

DR NIALL RAMSDEN

Oil and Gas industry Fire Hazard Management specialist

Highlights

- Comprehensive knowledge, experience and expertise in international practices related to all aspects of Fire Hazard Management in the oil, gas and petrochemical sectors from site specific policy development through to implementation and assurance.
- Led development of much of current related industry good practice guidance including publications of Energy Institute, International Oil and Gas Producers' Association, Society of International Gas Tanker and Terminal Operators and LASTFIRE (see below) as well as in-house standards for major oil companies.
- Development and implementation of specialist training programmes including both hands-on and classroom in subjects such as LNG Hazard Awareness, LNG Fire Response, Storage Tank Fire Hazard Management, Fire Systems Integrity Assurance,
- Project Coordinator of LASTFIRE (Large Atmospheric Storage tank Fires) – an international forum of oil companies to develop guidance on best practices for storage tank fire risk reduction. (Incorporating data collection, risk reduction options review, practical fire test work, lightning related studies and training aid development.) Coordinated Group input to American Petroleum Institute/Energy Institute studies of lightning related hazards for storage tanks.
- Extensive knowledge and experience in firefighting foam selection and application and the issues associated with new generation foams including large scale testing, foam management assurance procedure development and auditing.

Dr Niall Ramsden combines worldwide practical experience with academic knowledge in the field of specialist Fire Hazard Management in the oil, gas and petrochemical sectors with particular emphasis on refineries, production facilities, storage terminals and gas processing plants.

In previous roles he has been responsible for developing and implementing much of current industry guidance and standards for risk based development of site-specific cost-effective and appropriate Fire Hazard Management policies. (See Typical Projects below)

He has worked on contracts in more than 70 countries, gaining unique experience of different operating and legislative environments.

He has special knowledge in the fields of Firefighting Foam Systems and Equipment, Storage Tank Incident Response, LNG Hazard Awareness, Fire Effects Modelling and Scenario Based Emergency Response Planning.

He has acted as Expert Witness internationally in a number of cases applicable to fire protection system design and operation, firefighting foam application and associated consequences and application of current best practice risk based fire hazard management policies.

Academic Qualifications

1973 B.Sc in Physics, First Class with honours, University of Kent

1976 Ph.D, Mechanical Engineering, University of Aston

Professional Memberships/Qualifications

- Chartered Engineer
- Chartered Physicist
- Member of the Institute of Fire Engineers
- Member of the Energy Institute (formerly Institute of Petroleum)
- Member of the National Fire Protection Association (USA)
- Full voting member of NFPA 11 and European EN 13565-2 Standards Committees for the design of firefighting foam systems.
- Full voting member of NFPA 30 Flammable and Combustible Liquids Code Committee
- Previously member of British Standards Institute Dry Chemical Fire Protection Systems Standard committee
- Member of Energy Institute Process Safety Committee
- Member of Underwriters Laboratories UL 162 Foam Systems Testing Steering Panel

Specific Specialist Experience

- Responder to the Buncefield Storage Tank Terminal fire – acting as adviser to Fire Brigade and Industry Terminal Operators
- Contracted by Buncefield Major Incident Investigation Board to provide expert opinion on incident causes and comment on recommendation issues.
- Energy Institute representative on Committee reviewing overpressure mechanism for Buncefield incident
- Development of Major Incident Response Units for long duration incidents for Petroplus, BP, Shell, Ineos, ADCO and GALP.
- Hydrocarbon fire incident investigations and Expert Witness
- Development of Amsterdam Mutual Aid Society procedures and equipment packages for Amsterdam Fuel Services, Schiphol and other fuels/gas terminals.
- Management of emergency response exercises
- Performance based testing of fire detection and protection systems
- Development and implementation of Fire Systems Integrity Assurance procedures
- Development and Presentation of Training Courses on Storage Tank Fire Hazard Management (Practical and Theoretical Sessions), LNG Hazard Awareness, Fire Systems Integrity Assurance, Emergency Planning etc.
- Expert witness for Foam Application selection, operation, and engineering.

Typical Projects

- Development of Industry Knowledge, Guidance and Standards
 - Energy Institute Model Code of Safe Practice, Part 19 – Fire Protection of Refineries and Bulk Storage Terminals
 - Fire Hazard Management of Gas Tankers and Terminals on behalf of SIGTTO - Society of International Gas Tanker and Terminal Operators
 - Fire Systems Integrity Assurance on behalf of the International Oil and Gas Producers Association
 - LASTFIRE Project Deliverables including Incident Data Collection, Escalation Analysis, Risk Reductions Options Guidance, Lightning Protection Review, Foam Fire Performance Test Protocol and Research Projects Reports (Internal Floating Roof Tank Roof Fire Characteristics, LNG Vapour Suppression, Boilover Studies, new generation foam types testing and evaluation etc.)
 - Total Oil – Research into Vapour Suppression and Fire Radiation Reduction of LNG and LPG spills by application of foam and /or passive protection materials.
 - Fire response training packages for Liquefied Natural Gas (LNG) on behalf of SIGTTO
 - BP Fire Response Workbook – a methodology by which an operator can develop and audit a risk based Fire Hazard Management policy

- Review of storage tank lightning protection work carried out jointly by Energy Institute and American Petroleum Institute
- Crude oil and refined products boilover tests to develop consequence prediction tools and response guidance.
- Foam test protocol development for storage tank application.
- Testing of foam against internationally recognised systems including aviation, industrial and general purpose standards.
- In house guidance and standards on Fire Hazard Management for BP and Shell.
- Energy Institute guidance on Ethanol Fire Response
- Storage Tank Terminals, Gas Processing, Refinery and Oil Production Stations Fire Hazard Management Audits on behalf of BP (Worldwide), Ecopetrol (Colombia), Esso (UK), FPCC (Taiwan), Gulf (UK), GUPCO (Egypt), MOL (Hungary), Oil Search (Papua New Guinea), PDO (Oman), Petronas (Malaysia), Sasol (S. Africa), Shell (Worldwide), Statoil (Ireland), Oil Search (Papua New Guinea), Texaco (UK), TOP (Ireland), Total (UK), Tupras (Turkey), ZADCO (UAE) and others.
- In-house seminars on Fire Hazard Management of oil/petrochemical facilities for BAPCO (Bahrain), Brunei Shell Petroleum (Brunei), Exxon Mobil (Hong Kong), Petron (Philippines), National Grid Grain LNG, Petronas (Malaysia), Shell Nigeria, Shell USA, Shell International (Corporate) and others.
- In-house seminars on LNG Hazard Awareness and/or Fire Response (hands-on) for BP, South Hook, Exmar and Exxon Mobil.
- Management of Industrial Fire Brigade at Oil/Gas Production and Export facilities and associated infrastructure for Shell, Gabon.
- Emergency Plan development for BP, Shell etc.
- Fire detection and protection system design, specification, commissioning and testing – BP, Shell, TOP, Total and others.
- “Expert witness” regarding fire system design, maintenance and effectiveness. (CO₂, Foam and Waterspray Systems)
- Storage Tank Terminal Audit Methodology and associated guidance development on behalf of Rotterdam Europoort Unified Fire Brigade (a specialist unit with Rotterdam Fire Brigade part funded by industrial users.)
- Feasibility Studies and Design of Major Incident Response Packages for storage tank fires (Ceyhan Terminal, Turkey; Shell, Nigeria; Total, UK; BP, UK)
- Cost Benefit Analyses and Outline Specifications for the provision of a strategic Major Incident Response Unit for UK and Northern Europe.
- Technical advice at Buncefield Terminal Fire (2006)
- Member of BP Regional Response Team
- Lecturer on Oil/Gas Fire Response issues at UK Fire Services College, Moreton in Marsh.

Career Experience

2012 – Present

Director, ENRg Consultants

1989 – 2012

Director, Resource Protection International (RPI),

During this time the work described above was carried out. Other highlights included:-

Call off contracts with both BP and Shell at international corporate level were held covering all aspects of Fire Hazard Management for more than 10 years.

Management of specialist firefighters on long term contracts to act as Fire Chief at oil production/storage facilities and develop and train local personnel. (Turkey, Nigeria and Gabon)

1983 – 1989

Director, National Foam, UK

Responsible for European, Scandinavian and Middle East operations of USA based market leader in fire fighting foams and foam system design.

1979 – 1983

System Design Manager, Angus Fire

Responsible for designing and costing all types of fire detection and protection systems.

1976 – 1979

Foam System Product Manager, Angus Fire

Responsible for technical marketing aspects of fire fighting foams and foam equipment.

1973 – 1976

Dunlop Angus Belting Group (as part of sponsored Ph.D. studies)

Research work into fabric reinforced elastomers including physical properties and fire resistance.