



***MIES***



# Company Profile

MES is an International Consultancy Group offering Risk, Safety, Environmental and Reliability Engineering Services to the Energy Sector.

## Our Services

- Life-cycle (technical support, Design, Operation and Decommissioning) and on-call expertise.
- High quality Safety, Environmental and Risk Management services.
- Bespoke Reliability, Availability and Maintenance (RAM) services using PLASMA.
- Asset Performance, Optimisation and Integrity Assurance; and
- Highly competitive Terms and Prices.

## Our People

MES presents a growing team of international consultants based across our office locations.

Our consultants are;

- Predominantly degree qualified and professionally accredited engineers.
- Highly motivated to excel when presented with new challenges.
- Flexible and able to integrate within our client's design/operational organisations.
- Carefully selected to each project assignment based on experience, skills and specific client requirements.

## Our Locations

MES' main project activities are performed from our London (Leatherhead) office. International Projects are supported from strategic offices in:

- Dubai (Middle East)
- Lagos (W. Africa)
- Aktau (Kazakhstan)

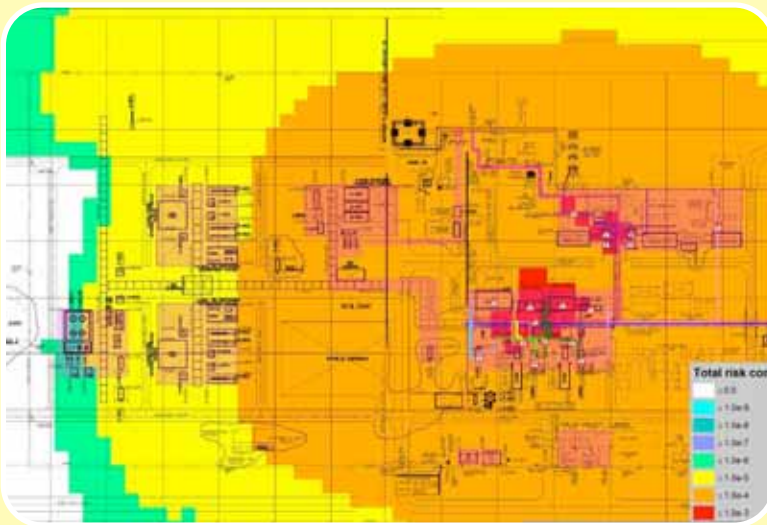


# OUR SERVICES

## Safety Engineering and Risk Management Capabilities

### Safety Engineering

- Study Facilitation (HAZOP, HAZID, SIL, LOPA, BOWTIE, ENVID, HRA). MES provides highly experienced in-house and retained contractor facilitators.
- Safety Engineering - Fire Protection (Active/Passive) Design, Blowdown/Flare studies, Fire and Gas Detector Layout and Hazardous Area Classification.



### Risk Management

- Fire and Explosion Risk Assessments - Modelling jet fires, pool fires, flash fires, explosions and toxic gas releases using a variety of software programs including Shell FRED, DNV PHAST and BP Cirrus.
- QRA - Quantitative Risk Assessment by trained personnel using industry standard software.
- Formal Safety Assessment including Gas Ingress and TR Impairment assessments, Escape Evacuation and Rescue Analysis (EERA), Emergency Systems Survivability Assessments (ESSA), Passive Fire Protection studies, Ship Impact and Dropped Object studies.
- Evaluation of risk mitigation measures and Cost Benefit Analysis.

### Client Management Support

- Technical Authoring - Development of Safety Cases, COMAH Reports, Health, Safety, Environmental Impact Assessments and Performance Standards by Industry experienced engineers.
- Technical Assurance - Design Verification, Audit and Review and acting as Clients Engineer.

### External Services

Additionally, MES provides a 'source and manage' service for specialist study requirements where these skills are not retained in-house. We assist our clients to develop scope requirements and manage execution to ensure these study deliverables add value to the Design Process. Support areas include:

- CFD (Computational Fluid Dynamics) for Gas Dispersion and Explosion Analysis.
- Noise and Vibration Studies.
- Occupational Hygiene Assessments.

# Reliability, Availability & Maintainability (RAM) Capabilities

## RAM studies using In-house programs:

- MES acquired SimEng, a reliability design company in 2009. This significantly enhances MES' capabilities through the specialist software.
- PLASMA (Plant Simulation using Monte Carlo and Analytical Techniques). Successfully implemented for on/offshore RAM (Reliability, Availability and Maintainability) modelling for more than 10 years.
- Fault Tree Package - Applied either as standalone or integrated with PLASMA to assess component/system reliability.

### RAM (Oil & Gas)

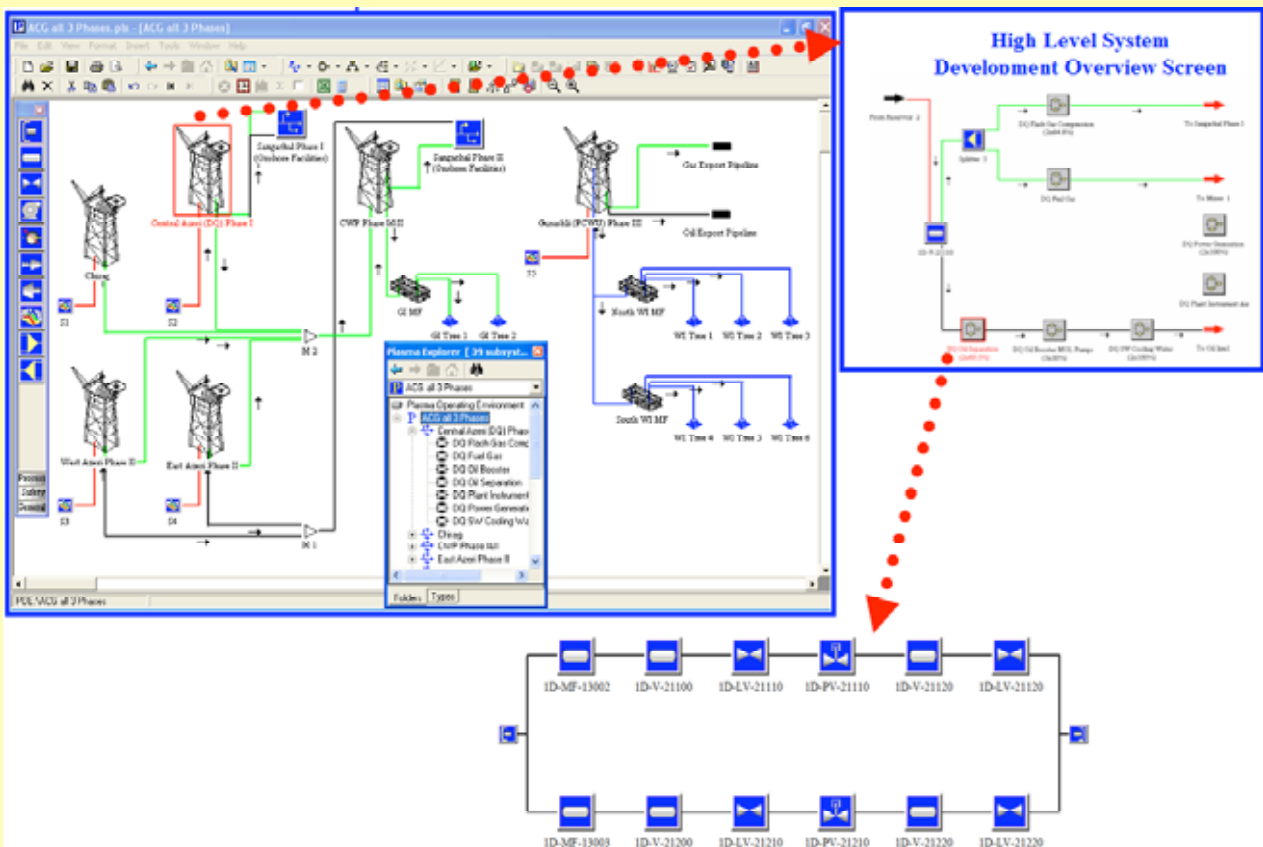
- Assess the performance of complex oil and gas production systems.
- Evaluation of annual production availability and other performance related parameters.
- Assessment of various operating policies (e.g. Makeup, Flaring, Line Packing and Bulk Storage etc.), Production Phasing, multiple source and production profiles, early life failures (using the Bath Tub Curve) and Multiple Sales Quotas.
- Prime Driver selection studies.
- Maintenance Scheduling and Spares optimisation.
- High Integrity Pressure Protection System (HIPPS) Studies.
- Safety Integrity Level (SIL) analysis and verification studies.
- Life Cycle Costing Analysis.

### RAM (Logistics)

- Ship export modelling including weather impact.
- Real time simulation.
- Buffer Storage modelling.
- Reliability Centred Maintenance (RCM).
- Risk Based Maintenance Plan Development.

### RAM (Wind Farm)

- Model performance of Wind Farm Arrays and their associated transmission distribution system network.
- Assess the impact on Availability (or Annual Energy Production) caused by access restrictions due to weather and other events. The modelling features include wind/wave data (e.g. the maximum wave height for accessing Wind Turbine Generators), number of crews, crew shift systems (e.g. night working), number of vessels and any other travel restrictions.
- Identify operational losses due to downtime, and recommend the level of system redundancy required to mitigate the effects of system failure.



PLASMA Software is used to assess the performance of complex Energy Production systems.

## Environmental Engineering Capabilities

At MES we provide the following Environmental Services.

- Baseline Environmental Studies and Reports.
- Screening-level Environmental Impact Assessments/Environment risk studies.
- Facilitating ENVID workshops and preparing Environmental Aspect Registers.
- Legislative compliance reviews and preparation of registers.
- Permitting, Public Disclosure and Consultation Planning.
- Environmental survey and monitoring design, planning and execution.
- Environmental engineering in design projects: option evaluation, documentation, compliance assurance and the determination/justification of BAT.
- Environmental management philosophy and systems development, review and audit.
- Energy efficiency and emissions modelling.
- Chemical usage, risk, modelling and disposal.
- Environmental noise assessment and modelling.
- Pollution control engineering-emissions, water treatment, waste management.
- Advanced dispersion modelling, including ground-level flaring, odour and plume visibility.
- Development of emission inventories and environmental calculation and reporting systems, and their verification.
- Preparation of GHG reports to EU ETS, NER application.
- Greenhouse gas inventories, forecasting and trading strategies.
- Occupational exposure, noise and chemical evaluations.
- Permitting, screening-level evaluations and submissions, liaison with regulators.
- Environmental Impact Assessments and Statement Preparation!
- Pollution Prevention and Control Statements.
- COMAH Reports.
- HSEIA Reports.



# OUR CURRENT CLIENTS

MES has performed various studies for a number of clients ranging from major international operators to EPC contractors and design houses.

Some of the clients we are currently working for include:

- Agip KCO
- Amec
- BP
- Chrysaor
- ENI
- Granherne
- G3
- Heritage Oil
- KazakhOil Aktobe
- KBR
- KCP
- NCOC
- Oman Gas Company
- Oman Refineries and Petrochemicals Company
- Penspen
- Petrofac UAE (Sharjah)
- Petrofac UK
- PDO
- Production Services Network (PSN)
- Saipem
- Shell
- Statoil
- Subsea7
- Tullow Oil
- Wood Group Engineering
- Woodside
- Worley Parsons



# QSE Management SYSTEM

MES operates a Quality, Safety and Environmental Management System in accordance with International Standards  
The QSE MS is underpinned by the MES Corporate QSE Policy.

**Monaco Engineering Solutions (MES) LIMITED**  
**QUALITY, SAFETY and ENVIRONMENTAL**  
**POLICY STATEMENT**



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MES is committed to providing Design and Consulting Excellence to the Global Energy Sector maintaining the highest standards with respect to Quality, Safety and the Environment.

Our goals are simple:

- No harm to people
- No harm to the environment
- No damage to assets

These goals are achieved through the implementation of a Quality, Safety and Environmental Management System (QSEMS) and specific work procedures to meet the requirements of appropriate legislation, standards and the needs of our clients and stakeholders. The QSEMS applies to our own work locations as well as those of our clients and partners, including those where we provide input into their design and operation.

#### **Health & Safety Goals**

Health and Safety is considered in every activity and in every decision that we as a company make. Through formal processes, hazards are identified, risks assessed and appropriate measures implemented to eliminate or control them.

Monaco Engineering Solutions provides a safe working environment for all its employees and we ensure adequate training/induction is provided to all our employees. All employees are reviewed on whether they have the appropriate skills sets and experience before they are given a particular task to perform.

#### **Environmental Goals**

Our Environmental goals are to constantly drive down the environmental impact of our activities through:

- waste reduction, and
- by using energy more efficiently.

Environmental impact is assessed for every activity and project decision that we as a company make. Through formal processes, hazards are identified, risks assessed and appropriate measures implemented to eliminate or control them.

#### **Quality Policy**

MES has established Quality Policies and Procedures to meet the requirements of appropriate legislation, standards and the needs of our clients and stakeholders. We regularly conduct management reviews of the QSE performance to verify implementation and monitor its continuing suitability and effectiveness.

Giovanni Monaco

Managing Director (MES Limited)

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# CONTACT US

The background of the entire page is a photograph of an offshore oil rig at sunset. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the water. The rig's structure, including its tall derrick and various platforms, is silhouetted against the bright sky. The overall mood is industrial and serene.

## Office Location

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