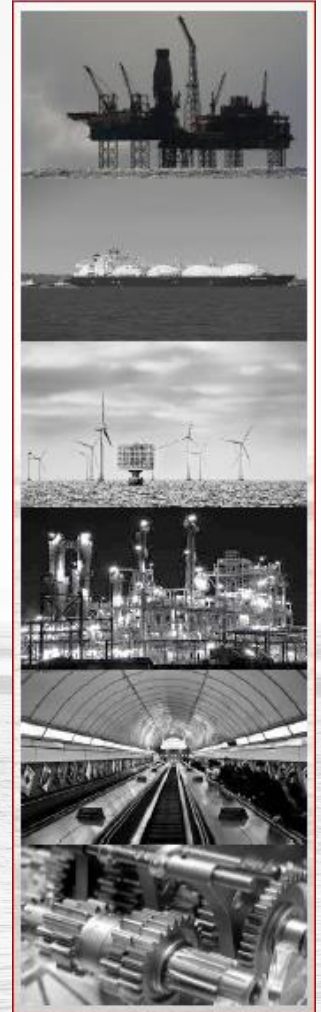


Introduction to Hughes Risk Management



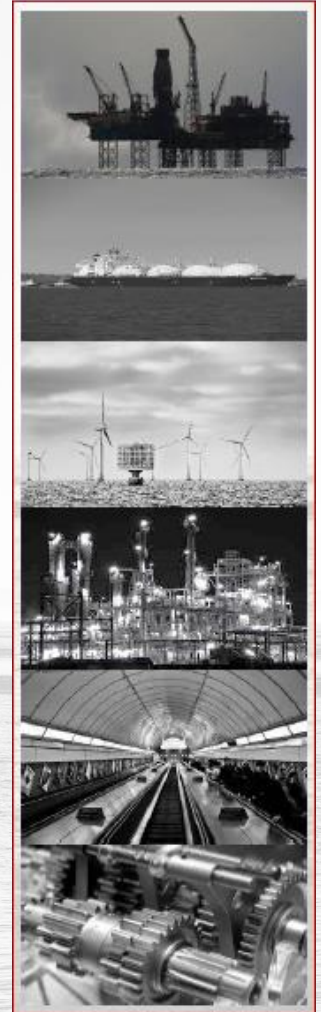
About Hughes Risk Management

- ❖ Progressive consultancy that aims to provide Clients and Organisations with tailored solutions to requirements in a structured approach to ensure that both deliverable and Client ownership is assured.
- ❖ We work on an International footing provide direct contractual support or by association with other like minded Companies and Organisations ensuring a comprehensive service encompassing all aspect of the Clients requirements in a single delivery contact.
- ❖ Based in the North West of England with associations in Europe, the Middle and Far East, Americas and Africa.
- ❖ Have the ability to provided the Client with a comprehensive skill base covering all aspects of risk management, technical and occupational safety, integrity and assurance across a wide range of Industrial and Commercial applications.
- ❖ We employ a team of staff members and associates who are professionally qualified and have a significant amount of experience from both an operating and consulting background.
- ❖ HRM is a certified member of several International Organisations and actively take part in discussions and development sessions.



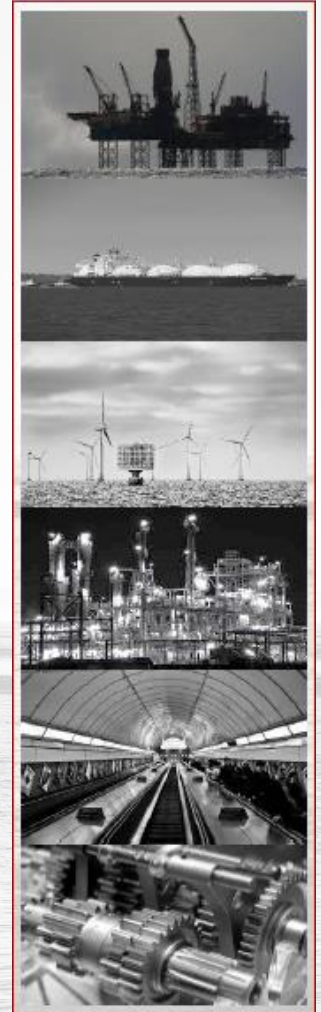
What We Deliver

- ❖ Quality and cost effective solution based services specifically tailored to meet a Clients needs.
- ❖ With our work being Client led we ensure from the outset that our scope of work and delivery process is fully in line with expectations and if it is a scope we cannot address ourselves or with associates then we will not undertake the work.
- ❖ Our services have a proven track record and we endeavour to cascade experience from other project and lessons learnt back into our service profile with the view to improving the overall deliverable and execution process. Much of our work is on an extension or referral basis.
- ❖ We have the ability to work within a Clients organisation providing either a seconded support function, team lead or a cascade process for deliverable understanding. Such projects have included FEED & Detailed Design, long term study delivery programmes (such as HSE Cases and change management) and education packages.
- ❖ We pride ourselves in being responsive to Clients requirements and a full understanding of the delivery process and cost restraints.



Service Base

- ❖ Our service base can be categorised in the following areas which will be detailed further in this introductory presentation.
- ❖ Offshore Oil, Gas & Drilling Sector (OFF)
- ❖ Onshore Oil, Gas & Drilling Sector(ON)
- ❖ Renewables (R)
- ❖ Chemical (C)
- ❖ Transportation (T)
- ❖ Manufacturing (M)
- ❖ Utilities (T)

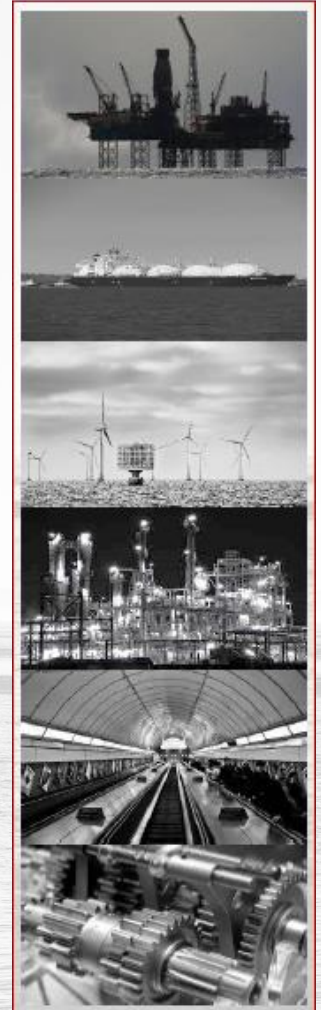


Locations

- ❖ HRM provide services on a Global basis to Corporate Organisations and local Clients alike



- ❖ Onshore Facilities
 - o United Kingdom, France, Kurdistan, Egypt, China, Australia, Trinidad & Tobago, Qatar, Oman, Malaysia UAE and Kuwait
- ❖ Offshore Installations
 - o United Kingdom CNS, Norway , Australia, Trinidad & Tobago, Qatar, UAE, KSA, Gulf of Mexico & South Africa
- ❖ Drilling Offshore and Onshore
 - o Europe, UAE, KSA, Qatar, Bahrain, China, Indonesia, Vietnam, India, Ghana, Kenya, Ethiopia, Singapore and Australia
- ❖ Manufacturing
 - o United Kingdom, Germany, Vietnam & KSA
- ❖ Transportation
 - o United Kingdom, South Africa, Thailand & Hong Kong
- ❖ Chemicals
 - o United Kingdom, USA, Thailand, Australia and France
- ❖ Utilities
 - o United Kingdom, Thailand, Qatar, Australia and France



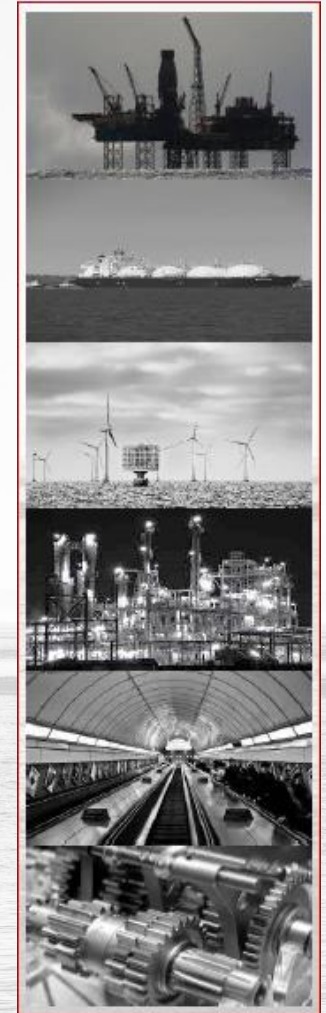
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Clients and Associations

- ❖ The following list provides an insight to the Clients and sectors we currently work in. This is not a complete list but aimed at giving an outline of capabilities and diversity by the HRM team. A more specific list can be made available on request.
- ❖ Neil Massy Wood Group Trinidad and Tobago for EOG Toucan compression and modification projects at FEED and Detailed design for Technical Safety studies and inputs.
- ❖ SHELF, Seadrill, Hercules, Transocean, Exalo, SMP and Deepwater Drilling Companies for the delivery of MHRA, HSE Case, SCE Listings and for Seadrill Performance standards and WSE. These projects have been executed in Far East, Middle East, Africa and the Americas. This was part of the TRiM alliance delivering the work on behalf of Haztek International.
- ❖ Tullow Oil for audit, HSE Comparison study and development of IADC HSE Case internal and contractor directives. This was part of the TRiM alliance delivering the work on behalf of Haztek International.
- ❖ ECi Manufacturing for full development of HSEMS and Technical files for CE marking projects in Europe.
- ❖ TTOPCO in the Taq Taq Oil field in Kurdistan for full FEA/QRA/Risk Reduction Studies for CP1, TLS, TPF, TPF2 and Pipelines with the new CPF2 studies interfaces. Bowtie XP, PHAST and Jeopardy models have been used in the overall study process. This was part of the TRiM alliance delivering the work on behalf of Haztek International.
- ❖ Qatar Gas 3 and 4 project providing Technical Authority over all Technical Safety and Environmental issues for the design and construction phases. This included the offshore platform interfaces, tie backs to Ras Laffan and QG2 and regulatory submissions.
- ❖ Wood Group Aberdeen providing leadership and study management for the Technical Safety team for the BP Andrew development.
- ❖ BGTT on behalf of NMWG providing consultancy services for QRA review, risk reduction and measures assessment and Performance standards development for the Dolphin A Platform. Performance standards development also undertaken for Hibiscus, Poinsettia, Beachfield and Evergreen Facilities.
- ❖ Repsol Trinidad on behalf of NMWG for risk vulnerability assessments Poui, Saaman, Teak and OCOT platforms.

HRM are associated with or have registrations with the following:

- o Registration of UK Expert Witness
- o IADC
- o FPAL registered
- o NOPSEMA
- o Health and Safety Executive



Offshore Oil and Gas

❖ Producing Facilities and Pipelines

o Full range of Occupational Safety and Health services that cover HSEMS and procedural development, training programmes based on KPI and Metric established targets.

o Technical Safety support that covers:

- o Layout studies, Hazardous area classification, Flare sizing and assessment, SIL , LOPA and Dropped Objects.
- o PFEER, EER and ERP linked to Major Accident profiles.
- o HazId, PHA, Bowtie, HazOp, SIL, LOPA, FMEA/FMECA and RBI/RBM .
- o FEA, QRA and sensitivity Analysis.
- o SCE/SCA and Performance Standards development.
- o Concept, FEED and Detailed Design support at both studies and individual secondment level.
- o HSE Case. Combined Operations and SimOps submissions.

❖ Drilling Facilities

o Full range of Occupational Safety and Health services that cover HSEMS and procedural development, training packages and audit programmes based on KPI and Metric established targets.

o HazOp, FMEA and FMECA, for ballast, propulsion. mooring systems.

o DWOP, SimOps and General Hazard Assessment support.

o MHRA Studies using Bowtie analysis to meet IADC SHIDAC, ISO 17776/31000 requirements as part of HSE Case development.

o FEA/QRA and sensitivities studies supporting HSE Case submissions or HT/HP, H2S, etc. well conditions.

o SCE/SCA and Performance standards and written schemes.

o IADC HSE Case development, education and lifecycle support programmes (CARE, CONNECT and CALM).



Onshore Oil and Gas



- ❖ HSE
 - o Occupational Health Safety and Environment audits, Metric and KPI programmes and Training packages.
 - o HSEMS, procedural development and Audit programmes.
- ❖ Process and Technical Safety
 - o Layout studies, Hazardous area classification (ATEX/DSEAR), Flare sizing and assessment, SIL , LOPA and Dropped Objects.
 - o EER and ERP linked to Major Accident profiles.
 - o HazId, PHA, Bowtie, HazOp, SIL, LOPA, FMEA/FMECA and RBI/RBM.
 - o FEA, QRA, Occupied Buildings and sensitivity Analysis.
 - o SCE/SCA and Performance Standards development.
 - o Concept, FEED and Detailed Design support at both studies and individual secondment level.
 - o Drilling services as for Offshore Oil and Gas tailored to meet land rig specifications using IADC Land Rig HSE Case Guidance.
- ❖ Environmental
 - o HRM has an association with ExCal for environmental studies and support as part of its Trim alliance.
- ❖ Regulatory Submissions and Expert Witness
 - o Seveso III Directive covering all aspects of the Legislation and providing full GAP assessment from previous COMAH submissions.
 - o IADC Drilling case for Onshore Drilling Units.
 - o Accident, incident investigation using Root cause analysis and technical reviews
And preparing and giving evidence.



Renewables



- ❖ HRM is committed to support and assist Clients in the field of renewable energy. Albeit a new field for HRM we are able to offer the following services in conjunction with our TRiM Alliance associates;

- ❖ Sustainable Development
 - o Carbon foot printing.
 - o Climate change and adaptation.
 - o Health, social and environmental impact assessment.
 - o Low carbon development.
 - o Renewable energy (Wind, Water, Solar).
 - o Strategic environmental assessment.
 - o Sustainability planning and strategy.
 - o Waste minimisation.

- ❖ Sectors
 - o Oil, Gas and Petrochemical.
 - o Manufacturing.
 - o Buildings.

- ❖ Assessments and Submissions
 - o LEED (Leadership in Energy and Environmental Design) Assessments as part of the ESOS Scheme.
 - o ISO 50001 Audit.



Chemical and Utilities



- ❖ HSE
 - o Occupational Health Safety and Environment audits, Metric and KPI programmes and Training packages.
 - o HSEMS, procedural development and Audit programmes.
 - o Asbestos Management assessment and programmes.
 - o Noise exposure studies and programmes including design mitigation.
 - o Handling systems assessment.

- ❖ Process and Technical Safety
 - o Layout studies, Hazardous area classification (ATEX/DSEAR), Ventilation studies, SIL , LOPA and Dropped Objects
 - o Bulk handling, conveying and process re-engineering design support
 - o EER and ERP linked to Major Accident profiles
 - o HazId, PHA, Bowtie, HazOp, SIL, LOPA, FMEA/FMECA, Outage and vulnerability assessments and RBI/RBM
 - o FEA, QRA, Occupied Buildings, Multi fuel and sensitivity Analysis
 - o SCE/SCA and Performance Standards development
 - o Concept, FEED and Detailed Design support at both studies and individual secondment level

- ❖ Environmental
 - o HRM has an association with ExCal for environmental studies and support as part of its Trim alliance

- ❖ Regulatory Submissions and Expert Witness
 - o Seveso III Directive covering all aspects of the Legislation and providing full GAP assessment from previous COMAH submissions
 - o Accident, incident investigation using Root cause analysis and technical reviews and preparing and giving evidence.



Transportation



❖ RAIL

- o HSEMS development and audit.
- o Occupational Health Safety and Environment audits, Metric and KPI programmes and Training packages.
- o Safety Assurance Plans, Safety Case Acceptance and Route Acceptance.
- o Contractor Assurance Cases.
- o HazOp SWIFT, SPAD assessment and PHA.
- o FEAH, Consequence Analysis, Sensitivity studies and demonstration of ALARP.

❖ AIR

- o Occupational Health Safety and Environment audits, Metric and KPI programmes and Training packages.
- o Line Operations Safety Audit (LOSA).
- o Airport/Ramp Safety Assessments.

❖ ROAD

- o HRM,s services are limited in this area to bulk and hydrocarbon road transfers which is covered under the Onshore Oil, Gas and Chemical services.

❖ SEA

- o Warranty surveys, statutory rules, regulations and compliance inspection.
- o ISM integrated management systems , ISPS systems leading to certification and MLC 2006.



Manufacturing



- ❖ HSE
 - o Occupational Health Safety and Environment audits, Metric and KPI programmes and Training packages.
 - o HSEMS, procedural development and Audit programmes.
 - o Asbestos Management assessment and programmes.
 - o Noise exposure studies and programmes including design mitigation.
 - o Handling systems assessment.

- ❖ Technical Safety
 - o Layout studies, Hazardous area classification (ATEX/DSEAR), and Ventilation studies,
 - o Bulk handling, conveying and process re-engineering design support
 - o EER and ERP linked to Major Accident profiles
 - o HazId, PHA, Bowtie, HazOp, SIL, LOPA, FMEA/FMECA and RBI/RBM
 - o FEA, QRA, Occupied Buildings, and sensitivity Analysis
 - o Technical file development supporting CE Marking directives

- ❖ Environmental
 - o HRM has an association with ExCal for environmental studies and support as part of its Trim alliance

- ❖ Regulatory Submissions and Expert Witness
 - o CE Marking submissions and statutory HSE returns
 - o Accident, incident investigation using Root cause analysis and technical reviews and preparing and giving evidence.

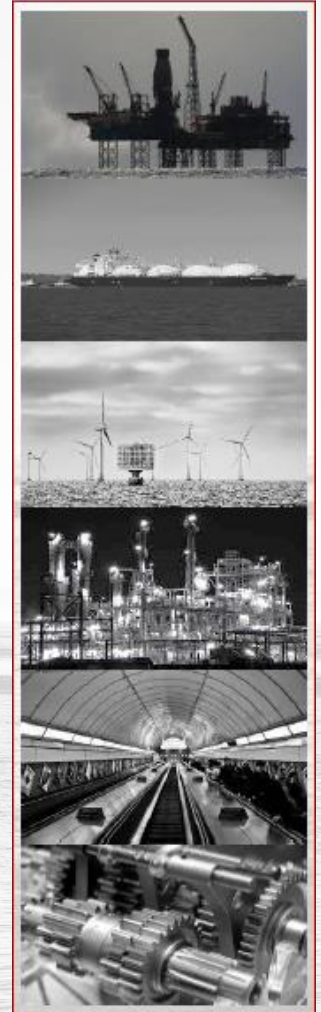


Summary

- ❖ HRM is totally committed to supporting Clients in finding the optimum way to tailor services to meet technical, commercial and regulatory requirements as part of the delivery process.
- ❖ Has a good reputation across industry for delivering quality based products on time and in budget
- ❖ Solutions based with positive and reactive ethos linked with the full understanding of its own limitations and the ability to draw upon expertise as required through established and tried associates through its TRiM programme.
- ❖ Able to respond to short or long term assignments on a global basis with a high level of repeat or referral projects.

Individual presentations are available with greater detail in the following specific areas:

- o Seveso III assessment, development and submission.
- o IADC HSE Case assessment, development and education/lifecycle programmes.
- o Compliance with ISO 17776 and ISO 31000 through a structured approach.
- o Use of BowTie Analysis
- o The use of QRA and sensitivity analysis.
- o Safety Critical Elements and Performance Standard development
- o Process safety techniques
 - o HazId, EnvId, PHA , SIL and LOPA



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