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Accomplishing what others
Can only imagine
FEDDO GROUP – industry Leading expertise

FEDDO GROUP can solve Clients most difficult Challenges, Efficiently, and help reduce Cost and Schedule.

FEDDO GROUP brings innovative and cost-effective solutions to clients around the world, from studies to full scope Engineering, Procurement, Project, and Construction Management (EPCM) services on major projects.

- Field Development
- Subsea and Onshore Pipelines
- Subsea Systems
- Floating Systems
- Systems Engineering
- Flow Assurance
- Marine Production Riser Systems
- Tendon and Mooring Systems
- Arctic Development
- Marine and LNG Terminals
- Survey and GIS
- Pipeline Equipment Design
- Materials Engineering
- Technical Training Solution
- Renewable Energies
- Advance Engineering
- Asset Integrity Management
- Research and Development
- Refineries and Petrochemicals
- Interface Management
- Construction Management
- Project Management

FEDDO is a global company consisting of regional engineering centres, with capabilities in the floating systems, offshore pipelines and subsea production. We offer our clients a full-service solution for any offshore application with a particular focus on challenging environment or operating conditions.

Our skill sets are proven winners for meeting challenges posed by offshore, Arctic, HPHT, and deep-water oil and gas developments. FEDDO GROUP has a multi-skilled and multi-national work force with the experience to address the most complex projects.

Corporate Overview

FEDDO GROUP is a leading global provider of professional services to the resources & energy sectors, and the complex process industries.

FEDDO GROUP specializes in offshore engineering, subsea field developments, subsea and Onshore pipeline systems, integrity management and pigging, life extension, decommissioning, and construction management.

We also offer technical training solutions to develop skills and capabilities for the whole life of field covering every aspect of design, operation, integrity management and maintenance.

FEDDO GROUP business model works on a network of regional engineering centres which enable specialised skills, knowledge and expertise to be shared across its global operations.

Our global operational head office is located at Perth, Australia covering Australia and Asia, FEDDO GROUP also has operating offices in Houston; covering the Americas, London, United Kingdom; covering Europe and Lagos covering Africa.

Engr. Dare Jeremiah
President / Chief Executive Officer

Dr. Scott M Shemwell
Chief Technical Advisor (Operations)

Dr. Kashmir Johal
Chief Technical Advisor (Engineering)

Mr. Tope Fashetire
Business Development Advisor
FIELD DEVELOPMENT

FEDDO’s capability on leading industry personnel with extensive experience of all stages of offshore oil field Development.

Field Development consists of identifying and defining, as a system, all components required for successfully developing and operating offshore oil and gas field. It is a multi-disciplinary task, requiring both technical and commercial skills, including subsurface, drilling, facilities, project, operations and commercial competences.

Field Developments activities can occur early in support of oil companies’ exploration efforts. More typically, Field Development begins following exploration success when commencing the Assess phase of project development which, if successful, continues through to the Define phase and FID. In some cases, Field Development addresses brown-field redevelopment opportunities

FEDDO GROUP Capabilities include:

- Pre-exploration quick field development concept selection and cost estimating in support of exploration or farm-in economic assessment
- Post discovery, multi-disciplinary development concept selection, cost estimating and trade-off
- Field Development coordination of other disciplines including subsurface, drilling, process facilities, Operations, commercial, HSE and regulatory.
- Management of all Field Development activities including technical definition of concept, CAPEX and OPEX cost estimating, and execution planning
- Management of or contribution to typical project stage/gate processes including independent verification, preparation of documentation from concept through FID

Where Field Development activities are managed by others, FEDDO can provide independent review

- Provision of FEDDO SURF and Floating Systems technical disciplines for Field Development projects as well as provision and coordination of third party subsurface, drilling, process facilities. Operations, commercial, HSE and regulatory approval consultants as required.
- Preparation of project contract strategies and, if required management of project execution tenders
- Provision of, or contribution to operators Field Development project teams for all phases of Field Development from concept to FEED, detailed engineering, construction, and commissioning.

FEDDO’s team includes former Oil Company and Contractor Engineering, Construction and Operating senior staff with significant experiences as engineering managers, project delivery managers and engineers.

FEDDO has been extensively involved in field development studies, review, and cost estimates for discoveries, prospects, brown-field redevelopment and potential farm-ins globally.

FEDDO GROUP has in-depth knowledge and extensive experience in the design of subsea production systems used for production of oil and gas.

FEDDO’s capability in subsea systems is founded on leading industry personnel, with experience to develop innovative practical solutions for subsea systems. Subsea systems include subsea trees, subsea hardware (connectors and structures), control systems (including umbilicals), pipeline/flowlines (including HPHT), jumpers and materials.

All projects have their individual challenges from a single well tie-back to a multi-well long distance subsea development. FEDDO strive to bring smart high value and economic solutions whatever the development

FEDDO GROUP Capabilities include:

- Through life cycle engineering-appraise, select, define, execute, operation support, decommission
- Horizontal and vertical remote connection system
- Subsea architecture (including difficult/hazardous terrain), P&ID and layout definition
- Pipeline End Manifold (PLEM), In-line Tee (ILT) and Flowline End Termination (FLET) structures
- Manifold and tree protection structures
- Control and workover systems definition
- Umbilical Systems definition and functional specification
- Tree systems definition and functional specification
- Integration of Subsea processing facilities including Subsea separation, pumping and compression.
- Flow Assurance analysis and development of field operability methods
- Materials selection, corrosion and corrosion management
- Production of operating philosophies
- Production of Tender Documents / EPIC packages for procurement, fabrication, construction / installation, testing and commissioning of subsea components
- Management of factory acceptance testing (FAT) and system integration test (SIT)
- Procurement / manufacturing / fabrication management/Construction management including offshore installation start up and commissioning.

FEDDO’s senior technical team consists of industry experts with extensive international knowledge and expertise in challenging environments. Members of this team have worked on some of the most innovative projects of their time.

Representative Projects

- Subsea Installation of ONGC Vashishta & S1 Development Project – offshore India
- Wheatstone Upstream Project – Offshore Australia
- CNOOC Husky L1wan 3-1 Area – offshore China
- USAN deep water development - offshore Nigeria
- Gazprom Shтокман Ph. & 3 Subsea – offshore Russia (Artic)
- Total Ikike SURF – offshore Nigeria
- Equus Concept Select Study – Offshore Western Australia
- Woodside Sunrise Project – offshore Australia
- PTTEP Zawtika Field Development – offshore Myanmar
- Iwaki-Oki Subsea CO2 Injection FEED – offshore Japan
SUBSEA AND ONSHORE PIPELINES

FEDDO’s capability in subsea Pipelines is founded on leading industry personnel, with experience to develop innovative solutions to the many challenges facing pipeline systems as they move into ever deeper waters.

Our Personnel have experience in the design and construction of all types of subsea pipeline systems from conventional rigid and flexible pipeline systems in shallow and medium water depths to design solutions for the deep and ultra deep water (over 2000m) and ultra shallow. We have experience of reeled, S-Lay, J-Lay, Towed Pipe-in-Pipe and bundled system.

Long distance and Deepwater pipelines require careful planning and good understanding of limit state design to ensure optimum design and minimised material costs. At FEDDO, we understand the capabilities of the pipe mills and installation vessels which enables our Concept and FEED designs to establish realistic project schedules and highlight critical activities.

FEDDO GROUP Capabilities include:

- Component design using advanced mechanics solutions such as J-lay collar, buckle arrestor, end and intermediate bulkhead design
- Shore approach stability, cathodic protection and crossing design
- Fatigue evaluation and ECA
- J-lay, S-lay, Reel-lay and bundle installation analysis
- Materials Selection, corrosion and corrosion management
- Production of Tender Documents / EPIC packages for procurement, fabrication, construction / installation, testing and commissioning of subsea pipelines
- Production of operating philosophies
- Procurement / manufacturing / fabrication management
- Construction management including offshore installation. Start up and commissioning
- Development and implementation of inspection, maintenance and repair strategies / Interface management

FEDDO’s senior technical team consist of industry experts with extensive international knowledge and expertise in challenging environments. Members of this team have worked on some of the most innovative projects.

FEDDO has been extensively involved in field development studies, review, and cost estimates for discoveries, prospects, brown-field red

MARINE PRODUCTION RISERS

FEDDO’s capability in Marine Risers is founded on leading industry personnel, with experience to develop innovative solutions. FEDDO personnel have experience in the design and construction of conventional rigid riser systems in shallow and Deepwater applications, and also dynamic risers in deep to ultra-deep waters with challenging environmental loadings.

Our scope of work ranges from concept studies, FEED, through detailed design, to fabrication and installation engineering, supervision and management. For many Deepwater systems, risers are an integral part of the subsea development or export system. At FEDDO, we adopt a system level overview to ensure individual components fit with the overall functional requirements, in particular and the constructability and installability. The interface between risers with subsea, flowline/pipeline, floating structure adopt the most efficient and reliable system.

FEDDO GROUP Capabilities include:

- Life cycle engineering—appraise, select, define, execute, operation support, decommision
- Steel Catenary Risers (SCR), Lazy-wave Steel Risers, Flexibles and Top Tensioned Risers (TTR) ranging from small diameter flowline to large diameter export system
- Hybrid risers, including freestanding riser towers and/or bundles
- Flex joint, stress joint, keel joint, J or I-Tube and buoyancy tank concept evaluation and design.
- Dynamic, floating and seabed riser base spools
- Risers interference analysis
- Engineering Critically Assessment (ECA)
- Vortex-shedding induced Vibration (VIV) analysis
- Materials Selection, fatigue evaluation, and safety factor calibration analysis.
- Component design using advanced mechanics solutions, such as finite element methods and/or testing with statistical simulations, including test program design, implementation, management and supervision
- Development and implementation and repair strategies
- Interface management

Representative Projects

- CNOOC Panyu Project- Detail Engineering
- Subsea Installation of ONGC Vashishtha & S1 Development Project
- Wheatstone Upstream Project
- CNOOC Husky Liwan 3-1 Area
- USAN deep water development
- Gazprom Shotkman Ph. 2& 3 Subsea (artic)
- Total ikike SURF DED
- Woodside Sunrise Project
- PTTEP Zawitika Field Development
- Cooperation ADOC Hail Field Development EPC Project
- Iwaki-Oki Subsea CO2 Injection FEED
- Apache Reindeer Pipeline Crossing Design project
- Wheatstone Expansion Gas Conceptual Study
- Pipeline simulation & analysis using OFFPIPE SOFTWARE for Forcados Terminal Facilities
- Total Upstream Nigeria – OML 130 EGINA Deepwater Project Offshore Nigeria
ADVANCE ENGINEERING

Specialist Engineering for FEDDO incorporates Advance Mechanics materials and Corrosion, and Geomechanics. FEDDO’s capability is leverages on its leading industry personnel, with experience to develop innovative solutions. Using state of the art technology and analysis methods. The oil and gas industry continue to push the boundaries of high operating pressures and temperatures (HPHT) which place very onerous conditions on system components and can take them well beyond conventional design limits.

Projects in ever deeper water and harsh environments, including arctic, require specialist techniques and method to accurately assess and model conditions.

All projects have their individual challenges. FEDDO strive to bring smart, high value and economic solution whatever the development.

FEDDO GROUP Capabilities include:

- Life cycle engineering—appraise, select, define, execute, operation support, decommission
- Two and three dimensional overall and components level modelling using proprietary finite element modelling programs, including ANSYS and ABAQUS
- Structural analysis of manifolds and associated Deepwater structures
- Pipeline Global Buckling and walking assessment
- Ice load development and gouge analysis and solutions
- Internal / external corrosion monitoring
- Materials selection and optimisation
- Fatigue and ECA assessment

Representative Projects

- Sunrise LNG Development Pre-FEED – Advance Engineering studies using FEA, SAFEBUCK, BUCKFAST for Global Buckling Analysis – Australia
- Subsea Installation Of ONGC Vashihta S&I Development Project –India
- Chevron, Jansz-lo Subsea Compression Project Phase 2 Studies – Australia
- Browse Basin, Confidential Phase 1, 3rd Party Tie-Back Study - Australia
- Barzan Pipeline Repair EPCI for-- FEA Analysis - Qatar
- Julimar Development Phase 2 – Pipeline Buckling and Walking & ECA assessment - Australia
- Lucious Hadrian Subsequent Development Project - A Assessment for Installation and Operating Cycles
- Greater Sunrise Field, TIMOR GAP Deepwater Study - Australia

FLOW ASSURANCE

FEDDO’s capability is founded on leading industry personnel, with experience to develop innovative solutions. Flow assurance designs must consider the capabilities and requirements for all parts of the system throughout the entire production life of the system to reach a successful solution. Successful system designs must be developed with system unknowns and uncertainties in mind and should be readily adapted to work with the system that is found to exist after production starts, even when that system is different from what was assumed during design.

To assure that the entire system can be designed to operate successfully and economically, system designers must consider flow assurance fundamentals such as reservoir characteristics, production profiles, produced fluid chemistry, and environmental conditions.

Key system parameters est abolished as part of the design effort include tubing and flowline diameters, insulation, chemical injection requirements, flow blockage intervention provisions, host facility requirements, capital and operating costs, operating boundaries, and risk mitigation.

FEDDO GROUP Capabilities include:

- Life cycle engineering—appraise, select, define, execute, operation support, decommission
- Field development engineering
- Pipeline / Flowline sizing—steady state and transient
- Definition of transient start-up and cooldown temperature profiles for assessment of buckling and walking
- Insulation requirements definition type and required performance characteristics
- Development of operations manuals
- Hydrate prediction, prevention (inhibition) and remediation including chemical injection requirements for start-up, normal operation and shutdown—throughout the field life
- Operational envelope development—minimum, maximum, ramp-up
- Production chemistry issue resolution, such as wax and asphaltenes
- Slug prediction, sizing and slug catcher sizing
- Through life production system optimisation
- Production system operability

Representative Projects

- Panyu Oil and Gas Field Offshore China-CNOOC/CAMERON
- Kazan Shale Gas Oman.
- USAN /Erha North Deep Water - offshore Nigeria
- Sidi Ghazy Development onshore Egypt
- Rona West of Shetland (heavy Oil)
- Mangala- Rajasthan (Difficult Oil)
- Kashagan Flow Assurance
- North Idku Offshore Egypt
- Foinaven / Schiehallion
- Total Ikike SURF DED – Nigeria
- Flow Induced Vibration (FIV) Potential

FEDDO GROUP offers a range of in-house developed software solutions:

- FIELD OPTIONS
- QUICK SURGE
- GAS RELEASE
- FLARE STACK
- GASNET
- LIONET
- TRANSGAS
FLOATING AND FIXED STRUCTURES

FEDDO’s capability is founded on leading industry personnel, with experience to develop innovative solutions for floating structures.

Floating and Fixed structures include FPSO’s, FSO’s, TLP’s, Spars, Semisubmeribles, Control Buoy, Jacket Platform and Marine Terminal.

Determining which floating structures the best solution for any particular development is crucial. Key factors in the selection include the number, location and type of wells, flow assurance issues, hydrocarbon product (oil, gas, multiphase, water cut etc), water depth, environmental conditions, development schedule, availability of yards etc. FEDDO strive to bring smart, high value and economic solutions.

FEDDO GROUP Capabilities include:

- Production of Tender Documents / EPIC packages for procurement, fabrication, construction / installation, testing and commissioning Field development engineering
- Sea fastening design and transportation analysis
- Float-over deck engineering
- Construction management
- Interface management

FEDDO’s team includes former Oil Company and Contractor Engineering, Construction and Operating senior staff with significant experiences as engineering managers, project delivery managers and engineers.

FEDDO’s senior technical team consists of industry experts with extensive international knowledge and expertise in challenging environments. Members of this team have worked on some of the most innovative projects of their time.

Represents Projects

Through life cycle engineering—appraise, select, define, execute, operation support, decommission
Field development engineering
Floating structure engineering / naval architecture including new build and conversion engineering.
Vessel availability and surveys
Response based analysis of floating structures
Structural engineering
Jacket Design
Mooring system design
Mooring and offloading buoys
Materials Selection, corrosion and corrosion management
Procurement / manufacturing / fabrication management

ASSET INTEGRITY MANAGEMENT

Assets must perform effectively and efficiently to ensure safe and reliable operation and achieve your objectives.

Asset integrity management ensures you have the business processes, systems, tools, competence and resources needed for integrity of their assets throughout its lifecycle.

Design, operational, and technical integrity must all be managed effectively to control costs.

FEDDO can support you to develop, optimise and implement an effective asset integrity management system for all asset types, including down-hole, wellhead, subsea, pipelines, topside process, load-bearing structures, and floaters. We understand the challenges your industry faces and are actively involved in development of asset integrity standards and guidelines.

FEDDO GROUP Capabilities include:

- Corrosion Management
- IMMR Engineering and Support
- Risk Assessment and management
- Integrity Management System Design
- Fitness for Service Engineering
- Life Extension assessment
- Failure investigation and expert witness
- Economic Evaluation Assessment
- Systemic Risk Management
- Operation Management System
- Decommissioning Studies
- Technical integrity analysis & Independent Verification
- Development and optimisation of maintenance, inspection and testing (MIT) plans
- Data Management system
- Implementing Culture of Safety
- Customise Ultrasonic Sensors and Application
- Remote Visual and NDT Inspection

Representative Projects

- Y2K Assessment for Upstream Operator– GOM
- Terra Nova Offshore Oilfield Development– Offshore Canada
- Plant Re-Commissioning (Process Simulation)– Canada
- Real Time Data Solutions– USA
- Hurricane Disaster Recovery– GOM
- Fiber Optic Cable Assessment– GOM
- NDPR Refinery Asset Integrity Management - Nigeria
- MT Puffin FPSO Integrity Assessment and Evaluation – Nigeria.
RENEWABLE ENERGIES

Specialist Engineering for FEDDO incorporates Advance Mechanics materials and Corrosion, and Geomechanics. FEDDO’s capability is founded on leading industry personnel, with experience to develop innovative solutions. Using state of the art technology and analysis methods.

The World currently relies heavily on coal, oil and natural gas for its energy. Fossil fuels are non-renewable. Thus, they draw on finite resources that will eventually dwindle, becoming too expensive or have negative environmental impact.

In Contrast, renewable energy resources such as wind and solar energy are constantly replenished as wind and solar energy are constantly.

RESEARCH AND DEVELOPMENT

FEDDO’S capability is founded on leading industry personnel. With experience to develop innovative solutions integrity standards and guidelines.

Oil and Gas is a high-technology industry, where companies, scientists and engineers continually challenge the barriers of what is possible to find and produce energy. New techniques and technologies discovered through R&D have been vital in enabling the industry overcome current and future challenges.

We work with governments, world-class academics and industry specialist to help meet the world’s growing energy needs and we share ideas and expertise with partners within and beyond the energy sector to drive innovation forward.

FEDDO GROUP PATENTS:
- Seabed Power Generation-Renewable Energies
- Intelligent Slug Mitigation
- Intelligent Production Riser System
- Gas to Liquids Absorption Technology (GTLA) - Solution to wax, Hydrates and Corrosion.

TECHNICAL TRAINING SOLUTION

FEDDO courses develop technical skills (e.g. Subsea, Renewable) and capabilities the whole life-of-field.

FEDDO courses are interactive with plenty of quizzes, group discussions, case studies, worked examples and exercises.

Some courses also include site visits to give you first-hand experience of the equipment and components normally only visible on the seabed.

Our courses can be taken-in-house, in the classroom, online or through blended learning programmes.

Designed with large, global teams in mind, services include the following:
- Seminars
- Classes
- Teaching
- Coaching & Mentoring
- Developing a Team for Clients

Each training course can be organized for your specific needs and can be offered as follows:
- 1 Day Training: For Senior Management that require a basic understanding of the subject.
- 3 Day Training: For Middle Management and Senior Engineers who require sufficient details to provide leadership to their teams.
- 5 Day Training: For hands on details of the subject for Engineers of a range of disciplines that are involved in detailed design and system operations.
- Developing a team for a client and fully support the team on projects and proposals till maturity, which can range from 1-2 years.

Representative Projects
- Subsea Systems Design, Installation and Integration Management Course Facilitation (ONGOING)—Shell/Petronas Malaysia
- Piping Flexibility and Stress Analysis—Malaysia
- Subsea Pipeline Engineering—Shell Malaysia
- Company Site Representative- Shell Malaysia
- Subsea Structure Design Course - Nigeria
- Flow Assurance for Offshore Production– London
- Offshore Oil and Gas Field Design – London
- Implementing Culture of safety – GOM
- ASME B31.8 Gas Transmission and Distribution Piping Systems Course – Nigeria
- Operational Excellence – USA
- Instrumentation and Control Essentials on Capital Oil and Gas Projects - Nigeria

For Further Information: Contact: training@feddogroup.com

Courses can be held in most locations with adequate notice.
“Accomplishing what others can only imagine”

- Safety
- Integrity
- Trust
- Excellence
- People
- Technology
- Giving Back

- We operate under a Quality Management System (QMS) of ISO 9001:2015 standards
- Our environmental policy extends across all of our operations and sites
- FEDDO Group operates a ‘Safety first’: no accidents; no harm to people

= our people