling of High Consequence, Low Probability Scenarios	Clive Robinson	Advantica Technologies

TECHNICAL MEETING REVIEW 27

Phase 111b Fire and Blast Joint Industry Project

TITLE OF PRESENTATION	SPEAKER	COMPANY
Amendments to the Seveso II Directive	Neil Mitchison	Major Accident Hazards Bureau Ispra
Introduction	Trish Sentence	TotalFinaElf
Experiments	Mike Johnson/ Phil Cleaver	Advantica Tehnologies
Blast Loading	Simon Chynoweth	Shell Global Solutions
Conclusions	Mike Johnson	Advantica Technologies

TECHNICAL MEETING REVIEW 28

Codes and Regulations for the Protection of Topside Structures Against Fire and Explosion

TITLE OF PRESENTATION	SPEAKER	COMPANY
Effective Improvement of Process Safety	Robin Turney	European Process Safety Centre
HSE Regulatory Activities and Interaction with Fire and Explosion Guidance for Design and Risk Assessment	Roland Martland	Health and Safety Executive
Canadian Initiatives in Fire and Explosion Safety for Offshore Structures	Rick Grant/ David Galbraith	CBCL Limited/ Galbraith Consulting
A Comparison of Developing Codes	Brian Corr	BP
The NORSK Procedure on Probabilistic Explosion Simulations	Jan Pappas	Norsk Hydro

TECHNICAL MEETING REVIEW 29

Blast Load Predictions for Gulf of Mexico Offshore Facilities

TITLE OF PRESENTATION	SPEAKER	COMPANY
Objectives and Structure	Fadi Hamdan	SCI
Blast Load Prediction Basics/Methodologies and Range of Results	Jan Roar Bakke	GexCon AS
North Sea vs. Gulf of Mexico Key Differences and Similarities	Dave Kehn	Mustang Engineering
Load Prediction Approach for Preliminary Design	Gary A Fitzgerald	ABS Consulting
Industry Practices and Trends	Olav Rasmussen	Det Norske Veritas

TECHNICAL MEETING REVIEW 30

Preparation of Updated Guidance for Fire and Explosions Hazards

TITLE OF PRESENTATION	SPEAKER	COMPANY
Introduction and Overview	David Galbraith	Galbraith Consulting
Explosion Hazard Philosophy – Hazard Management	Rod Bleach	Genesis Oil and Gas Consultants
Derivation of Explosion Loads	Greg Fairlie	Century Dynamics
Response to Explosions	Steve Carney/ Luke Louca	Aker Kvaerner/ Imperial College Consultants
Interaction with Fire Hazard Management	Rod Bleach	Genesis Oil and Gas Consultants
Guidance on Detailed Design	Steve Carney	Aker Kvaerner
The Guidance – Part 1 – Avoidance and Mitigation of Explosions	Steve Walker	MSL Engineering
The Way Forward	David Galbraith	Galbraith Consulting

TECHNICAL MEETING REVIEW 31

Structural Design of Offshore Facilities for Blast Loads

TITLE OF PRESENTATION	SPEAKER	COMPANY
Introduction of Topic	Darrell Barker	ABS Consulting
Managing Explosion Hazard Assessment and Design	Jan Borgen	Credence Group
Overview of Structural Response Prediction – Basics/ Methodologies	Jurek Czujko/ Kate Filippin	CorrOcean
Methods for Evaluation of Blast Loads and Structural Response	Paul Jacob	MMI Engineering
Structural Criteria Development for Fire and Blast	Pat O’Connor/ Christy Hand	BP America Inc

TECHNICAL MEETING REVIEW 32

Protection of Onshore Oil and Gas Plants Against Fire and Explosion

TITLE OF PRESENTATION	SPEAKER	COMPANY
Blast Mitigation Retrofits for Onshore Facilities	Darrell Barker	ABS Consulting
Design and Protection of Pressure Systems to Withstand Severe Fires	Carl Butler	Health and Safety Laboratory
Risk Analysis of Large Onshore Plants Using CFD Codes	Laila Rodsaetre/ Ingar Fossan	Scandpower AS
The Passive Approach for the Protection of Onshore Facilities Against Fire Attach	Eddie Walker	Cafco International
Further Compressor House Explosion Modelling	Alastair Mudie	Shell UK Exploration and Production

TECHNICAL MEETING REVIEW 33

Fire and Blast Regulations/Guidance for Gulf of Mexico

TITLE OF PRESENTATION	SPEAKER	COMPANY
Fire and Blast Regulations and Guidance for the Gulf of Mexico	Garth Burton/ Kent Dangtran	ABS Consulting
Fire and Blast Regulations – A Contractor’s View	Steve Scanio	Technip-Coflexip
Application of Fire and Guidance	Ben Poblete	Lloyds Register North America
Update of UKOOA Design Guidance	Justin Bucknell	MSL Engineering

TECHNICAL MEETING REVIEW 34

Passive Fire Protection

TITLE OF PRESENTATION	SPEAKER	COMPANY
HSE Continuation of the Shell Programme on Weathered Passive Fire Protection	Terry Robers	Health and Safety Laboratory
The Determination of Passive Fire Protection for Pressurised Systems in Accordance with the IP's Guidelines	Sava Medonos	Petrellus Limited
Passive Fire Protection Materials and their Application	David Stowers	International Coatings
Intumescent Protection Systems for the Protection of Critical Control Systems	Brian Bailey	Thermal Designs Inc

TECHNICAL MEETING REVIEW 35

Re-Assessment of Offshore Structures Against Fire and Blast

TITLE OF PRESENTATION	SPEAKER	COMPANY
The Use of Bow-tie Model and THESIS in the Control of Major Accident Hazards	Baldev Kandola/ Mike Sullivan	ABS Consulting
A Holistic Approach to Explosion Hazard Management	Derek Martin/ Ian Cowan	Atkins
Blast Re-assessment of Glass Fibre Deluge System	Mike Smith	Kellogg Brown & Root
Remedial Measure Optimisation Through Re-assessment of Explosion Overpressures	David Holland	Det Norske Veritas

TECHNICAL MEETING REVIEW 36

Fire Resistant Design for Offshore Structures

TITLE OF PRESENTATION	SPEAKER	COMPANY
Fire Hazard Assessment	John Alderman	Risk, Reliability and Safety Engineering
Risk Based PFP Design Using New Fire Tools Kameleon-FAHTS-USFOS	John Baik	Det Norske Veritas
Fire Fighting Risk Assessments – Lessons Learnt	Ken Smith	J. Connor Consulting
Passive Fire Protection Methods for Marine Structures	Tom Dearing	Thermal Designs
Overview of FABIG Information on Fire Protection for Offshore	Fadi Hamdan	SCI

TECHNICAL MEETING REVIEW 37

Protection of Piping Against Fires and Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Piping Systems Exposed to Fire/ Explosion	Roland Martland	Health and Safety Executive
FABIG Technical Note 8	Fadi Hamdan	SCI
Piping Design Against Explosion: Goals, Practical Guidance and Future Developments	Bob Brewerton	GexCon AS
Guideline for Protection of Pressurised Process Systems	Jan Reier Huse	Scandpower AS
Jet-fire Test on Pressurised Steel Pipes	Per Salater	Norsk Hydro ASA
FEED Explosion Loading Analysis	Peter Boyle	Det Norske Veritas

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Inherent Safety for Offshore Structures

TITLE OF PRESENTATION	SPEAKER	COMPANY
Inherent Offshore Fire Safety	Ernesto Valenzuela	ABS Consulting
Risk Assessment and HSE Decision Making	Wilbert Lee	Chevron Texaco
Lessons Learned from Applying Inherently Safer Designs to Address Fires and Explosions on Offshore Facilities	Ben Poblete	Lloyds Register
Inherent Safety: What does it look like?	Phil Guy/ Farrell /Zwerneman	Mustang Engineering

TECHNICAL MEETING REVIEW 38

Protection of Onshore Oil & Gas Plants Against Fires and Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Building Siting Assessments for Chevron Texaco US Refineries	Wilbert Lee	Chevron Texaco
Fire and Explosion Prevention and Protection on Nuclear Sites	Paul Renwick	British Nuclear Fuels
The Use of Passive Fire Protection Against Fires and Explosions	Brian Bailey	Thermal Designs UK Limited
Vulnerability Assessment with SURVIVE	Russell Grier	QinetiQ
Leading Software for QRA	Steve Lewis	Risktec Solutions
Risk Assessments of Gas Turbine Enclosures	Mike Johnson/ Phil Cleaver	Advantica

TECHNICAL MEETING REVIEW 39

Fire Loading and Simultaneous Design Against Fires and Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Fire and Explosion Risk used as a Decision Parameter	Jens Kristian Holen	Statoil ASA
Simultaneous Fire and Explosion Analyses	Joar Dalheim	Det Norsk Veritas
Design of Steel Structures in Fire to EC3 1-2	Gerald Newman	SCI
Fire Load – Experimental Data Versus Real Fires	Ragnar Wighus	SINTEF Energy
Kameleon FireEx – An Advanced Computational System for Calculation of Fire Structure Interaction	Trond Evanger	ComputIT

TECHNICAL MEETING REVIEW 40

Fire and Blast Issues Related to LNG

TITLE OF PRESENTATION	SPEAKER	COMPANY
LNG Safety – The Maplin Sands Experiments and After	Jonathan Puttock	Shell Global Solutions
Experiences from LNG Projects	Jan Reier Huse	Scandpower AS
LNG Vaporisation and Dispersion Modelled with FLACS	Hans-Christian Salvesen	GexCon AS
LNG Spills Consequence Assessments	Aubrey Thyer	Health and Safety Laboratory
LNG Behaviour	Phil Cleaver/Mike Johnson	Advantica
Examples of Statoil's Work Related to LNG Safety	Jens Kristian Holen	Statoil ASA

TECHNICAL MEETING REVIEW 41

Lessons Learnt from Past Accidents

TITLE OF PRESENTATION	SPEAKER	COMPANY
The Inevitability of Ignition	Trevor Kletz	Loughborough University
Principles for Learning Lessons from Incidents – A UK Perspective	Brian Fullam	Health and Safety Executive
Development of Risk Management Strategy for Gas Distribution Mains	Rosemary McAll	Advantica
Fire Events at Nuclear Stations – Lessons Learnt to Enhance fire Risk Assessment	Ana Gomez-Cobo	Health and Safety Executive
Mongstad Refinery Fire – Lessons Learnt	Morten Sorum/ Jens Kristian Holen	Statoil ASA
Lessons Learnt from Accidents at a Retail Station and Offshore Platform	Geoff Chamberlain	Shell Global Solutions

TECHNICAL MEETING REVIEW 42

Protection of Onshore Oil and Gas Plants Against Fire and Explosion

TITLE OF PRESENTATION	SPEAKER	COMPANY
Fire and Explosion Risk Assessment for DSEAR	Gareth Roberts	ERM
Explosion Analysis of an Onshore Plant with Worked Examples, Quantitative Risk Analysis, Probabilistic Explosion and MDOF Response Analysis	Pol Hoorelbeke/ Jerome Renoult/ Bob Brewerton	Total/ GexCon
Fire Safety of a LPG Storage Vessel	Sava Medonos	Petrellus Limited
An Alternative Perspective on Fire & Blast	Andrew Craig	Mitsui Babcock

TECHNICAL MEETING REVIEW 43

Risk Assessment, Protection and Design of Piping Against Fires and Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Integrity Management of Piping Systems with Particular Emphasis on Fire/Explosion Hazards	Roland Martland	Health and Safety Executive
FABIG Technical Note 8	Fadi Hamdan	SCI
Where Quantitative Risk Assessment and Risk Based Inspection Meet Each Other	Xavier Arnault/Dirk Roosendans	Total Petrochemicals
Risk Assessment for Piping Vibration Fatigue	John Hill	Bureau Veritas
Heat Exposure of Process Equipment	Geir Berge	Petrell AS
Development of a General Procedure for Probabilistic Fire Analysis	Asmund Huser	DNV
Practical Experience on Use of Guidelines for Protection of Pressurised Systems Exposed to Fire	Bjorn Hekkelstrand/Paul Skulstad	Scandpower AS
Piping for Blast and Fire: Future Research Needs for Onshore Work	Bob Brewerton	Gexcon

TECHNICAL MEETING REVIEW 44

Fire and Blast Issues for LNG

TITLE OF PRESENTATION	SPEAKER	COMPANY
Simulating LNG with FLACS: Report from Ongoing LNG Validation and Development Program Supported by Norsk Hydro, Statoil, Total and PTIL	Roald Hansen	Gexcon
Evaluating Risks of LNG Spills Over Water	Louis Gritzo	Sandia National Laboratories
Consequence Modelling of LNG Spills	Torunn Marthinsen	DNV
Treatment of Uncertainties in QRA	Sirous Yasseri	Kellogg, Brown and Root
Aspects of Design and Operational Safety at the Isle of Grain LNG Importation Terminal	David Glass	Grain LNG Terminal
LNG Fire Protection	Mike Willson	Kidde UK

TECHNICAL MEETING REVIEW 45

Safety Implications of a Hydrogen Economy: Risk Assessment and Design Against Fires and Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Hydrogen Modelling with FLACS: Validation, R & F Work Predicting DDT and Risk Assessments	Olav Roald Hansen	Gexcon
Risk Management Strategy for Hydrogen Economy Projects	Gordon Newsholme	Health and Safety Executive
Developing an Approach to Security Risk Management for Oilfield Installations	James Phipps/Patrick Mann	ABS Consulting
Study of Hydrogen Releases at Filling Stations	Phil Cleaver/John Evans/Paul Cronin	Advantica

TECHNICAL MEETING REVIEW 46

Human Factors Engineering for the Protection of Onshore Oil and Gas Plants and Offshore Structures Against Fires and Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
FABIG Technical Note 9	Ed Terry/Ian Randle	Sauf Consulting/ Hu-Tech Ergonomics
Human Factors – Not Just Common Sense	Andy Sutherland/Liz Cullen	WS Atkins
Early Human Factors Interventions in the Development of an FPSO	Ian Hamilton	Human Engineering Limited
Why Human Factors?	Rob Miles	Health and Safety Executive

TECHNICAL MEETING REVIEW 47

Life Extension of Ageing Assets: Re-Assessment, Design & Monitoring of Safety Critical Elements for Fires & Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Integrity Management for Fires & Explosions	Roland Martland	Health & Safety Executive
Development of Acceptance Criteria to Assure the Performance Standards of PFP on Ageing Facilities	Simon Thurlbeck	MMI Engineering
The Role of Metrics in Maximising the Performance of Critical Systems	Andrew Sekulin / David Piper	Marathon Oil
CFD Method for Extension of Machinery ATEX Compliance	Dr Adrian Holland/ Duncan Livingston	Frazer Nash Consultancy

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Disseminating the Lessons Learnt from Recent Onshore and Offshore Accidents

TITLE OF PRESENTATION	SPEAKER	COMPANY
Sharing Experience: Preventing Injury and Loss	Dave Fargie	BP
FABIG/SLPSG Collaboration	Viken Chinien	FABIG (SCI)
Keynote Address	Kevin Allars	Health & Safety Executive
Flixborough & Piper Alpha: Shaping the UK Regulatory Regime	Brian Fullam	Health & Safety Executive
Humber Refinery Saturate Gas Plant Fire and Explosion, April 2001	S. Mohammad Ali	Conoco-Phillips
Lessons Learnt from the Texas City Refinery Explosion	Michael Broadribb	BP
Visund Platform Gas Release Incident (NB: Presentation not included at speakers' request)	Gustav Heiberg/Oddmund Kvernfold	DNV
Process Safety Incident Database (PSID)	Scott Berger	Center for Chemical Process Safety

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Defence-in-depth: Prevention of Escalation of Fires and Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Development of an Ignition Probability Model for the Oil and Gas Industry	Dave Mansfield	ESR Technology
Subsea Gas Releases: Challenges of Estimating Topside Fire and Explosion Risk	Peter Sassan Johansson	Scandpower
Advanced Composite Solutions for Jet Fire and Explosion Protection of Oil and Gas Structures and Equipment	Matt Chalk	Solent Composites
Experimental Validation of Explosion Relief Panels for Onshore and Offshore Applications	Bob Brewerton	Natabelle Technology

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Managing Explosion Risks

TITLE OF PRESENTATION	SPEAKER	COMPANY
Approaches to Assessment and Reduction of Risks from Explosions Offshore and Onshore	Jonathan Puttock	Shell Global Solutions
An Advanced SDOF model for Steel Members Subject to Explosion Loading: Material Rate Sensitivity	Bassam A. Izzuddin	Imperial College London
FABIG Technical Note 10: Implementation of Advanced SDOF Model for Explosion Loading	Viken Chinien	SCI
The Oil & Gas UK Updated Fire and Explosion Guidance	Edmund Terry David Galbraith	Sauf Consulting Limited Poseidon International Limited

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Designing an Integrated Fire and Explosion Strategy

TITLE OF PRESENTATION	SPEAKER	COMPANY
ExpressFire – Safe and Cost Efficient Integrated Fire and Explosion Risk Management	Asmund Huser	DNV
Experience in the Use of ISO 23251-2006 in Process Safety Design	Geir Berge	Petrell AS
Tools for Quantifying Domino Effects: Threshold Value, Probit Approach and Reliability Based Method	Sirous Yasseri	KBR Engineering
Quantitative Risk Assessment of Domino Effects Caused by Explosion – A Case Study	Sirous Yasseri	KBR Engineering
Offshore Fires Protection with Water Deluge	Siaka Dembele	Kingston University

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Design for Emergency Response (Workshop)

TITLE OF PRESENTATION	SPEAKER	COMPANY
Methodology for Demonstrating Effective Fire Fighting Pre Planning on Large Petrochemical Facilities	Greg Richardson Paul Frankland	SembCorp Utilities (UK) Ltd
Emergency Planning for Onshore Gas Developments with High Content of H ₂ S	Jan Reier Huse	Scandpower AS
A Case Study of an Offshore Gas Release – Expect the Unexpected	David Piper	Marathon Oil UK Ltd
The Importance of Fire Systems Integrity Assurance for Effective Emergency Response	Niall Ramsden	Resource Protection International
Safety Issues Concerning the Introduction of Bio Fuels	Jeanne Van Buren	Rotterdam Port Fire Services
Systems Change and Effectiveness Reassessment	David Johnson	Essex County Fire and Rescue Service

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Dispersion Modelling

TITLE OF PRESENTATION	SPEAKER	COMPANY
Assessment of Gas Detection Strategies for Offshore HVAC Ducts based on CFD Modelling	Kevin O'Donnell Chris Lea	HSE Lea CFD Associate Ltd
Dispersion Modelling – Current Status and Developments	Mike Harper Asmund Huser	DNV Software DNV Energy
Recent and Planned Improvements of FLACS-DISPERSION	Jens Melheim	Gexcon
CFD Dispersion Modelling for Blast Analysis	Ian Cowan	Atkins Energy
Comparative Analysis of Dispersion Modelling of Emissions from Various Kinds of Sources by Analytical and CFD Methods	Claude Souprayen/Sharad Tripathi Paul Hill	Fluidyn (UK) Ltd Hill Consultants Ltd

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Asset Integrity and Hazard Management of Ageing Installations

TITLE OF PRESENTATION	SPEAKER	COMPANY
KP3: Asset Integrity in Focus	Stan Cutts	SLC Consultants Ltd
Key Findings from Offshore Oil & Gas Maintenance Management Assessments Carried Out Using the HSE's KP3 Assessment Process	Ian Wright	DNV
Integrity Management for the 21 st Century with 20 th Century Equipment	Andy Hollins Alan D'Ambrogio	ABB Engineering Services
Audit Tool for Integrity Management of Safety Critical Elements: Providing the Big Picture	Guillaume Vannier	SCI
Pipeline Integrity by Numbers	Phil Horrocks	ESR Technology

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Safety Performance Indicators

TITLE OF PRESENTATION	SPEAKER	COMPANY
Use of Process Safety Performance Indicators to Ensure the Effective Management of Major Hazard Risks: The HSE's Experience	Jonathan Carter	HSE
Global Process Safety Metrics	Michael Broadribb	BP
Safety Performance Indicators for a North Sea Operator	John Morgan	Advantica
Safety Performance Indicators in StatoilHydro	Lars Tronstad	StatoilHydro
T-Rate: A Key Performance Indicator (KPI) Designed to Elevate and Manage Technical Safety at All Levels in the Organisation	Sarah D. Grondahl	DNV
Development of Key Performance Indicators for Offshore Structural Integrity	David Galbraith John Sharp	Sigma Offshore Ltd Cranfield University

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Design and Siting of Process Plant Buildings

TITLE OF PRESENTATION	SPEAKER	COMPANY
API RP-753: Management of Hazards Associated with Location of Process Plant Portable Buildings	Wilbert Lee	Chevron (USA)
A Risk-Based Approach to Siting of Portable Buildings	Andrew Crerand	Shell Global Solutions (UK)
Developing Guidance for Siting and Design of Process Plant Buildings on BP Sites	Kieran Glynn	BP
Siting, Design and Protection of Occupied Buildings at TOTAL Petrochemicals	Dirk Roosendans	TOTAL Petrochemicals
Master Planning for Companies Performing Siting Studies & QRA's	Max Kolbe	Baker Risk (USA)
Risk Based Design Methodologies: Limitations and Future Developments	Jeff Daycock	DNV Energy
Design of Modular Blast-Resistant Buildings for Petrochemical Facilities	Paul Summers	MMI Engineering (USA)
Protection of People on Chemical Manufacturing Sites	Ken Patterson	Yule Catto

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Design of Structures Against Hydrocarbon Fires

TITLE OF PRESENTATION	SPEAKER	COMPANY
Guidance on Heat Loading from Jet and Pool Fires	Geoff Chamberlain	Visiting Professor at Loughborough University
Probabilistic Fire Load and Structural Response Procedure	Asmund Huser	DNV
Eurocode Approach to Structural Fire Design	Nancy Baddoo	SCI
Acceptance Criteria for Damaged Passive Fire Protection Coatings	Simon Thurlbeck	MMI Engineering
BP – LNG Fire Hazard Management Workshops	Kevin Westwood	BP
Mitigation of Fire on Storage Tanks using Water Deluge	Jake Kay	HSL

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The Buncefield Explosion Mechanism

TITLE OF PRESENTATION	SPEAKER	COMPANY
Overpressure and Directional Indicators	Vincent Tam	BP
The Deflagration Hypothesis	Jonathan Puttock	Shell Global Solutions (UK)
The Detonation Hypothesis	Mike Johnson	Germanischer Lloyd
Previous VCE Events and Consideration of Possible Alternative Mechanisms and Aggravating Factors	Laurence Cusco	Health & Safety Laboratory
Assessment of Structural Damage	Ian Barnes	Defence Ordnance Safety Group, MoD
Summary and Outline Proposals for Further Work	Bassam Burgan	SCI and FABIG

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Learning from the Nuclear Industry

TITLE OF PRESENTATION	SPEAKER	COMPANY
Learning from the Application of Probabilistic Safety Assessment in the Chemical Industry	Cyril Charvet Jean-Luc Chambon Francois Corenwinder	IRSN
Fire Research at IRSN – Experimental Programmes and Fire Codes Development	Laurent Audouin	IRSN
Fire Probabilistic Safety Assessment in the Nuclear Industry	Jerzy Grynblat	Relcon Scandpower
Assurance and Verification, Offshore vs. Nuclear	Paul Renwick	AMEC
Making Safety Cases Fit for Purpose	Howard Thompson	AMEC

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Managing Low Probability High Consequence Events

TITLE OF PRESENTATION	SPEAKER	COMPANY
Major Accidents - Understanding and Accepting their Dynamics	Jan Reier Huse	Scandpower
Managing Major Accident Risk	Mike Considine	BP
Risk Communication in the 21st Century: What have we learned and what are the lessons going forward?	Ragnar Lofstedt	Professor at King's College London
Societal Risk - Land Use Planning Around Major Hazards	Andrew Franks	ERM UK
Risk Predictions - Large Petroleum Storage Sites	Phil Crossthwaite	DNV
Risk Calculation Methods for Flammable Substances as Used for Land Use Planning in the Netherlands	Paul Uijt de Haag	RIVM
Explosion Analysis for Pipelines in High Consequence Areas	Mike Johnson Renato Mendes	Germanischer Lloyd Petrobras
Insurance and Loss Adjusting Considerations	Minaz Lalani	Lloyd Warwick / Atkins Oil & Gas

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Ignition

TITLE OF PRESENTATION	SPEAKER	COMPANY
Ten things you should know about electrostatic ignition hazards	Richard Ball	Chilworth Technology
Critical conditions for auto-ignition in large vessels	Timothy Snee	Health & Safety Laboratory
Mechanical equipment ignition risk assessment – The basics	Richard Ball	Chilworth Technology
Ignition modelling in risk analysis	Jan K Lund	Scandpower
Problems in the consistent use of ignition models in QRA	Brian Bain and Philip Nalpanis	DNV

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Innovations for the Prevention, Detection, Control and Mitigation of Fires and Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
Real time emergency response through source determination and 3D dispersion modelling	Amita Tripathi, Thibault Mailliard	Fluidyn
Large flammable vapour clouds – how they form ... and what the risks are	Graham Atkinson	Health and Safety Laboratory
Control of boilovers during tank fires using additives prior to and during emergency response	Jeanne van Buren	Rotterdam Port District Fire Services
Lastfire project – large storage tank fires – an update on incident experience and related research	Niall Ramsden, Paul Watkins	Resource Protection International
Investigation of the use of active explosion mitigation systems in congested geometries	Brian Wilkins	Gexcon

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Modern Structural Design against Explosions

TITLE OF PRESENTATION	SPEAKER	COMPANY
New Basis for the Design of High Pressure Polyethylene (LDPE) Reactor Enclosure to Blast	Christophe Catala	Technip
Structural Assessment of Blast Resistant Modules: A Case Study	Alastair Smith Daniel Mahoney Alban Proietto	Atkins
Mitigating Blast Effects On Existing Buildings	Stephen Ward	Baker Risk
Optimisation of Extensive Onshore Plant with many Closed Modules	Bob Brewerton	Gexcon
Concept Evaluation using CFD Based Approach to Explosion Modelling	Viken Chinien	DNV

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Complex Release Scenarios

TITLE OF PRESENTATION	SPEAKER	COMPANY
Liquid leaks – atomized or not?	Tarek Yousef	Scandpower
Two-phase jet releases, droplet dispersion and rainout: experiments and model validation	Henk Witlox	DNV
Large scale tests for oil & gas releases into complex geometry, including the effect of water in the release and the effect of deluge systems	Ragnar Wighus Are Opstad Sæbø	SINTEF NBL
Simulations of large-scale fires in complex geometries including effect of water sprays and water cut in spray fires - Comparison with experiments	Kjell Erik Rian	ComputIT
Improving subsea gas plume and dispersion above sea prediction capabilities	Asmund Huser	DNV

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Liquefied Natural Gas (LNG)

TITLE OF PRESENTATION	SPEAKER	COMPANY
Risks from Large LNG Releases	Phil Cleaver	GL Noble Denton
Safety Design in Baseload LNG Plants	Masayuki Tanabe Keiji Tanigawa Satoshi Kanno	JGC Corporation
A Structured Methodology for Assessing the Strengths and Weaknesses of LNG Source Term and Dispersion Models	Stuart Jagger	Health & Safety Laboratory
Fire and Explosion Modelling for FLNG	Jeff Daycock Savio Vianna	DNV
FLACS for LNG Safety Studies - New Models, Validation and Application in Projects	Olav Roald Hansen	Gexcon

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Design for Extreme Events

TITLE OF PRESENTATION	SPEAKER	COMPANY
Designing Offshore Structures to Survive Extreme Metocean Events	Donald Smith	Eni UK
Failure Probabilities for Offshore Structures Subject to Extreme Environmental Hazards	Mark Manzocchi	Atkins
Consequence Based Seismic Risk Assessment and Mitigation	Sirous Yasseri	Safe Sight Technology
Insurance and Extreme Events	Geoff Burnett	Shell

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Update on Recent Accidents and Related Research

TITLE OF PRESENTATION	SPEAKER	COMPANY
Lessons from ICL - Addressing the Safety of Bulk LPG Installations	Julian Delic	HSE
Evidence from Jaipur Vapour Cloud Explosion and Comparison with Buncefield	Mike Johnson	GL Noble Denton
Analysis of 3 Years of Events with High Consequence Potential in Total Petrochemicals	Dirk Roosendans	Total Petrochemicals
Vulnerability of Buildings near Hazardous Sites	Bassam Burgan	SCI
Deepwater Horizon: What Happened? Why?	Mark Boulton	DNV

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Reassessment and Upgrade of Existing Facilities

TITLE OF PRESENTATION	SPEAKER	COMPANY
Structural Assessment of Occupied Buildings on Petrochemical Sites, Refurbishment and Replacement Case Studies	Ian Maclachlan	IKM Consulting
Reassessment of Existing Control Room to meet Revised Blast Loads	Stephen Ward	BakerRisk
Optimization of Flame Detector Layouts using Genetic Algorithms	Oliver Heynes	MMI Engineering
Reassessment and Upgrade of Offshore Topsides and Substructures due to Field Developments and Life Extension	Ramsay Fraser	Atkins
Development, Design & Installation of a Novel, Retrofitted, Fire and Blast Wall	Michael Hasson Richard Holliday Enrique Munoz-Garcia	MMI Engineering