


**WILLIAM DAVID RICHARD HUGHES**

02-12-1955.

British

<b>PASSPORT AND DRIVING LICENCE COUNTRY OF ISSUE:</b>	United Kingdom for both Documents.
<b>ROLES</b>	Sole Expert. Joint Expert. Arbitrator. Investigator.
<b>EDUCATION &amp; TRAINING:</b>	MSc in Safety and Risk Management. Royal Navy Accredited Technical Education 1971 – 1980. Root Cause Analysis – Process Improvement Institute – Houston. Safe Hull analysis for Marine applications (Residential) – American Bureau of Shipping Houston. Safety and Risk Practitioners role in CDM Regulation update and examination – APS Edinburgh . Bowtie Analysis. General QHSE courses (details available on request). General Technical Safety Courses (details available on request) .
<b>PROFESSIONAL MEMBERSHIP:</b>	UK Chartered Engineer (CEng- 674871). Fellow of the Royal Institute of Naval Architects (0042899). Fellow of the Institute of Marine Engineering Science and Technology (8081158). Corporate Member of the International Institute of Risk and Safety Management (309242). Corporate Member of the Safety and Reliability Society (2115/M). Corporate Member of the Institute of Engineering and Technology (MIET – 00513144). Corporate Member of the Association of Planning Supervisors for the CDM Regulations - (MaPS- Number 3017). Professional Member of the Association of Project Management (PO297924). Vetted and registered on the UK Register of Expert Witness. Vetted and registered on the National Expert Witness Agency (NEWA).
<b>SOCIETY MEMBERSHIPS</b>	Member of the Association for Facility Engineering. Member of the Society of Petroleum Engineers.
<b>SPECIALIST AREAS</b>	<ul style="list-style-type: none"> <li>• Incident/Accident Investigation as both investigator and Expert Witness. This has included representation at Legal proceedings, Tribunals and Court settings both in the UK and Overseas.</li> <li>• Report preparation and delivery for Regulators, Courts and Tribunals.</li> <li>• Loss investigation which has included claims assessment for both plaintiff and defendant which also included arbitration evidence provision and appearance at meetings and tribunals. This has been centred around Project Management, Systematic failures (HSEQ, etc), claims for physical (equipment) and management (time and cost). This has related to construction and total loss of asset claims in varying industrial settings.</li> <li>• Peer review and Due Diligence review and reporting.</li> </ul>
<b>SKILLS</b>	Risk, HSEQ and Integrity Consultant.
<b>PREVIOUS ROLES</b>	Project Engineer, Marine Engineer, HSEQ Manager and Consultant.
<b>LOCATIONS</b>	Worked on projects in the following areas. <ul style="list-style-type: none"> <li>• Europe (UK, Norway, Denmark, France, Cyprus, Belgium and Monaco).</li> <li>• Middle East (Kuwait, Kurdistan, Qatar, KSA, Bahrain, UAE and Oman).</li> </ul>

	<ul style="list-style-type: none"> <li>• Americas (Brazil, USA and Mexico).</li> <li>• Africa (Cote de Ivory, Ghana, Nigeria, Namibia, Gabon and South Africa).</li> <li>• Asia and Far East (Australia, Thailand, India, Brunei, Singapore, China and Myanmar).</li> </ul>
<b>BASE LOCATION:</b>	Carlisle, United Kingdom.
<b>INDUSTRY EXPERIENCE:</b>	<p>A Professional with over 35 years of both National and International experience in the fields of HSEQ, Technical Safety and Integrity across wide ranging industrial applications.</p> <p>These include Construction, FEED and EPIC, Onshore Oil and Gas, Offshore Oil and Gas, Chemical, Utilities, Storage and Warehousing Transportation (Rail, Air and Sea) and Marine (Ports, Construction, Pipelay and Vessels).</p>
<b>TRAINING APPLICATIONS</b>	<ul style="list-style-type: none"> <li>✓ Hazard Identification and Environmental hazard identification training and leadership studies.</li> <li>✓ Accident and Incident investigation.</li> <li>✓ Risk assessment.</li> <li>✓ Safe Systems of work, Ergonomics and Human Factors.</li> <li>✓ Risk and vulnerability study leadership/chairmanship.</li> <li>✓ SECE/Performance standard development leadership.</li> <li>✓ Management systems Gap analysis and structure leadership/chairmanship.</li> <li>✓ Job task risk assessment.</li> <li>✓ QRA Training and quantification/sensitivity workshops.</li> <li>✓ Root Cause Analysis leadership/ investigator/chairmanship and training.</li> <li>✓ PHSSER, SHEAMS, SWIFT, Bows Tie and PHA Leadership/chairmanship.</li> <li>✓ LOPA/SIL graph and table lead study leadership.</li> <li>✓ Human Factors and Safety Critical Task Analysis.</li> <li>✓ Occupational HSE programme leadership, behavioural safety and training Applications.</li> </ul>
<b>CORE SKILLS FOR INVESTIGATION AND EXPERT WITNESS</b>	<ul style="list-style-type: none"> <li>✓ Accident and Incident investigation, prevention, control and human factors.</li> <li>✓ Functional Safety Assessments 1 – 5 and Verification.</li> <li>✓ Fire and Explosion.</li> <li>✓ ATEX/DSEAR investigations and assessments.</li> <li>✓ Process and Chemical failures.</li> <li>✓ Permit to work and isolation.</li> <li>✓ Machinery safety and guarding (PUWER).</li> <li>✓ Work at height and falling objects including LOLER.</li> <li>✓ Risk assessment and training.</li> <li>✓ COSHH and EMS.</li> <li>✓ Manual Handling.</li> <li>✓ Workplace transport.</li> <li>✓ Confined space entry.</li> <li>✓ Construction Design Management Regulations (CDM).</li> <li>✓ Safety Management systems.</li> <li>✓ Safe systems of work.</li> <li>✓ Culture and behavioural safety.</li> <li>✓ SHEQ Inspection, audit and continuous improvement programme development and implementation.</li> <li>✓ Technical and process safety failure assessments.</li> <li>✓ Lifting and transportation (Land and Marine).</li> <li>✓ Shipyard activities.</li> <li>✓ Insurance risk, Claims Management and Expert Witness.</li> <li>✓ Report preparation and giving of Evidence both Legal and Regulatory settings</li> <li>✓ Marine Operations and design.</li> <li>✓ Hazardous area assessment and Workplaces including COVID 19.</li> </ul>

SAMPLE CASES:

## Accident Investigation and Expert Witness Case summaries

### Personal Injury and Loss

#### **Piper Alpha Investigation**

Engaged as part of the investigation team for Cremer and Warner on behalf of the UK Department of Energy. The role was to support the Lord Cullen Technical Panel into the investigation of the events leading to the Piper Alpha fires and explosions with subsequent loss of life and asset. Provided reports and briefings for Council at all stages of the Inquiry.

#### **Kings Cross Investigation**

Engaged as part of the investigation team for Cremer and Warner on behalf of the UK Department of Transport. The role was to support the investigation of the events leading to underground system fire at Kings Cross and explosions with subsequent loss of life and asset. Provided reports and briefings for Council at all stages of the Inquiry.

#### **Clapham Junction Incident Investigation**

Engaged as part of the investigation team for Cremer and Warner on behalf of the Anthony Hidden (QC) Investigation team. The role was to support the Technical Panel into the investigation of the events leading to the incident and investigation for failure modes with the "WARS" that was in place for signalling and potential Human Failure using Root Cause and THERP software. Provided reports and briefings for Council at all stages of the Inquiry.

#### **Personal Injury investigation for Wood Group North Sea**

Investigation initiated by Wood Group North Sea to support their internal Legal department to determine cause and potential liability for an injury sustained by a contracted employee during lifting operations on the Brent Charlie Offshore facility during maintenance and work over operations.

#### **Employee injury due to rotating equipment accident**

Investigation initiated by a canning and conveying company based in the NW of England which resulted in a debilitating injury to an employee. HSE improvement notices were issued as well as personal injury claim against the Company

#### **Crane Collapse**

Engaged by Al Ain Ahlia Insurance Company for an investigation following a collapse of a crane boom during a heavy lift operation at the National Petroleum Construction Company site at Sadiyatt Island in Abu Dhabi. The crane owner was Al Jabeer and the operation were jointly supervised by NPCC rigging personnel and Al Jabeer the accident resulted in several injuries and asset damage. The investigation was conducted under UAE Federal Law and Ministerial Decree.

#### **Personnel Injury**

Engaged by CEONA to undertake an independent investigation to review safe work practices and equipment integrity for an incident resulting in injury and asset damage during Lifting, pipelay and tie back operations as part of Offshore EPIC programme for offshore floating facilities operations.

#### **Personnel Injury**

Engaged by Corker Binning on behalf of C.RO Ports to undertake an independent accident investigation following personnel injury at the Killingholme Port Facility, Humber-side, UK.

#### **Personnel Injury**

Engaged by Attias and Levy, Gibraltar for crush injury to personnel during lifting operations at GIBDOCK, Gibraltar as expert witness and submission reporting.

	<p><b>Personnel Injury</b> Engaged by Thompson Solicitors Edinburgh for serious injury to employee in performance of work duties at Stagecoach Glenrothes. Case settled out of Court.</p> <p><b>Personal Injury investigation for 6 Construct - UAE</b> Investigation initiated by 6 Construct following investigation and Court proceedings being issued by the Abu Dhabi Federal Court. Conducted accident investigation and reported on the fatalities of four workers due to gas explosion.</p> <p><b>Multiple Fatality Investigation and reporting for Consolidated Contractors Company - UAE</b> Investigation initiated by CCC due to cofferdam collapse and the fatal loss of personnel. Investigation. Provided testimony for CCC legal Counsel.</p> <p><b>Employee injury due to rotating equipment accident</b> Investigation initiated by a canning and conveying company based in the NW of England which resulted in a debilitating injury to an employee. HSE improvement notices were issued as well as personal injury claim against the Company.</p> <p><b>Employee injury and Asset damage due to Fire</b> Engaged to support an investigation of a fire incident that also resulted in employee injury and loss of assets. The Injury and Loss occurred to a fire in the chemical refining processes on a Chemical Facility in Flimby, Workington, Cumbria.</p> <p><b>Employee injury and Asset damage due to Machinery guarding</b> Engaged to support an investigation of a loss of limb accident resulting in crane and lifting operations. This was conducted in the UAE under UAE Federal Law Regulations and Ministerial decree.</p> <p><b>Worker Fatality</b> Providing expert witness support to Greater Manchester Police (GMP) relating to a fatality incident in lift maintenance operations at Oldham General Hospital. Report for HM Coroner.</p> <p><b>Loss Investigations</b></p> <p><b>Tank Collapse Abu Dhabi United Arab Emirates</b> Investigation initiated by Abu Dhabi Oil Company (ADNOC) following a collapse of a crude oil tank during the construction phase of the Umm Al Nar Refinery in Mussafah area Abu Dhabi. The main contractor was Six Construct but also there were three other contractors under subcontract arrangements supporting this activity. The accident resulted in two fatalities, several injuries and asset damage.</p> <p><b>British Gypsum Lopulco Mill Explosion, Kirkby Thore, Cumbria.</b> Internal investigation initiated by British Gypsum to determine cause and remedial risk improvement measures following an explosion of number 1 Lopulco Mill process at British Gypsum Plant at Kirkby Thore in Cumbria. This case investigation covered employee injury as well as plant damage.</p> <p><b>Gas Turbine Fire and Explosion Centrica Easington Facility</b> Engaged as part of the investigation team for Cremer and Warner on behalf of Centrica to determine the cause of a fire and explosion to gas turbine house and equipment. The remit was to determine causation as well as to table quantities for loss of production and rebuild of facilities. Inherent design considerations with the manufacturer of the Turbines were undertaken as part of the causation and mitigation measures. Supported Arbitration meetings and advised Client.</p>
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	<p><b>Hydrogen Explosion at INCO Refinery Swansea.</b> Internal investigation initiated by INCO following an explosion within its nickel extraction process, namely the hydrogen plant. The explosion caused structural damage, downtime, and injury to three employees who suffered burns during planned change over and maintenance activities at the refinery. The case was investigated and taken to court for prosecution by the HSE where I provided expert witness evidence.</p> <p><b>Environmental Pollution</b> Engaged by Lawson Mardon Packing and Printing to support an investigation into alleged pollution of the SSSI site Salter beck Burn adjacent to their facilities on the Salter beck Estate, Workington, Cumbria. A notice of intention to prosecute was issued by the Environmental Agency due to damage to flora, fora and aquatic life. Prepared case for defence against Environmental Agency summons which resulted in official (non-legal) hearing and evidence.</p> <p><b>Fire and Explosion</b> Investigation for Tank and Marine Storage area fire and resulting explosion at LUBREF facilities in the Kingdom of Saudi Arabia. Further supported the loss investigation with reports for Loss Adjusters as well as Insurers. Provided Mediation support of financial loss agreements.</p> <p><b>Crane Collapse</b> Engaged by Al Ain Ahlia Insurance Company for an investigation following a collapse of a crane boom during a heavy lift operation at the National Petroleum Construction Company site at Sadiyatt Island in Abu Dhabi. The crane owner was Al Jabeer, and the operation were jointly supervised by NPCC rigging personnel and Al Jabeer The accident resulted in several injuries and asset damage. The investigation was conducted under UAE Federal Law guidance. Further review reinstatement cost and loss as part of the claim process.</p> <p><b>Pipeline Loss</b> Ahlia Insurance Company to assess possible loss of significant GRP pipeline construction and materials site due to flash flooding in the Al Ain desert, Abu Dhabi UAE. The assessment was to determine the credibility of the main contractor Tannorri Engineering claim for £3 million loss of pipeline, construction/trenchworks and material due to the incident. Provided support as part of the arbitration of loss in UAE.</p> <p><b>Fire and Explosion</b> Engaged directly by the Company (Client) to assess failures in design supplied equipment that resulted in a fire and ensuing dust explosion of a Coffee Manufacturing process (Raw – Finished). Developed a report that was used in mediation and settlement.</p> <p><b>Waste Plant Loss</b> Engaged by Bankside Solicitors for Expert Witness report on potential engineering design failures and contractual issues for SRF pellet plant following fire cases. Preparing case file for arbitration between Principal Contractor and Designer under CDM.</p> <p><b>COVID 19 – Investigation</b> Review of Food and Beverage facility for breaches in COVID 19 Risk requirements. Undertook full review and reporting on failures to support case actions.</p> <p><b>Mediation and Support</b></p> <p><b>Mediation with UK HSE</b> Provided mediation support to a Major Drilling Contractor supporting defence against IDMSO UK HSE audit findings and subsequent rectifications.</p>
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	<p><b>Mediation with UK HSE</b> Provided mediation support to a Client (Graphix) supporting defence against closure by the UK HSE. Result was non closure of site with agreed special measures which were completed</p> <p><b>Arbitration Support</b></p> <p><b>Petrobras P36 (Spirt of Columbus)</b> Engaged as part of the investigation team for Poyry Aberdeen to assess the overall loss of production and construction costs for the P36 rig following total loss due to fire and explosion which also incurred 11 fatalities. The review was to establish fair and reasonable reimbursement for the rig (Scott Company) and damage sustained to the Marlim Field facilities. Specialist focus was on HSE and Safety related systems costs and suitability This included the development of report for the arbitration session and meetings with Council.</p> <p><b>Arbitration Lamprel Drilling</b> Provided support for the HSE performance and verification aspects of marine systems and upgrades of an offshore drilling unit upgrading for Lamprel. This was due to cancellation of contract and claim for work undertaken.</p> <p><b>Arbitration ECO Power and Perry</b> Provided input to HSE, CE Marking and technical engineering interfaces for claim for inadequate supply on manufactured items for waste treatment drying system and supporting engineering controls and manufactured belts.</p> <p><b>Arbitration Dodsai GMBH and WM Kellog</b> Part of Dodsai claim team for variations and changes requests for work undertaken and disputed by Kellog. This was for major equipment changes a at Umm Al Nar refinery expansion UAE.</p> <p><b>Arbitration NPCC and Daewoo Shipbuilding</b> Part of NPCC team for disputed costs and arbitration relating to the build of the pipelay barge IN South Korea.</p> <p><b>Arbitration BGC / AVAX SA</b> Engaged by Eversheds-Sutherland as part of a team to support arbitration case relating to dredging and jetty rehabilitation works at Jetty 2 at the Umm Qasr Marine Terminal, Basrah Iraq.</p> <p><b>Marine Projects</b></p> <p><b>Lloyds Insurers</b> Undertook damage survey for the Total ABK platform in the UAE following war Damage. Provided report of platform integrity and estimated damage costing.</p> <p><b>Lloyds Insurers</b> Undertook damage survey, vessel loading and transportation inspection and supervision of repairs for the UAE Royal Yacht Annad after extensive hull damage.</p> <p><b>American Bureau of Shipping</b> Classification Society surveys and examinations. Regulatory submissions, supporting Legal cases and loss assessments for Adjusters and Brokers.</p> <p><b>Matthews Daniel International</b> Provision of consultancy based services to a range of Clients in the Marine industries.</p>
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	<p>This has included the following key areas.</p> <ul style="list-style-type: none"> <li>• Warrant and Loss adjusting services cover loss, damage and repair Certification.</li> <li>• Provision of survey reporting on behalf of Shipowners, designers and Classification Societies.</li> <li>• Validation of verification of design and repair for inland and ocean going Vessels.</li> <li>• P and I club investigations.</li> <li>• Accident and incident reporting for damage to total loss of assets.</li> <li>• Load out and structural assessment.</li> <li>• Port and facilities layout and assessment.</li> <li>• Draught survey.</li> <li>• Ballast and propulsion FMEA/FMECA reviews.</li> <li>• General Marine survey</li> </ul>
	<p><b>General</b></p>
	<p>Cases of accident and incident investigations resulting in damage, injury or consequential third party losses.          These have been IN the Construction, Transportation, Marine, Manufacturing, Storage, Warehousing and Energy and Industries at all phases of operation.</p>

## Summary of General Experience

*The following is a summary of employment history which can be further detailed if required*

2006	Present	<p><b>Hughes Risk Management Limited, Carlisle</b>  <u>Managing Director and Projects Principal</u>          Provision of consultancy based services to a range of Clients on a Global basis for the Oil, Gas, Chemical, Construction, Manufacturing, Transportation, Marine (Drilling, Pipelay and Offshore construction) and Utility industries.          Covered all aspects of HSEQ, Functional Safety Assessments 1 – 5 and Verification, Technical Safety, Fire and Explosion analysis, Design reviews Marine, Integrity and Assurance services.          Development of Regulatory submissions and supporting Legal cases.          COVID-19 19 assessment, programmes and investigations.          Provided Technical Authority support to shareholders for the Qatar 3 and 4 Gas extension at Raslafan in Qatar and Marine pipeline activities and inspections.          Provided support to Wood as Chief Engineers for a range of projects.          Provided technical files supporting claims management for arbitration of work extensions  <a href="http://www.hughesriskmanagement.com">www.hughesriskmanagement.com</a></p>
2005	2006	<p><b>Attric PBI Middle East</b>  <u>HSEQ and Project Principal</u>          One year contract (rotational status) with ATTRIC PBI to undertake Transportation, Warehousing and Offshore Pipeline operation HSE Cases, HSEMS and HEMP related projects in Abu Dhabi, Qatar and Sharjah.          This further included supporting UAE Federal Court as Expert Witness in UAE.</p>
2003	2005	<p><b>Vectra Group, Warrington and UAE</b>  <u>Regional Manager and Head of HSEQ</u>          Project Management over full product ranges for Risk Management, Technical Safety, Fire and Explosion analysis and modelling, Functional Safety Assessments and Verification and Environmental Studies, Construction, Transportation, Loss investigation, Marine (Drilling, Pipelay and Offshore construction), Technical Safety, Assurance and HSEQ projects.          This further included supporting UAE Federal Court as Expert Witness in UAE</p>
2001	2003	<p><b>American Bureau of Shipping, Warrington and UAE</b>  <u>Risk and HSEQ Manager</u>          HSEQ, Construction, Design reviews, Marine survey, Loss Adjusting, Loss Investigation, Risk and Environmental studies, Fire and Explosion assessment on Marine and Onshore facilities, Management Systems development, Safe Work Systems and audit/compliance programmes.          Regulatory submissions, supporting Legal cases and loss assessments for Adjusters and Brokers.</p>
2000	2001	<p><b>INCO Swansea</b>  <u>Consultant (Engineering and HSEQ)</u>          Employed on a 12 month contract to establish and implement a Total Asset Care model based upon risk techniques across all assets. Further provided assistance in combining relevant disciplines into Compliance Management Group. Loss and Accident Investigations and full range of HSEQ activities for the Refinery. Regulatory submissions for COMAH and Waste Management and under EU Directives for Nickel production.          Undertook review of Hydrogen explosion and provided testimony at Court.</p>
1998	2000	<p><b>Haden Freeman, Manchester</b>  <u>Consultant (Engineering and HSEQ)</u>          Provided Management, development and technical input within the risk group of Haden Freeman providing clients with FEED and EPIC HSEQ, safety and risk support from risk and environmental studies to project management, advice, audit and inspections. This covered Design, Technical Safety and Risk Construction and Commissioning. Regulatory</p>



		submissions for Clients under COMAH, UK Offshore HSE Cases, Environment BATTE and IPPC.
1992	1998	<p><b>Consult (UK)/ Risk Management Centre (now Hughes Risk Management)</b>  <u>Principal/Owner (Engineering and HSEQ)</u>          Provided HSEQ, safety, Design, Fire and Explosion, risk and environmental support on a field, contract and consultancy basis to operators, sub-contractors and establish consulting groups.          Covered all aspects of HSEQ, Technical Safety, Marine (Drilling, Pipelay and Offshore construction), Integrity and Assurance services.          Regulatory submissions for Clients under CIMAH , UK Offshore HSE Cases, Environment BATTE and IPPC.          Provided technical files supporting claims management for arbitration of work extensions</p>
1990	1992	<p><b>BEQE, Warrington</b>  <u>Manager (Engineering and HSEQ)</u>          Responsible for setting up, managing and development of an Offshore Oil and Gas Division within BEQE based in Warrington with satellite offices in Aberdeen, Cambridge and UAE.          HSEQ, Marine survey, Loss Adjusting, Loss Investigation, Risk and Environmental studies, Management Systems development, Safe Work Systems and audit/compliance programmes.</p>
1987	1990	<p><b>Cremer and Warner, London</b>  <u>Consultant (Engineering and HSEQ)</u>          Placed as Deputy Team leader, then responsible for module investigation and recovery as part of the Department of Energy Piper Alpha team. Team member for Kings Cross and Clapham Junction investigations and Inquiry reporting.</p>
1985	1987	<p><b>Matthews Daniel International</b>  <u>Manager and Principal Surveyor</u>          Responsible for Onshore and Offshore investigations and losses for Insurance, Syndicates (Lloyds) and Brokers. This included Marine vessels, Drilling, Pipelay and Offshore construction, Manufacturing, Petrochemical and general loss/cargo.</p>
1983	1985	<p><b>National Petroleum Construction Company – Abu Dhabi</b>  <u>HSEQ and Marine Integrity Manager</u>          Responsible for the safe running of 5 Construction sites for Marine and Onshore (Drilling, Pipelay and Offshore construction). Petrochemical facilities in the UAE, India and Kuwait. Also responsible for the Marine activities integrity and HSE which covered accommodation barges, heavy lift barges, jack ups and pipelay barges. Responsible for overseeing integrity build on new pipelay barge in Korea and a sign off with Class Society (ABS).          Provided technical files supporting claims management for arbitration of work extensions</p>
1980	1983	<p><b>Dodsal GMBH – Abu Dhabi and Ruwais (UAE)</b>  <u>SH&amp;E Manager and Technical Safety / Verification</u>          Responsible for all aspects of HSEQ for the Umm Al Nar refinery upgrade, Jetty and Desalination project. Responsible for the verification and certification of all safety systems (hard and soft) as well as Regulatory and Standards requirements.          Provided technical files supporting claims management for arbitration of work extensions.</p>
1979 1971	1980 1979	<p><b>GKN Mills</b> - Regional SH&amp;E advisor (Contract) - West Wales  <b>Royal Navy</b> - Engineering and operations</p>