

REGULF OFFSHORE AND ONSHORE DESIGN SOLUTION PVT. LTD. www.regulf.org



## **ABOUT**

ReGulf Offshore and Onshore Design Solution Pvt. Ltd. is a premier Engineering, Design and Consultancy Organization located in Kochi the commercial capital of Kerala, India.

ReGulf deliver expertise in Engineering and Design Services from concept to commissioning for customers globally ensuring sustained compliance with Quality, Health, Safety, Security and Environmental standards within schedule and budget of projects.

ReGulf is conceptualized and formulated by highly experienced engineering professionals having a combined 300+ years of experience in the field of Engineering, Design, Consultancy and Project Management in India and abroad.

ReGulf is facilitated and managed by efficient managers and excellent engineers, augmented with top notch design professionals supported with state of the art software and 3D tools.

ReGulf is equipped with personnel who are having hands-on experience in- HYSIS, PIPESIM, PIPENet, PDMS, CEASER-II, STADDPro, PVELITE, TANK, INTools.

## **COMPANY ACTIVITIES**

ReGulf activities cover the entire array of Engineering, Design, Procurement and Project Delivery Management of various Offshore and Onshore, Upstream, Downstream, Green field and Brown field in Oil & Gas, Refinery, Fertilizer, Chemical, Petrochemical, Water Distribution Systems and Pipelines.

Activities also include plant operation, maintenance, de-bottlenecking, energy audit, Plant safety studies such as HAC, HAZID, HAZOP, QRA, SIL and other related services.

# **OUR VISION**

Our vision is to be a global Prime Engineering, Design and Consultancy Organization providing safe and environment friendly engineering solutions to our customers.

# **OUR MISSION**

ReGulf will strive to deliver tailored engineering solutions to meet the needs of our customers from smallest advisory assignment to large multi disciplinary projects and will endeavor to be a world class provider of value Engineering and Design Services with commitment on continuous improvement in Quality, Health, Safety, Security and Environmental standards within schedule and budget.



# **QUALITY, HEALTH, SAFETY AND ENVIRONMENT**

ReGulf are committed to continuous improvement of Quality, Health, Safety and Security of our employees, contractors and all stake holders through our good engineering practices.

We are committed to environmental protection, conservation of natural resources and sustained development and provide exemplary service standards to exceed customer expectations using our three (3) tier quality check procedure.

While engineering, we

- regularly monitoring safety performance against measurable targets
- consistently implement proactive and reactive measures to identify, analyze, reduce and prevent risk by appropriate design
- observe and adopt all applicable legal requirements, international standards and best practices across the industry

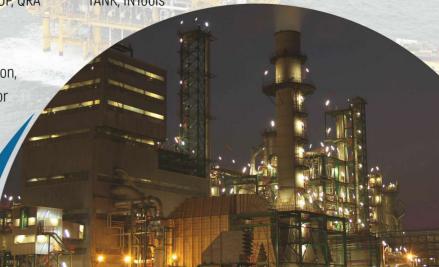
# **ENGINEERING CAPABILITIES**

Salient engineering capabilities of ReGulf are:-

- Project Feasibility studies for oil and gas facilities, tank farms, Onshore and offshore facilities, fertilizer, petrochemical, onshore and offshore pipelines, and marine applications
- 2. Preparation of Pre-FEED, FEED, Validation of FEED,
  Detailed Engineering and As-built engineering
- 3. Electronic Document Management System
- 4. Conducting energy audit of plants
- 5. EIA Studies
- 6. Conducting safety studies like HAC, HAZID, HAZOP, QRA and SIL
- 7. Procurement management including vendor pre-qualification, RFQ preparation, bid evaluation, purchase order preparation, inspection, vendor document review, and expediting services

- 8. Construction engineering support
- 9. Secondment of technical experts
- 10. Project Management Consultancy service
- 11. Interface Management service
- 12. Risk Management service
- 13. Pre-Commissioning and Commissioning Support
- 14. Due diligence studies
- 15. Hands-on experience in HYSYS, PIPESIM, PIPENet, PDMS, CEASER-II, STAAD Pro, PVELITE,

TANK, INTools





## ENGINEERING GROUP

ReGulf Engineering group consist of a team of well experienced engineering professionals equipped with sate of the art engineering software to meet customer needs. ReGulf expertise in Offshore and Onshore projects helps to design production facilities in multiple phases of project through increased level of definition, to manage risks and maximize value across all stages of project development.

- 1. Project Delivery Management
- 2. Process and Safety
- 3. Piping
- 4. Static Equipment and Pressure Vessels
- 5. Rotating Equipment and Material Handling
- 6. Electrical

- 7. Instrumentation & Controls, F&G systems
- 8. Architectural, Civil and Structural
- 9. HVAC
- 10. Fire Fighting System
- 11. Offshore and Marine Engineering
- 12. Onshore & Offshore pipeline

## **ENGINEERING DESIGN**

#### PROJECT DELIVERY MANAGEMENT

- Project execution plan and schedule
- QHSSE plan
- Coordination of inter disciplinary meetings
- Coordination of meetings with clients, vendors and contractors
- Organize risk studies
- Organize constructability studies
- Organize interface management plans
- Progress reporting, Resource mapping, Cost control
- Change Management
- Project Close out

#### PROCESS AND SAFETY

- Concept & Feasibility studies
- Process Design Basis
- Equipment & Pipe sizing calculations
- Hydraulic studies
- Material selection studies & preparation of MSD
- PFDs, P&IDs
- Process simulations
- Cause & Effect Diagram
- HAC, HAZID, HAZOP, QRA, SIL studies
- Commissioning and Start-up assistance







#### **PIPING**

- Piping Design Basis
- Pipe wall thickness calculations
- Specifications, Data Sheets and associated 2D drawings
- Piping Layout & GA drawings
- 3D Modeling & Models reviews
- Isometric & Stage wise MTO's
- Valve list
- Flexibility analysis
- Pipe support drawings
- Purchase requisitions, Technical Queries, Technical Bid Evaluation
- Review of Vendor Data and Drawings for technical compliance
- Preparation of Installation Specifications and Schedule of Work



#### STATIC EQUIPMENT & PRESSURE VESSELS

- Mechanical Design Basis
- Specifications, Data sheets, associated drawings and documents for procurement for Static Equipment,
   Fired heaters, boilers, flare systems, incinerators and Packaged Equipment
- Preparation of Purchase Requisition, Technical Queries, Technical Bid Evaluation
- Review of Vendor Data and Drawings for technical compliance



### **ROTATING AND MATERIAL HANDLING EQUIPMENT**

- Design Basis
- Specifications, Data sheets, associated drawings and documents for procurement for Rotating & Material Handling Equipment and Packaged Equipment
- Review of Vendor Data and Drawings for technical compliance





### ELECTRICAL

- Electrical Design Basis
- Load Schedule, Electrical Equipment Sizing, Single line
   Diagrams, Cable Sizing, Cable Schedule, DB Schedules
- Interlocking and Protection studies
- Data Sheets and Specifications
- Design and Engineering of power systems
- UPS and Power backup systems engineering
- Power factor improvement systems
- Sub-station layouts, Lighting Layouts, Cable Layouts,
   Earthing & lightning protection drawings
- Cathodic Protection systsem
- Detailed specifications for procurement
- Vendor data review



### INSTRUMENTATION

- Instrumentation Design Basis
- Data Sheet and Specification
- Instrument Layout drawings
- Cable block diagrams, Hook-up drawings, Control panel drawings, Routing drawings, F&G System, JB diagrams, Loop diagram
- Up-gradation of conventional instrumentation & control systems and shutdown systems to state-of-the-art ICSS (Integrated Control and Safety Systems)
- SCADA system, PLC Engineering
- Pipeline Leak Detection System
- Tank-farm management System
- Renewable Energy System engineering
- Plant alarm and General announcement System, Surveillance System
- Vendor data review
- Installation specifications and schedules of work





### ARCHITECTURAL, CIVIL & STRUCTURAL

- Civil and Structural Design Basis
- Specification for Geotechnical and Soil investigation Studies, Contour Survey
- Architectural plan and elevation in composite projects
- Infrastructural development drawings
- Valuation of assets
- Civil layout
- Plant building design
- Equipment footing design
- Pipe rack design



### **HVAC**

- Design Basis
- Carry out adequacy study of HVAC system based on project requirement
- Heat load calculations
- Layout drawings
- Purchase Requisitions, Technical Queries, Technical Bid Evaluation
- Review of Vendor Data and Drawings for technical compliance



### FIRE FIGHTING SYSTEM

- Design Basis
- Preparation of Fire fighting system conforming to NFPA, OISD, TAC
- Specification and Data Sheets of packaged equipment
- Fire water, Form and other fire mitigation system requirement calculations
- Fire water pump house layout drawings, GA Drawings
- Auto sprinkler and Deluge system for Tank farm, control room
- Adequacy study of existing system





# **OFFSHORE & MARINE ENGINEERING**

#### **OFFSHORE PLATFORM**

- Pre FEED, FEED
- Design Basis
- Specification for Geotechnical studies
- Specification for packaged equipment like Chemical injection, EDG, Compressor
- Detailed Engineering and Design for Process, Fire & Safety, Mechanical, Piping, E&I and Telecom
- Detail engineering for flare and venting system
- Weight distribution calculation and Center of gravity studies of the platform at varies stages of design
- Riser analysis and subsea pipeline approach drawing
- Power requirement calculation
- Subsea cable routing
- 3D modeling and multi discipline model reviews at various stages, layout drawings, Isometrics and MTO
- Design and Engineering of Boat landing, Material handling
- Engineering for personal safety requirements including escape route and Muster area
- Specification for Helideck
- Studies like, Installation analysis, transportation analysis, loading and unloading analysis, Flexibility analysis, stability analysis
- Pile drivability study





### FLOATING PRODUCTION STORAGE AND OFFLOADING (FPSO)

- Pre FEED, FEED
- Design Basis
- Specification for packaged equipment like Chemical injection,
   EDG Compressor, Separator
- Detailed Engineering and Design for Process, Fire & Safety, Mechanical, Piping, E&I and Telecom
- Detail engineering for flare and venting system
- Weight distribution calculation and Center of gravity studies for Topsides at varies stages of design
- Riser analysis and subsea pipeline approach drawing
- Power requirement calculation
- Subsea cable routing
- 3D modeling and multi discipline model reviews at various stages, layout drawings, Isometrics and MTO for FPSO, FSO and MOPU
- Design of Material handling system
- Engineering for personal safety requirements including escape route and Muster area
- Preparation of specification for Helideck
- Studies like Lifting analysis, Flexibility analysis, Stability analysis
- Design of Single Point Mooring (SPM)
- Mooring Analysis

### MARINE ENGINEERING

- Breakwaters and coastal protection works
- Dredging, reclamation and ground improvement
- Quays, wharf and jetties
- Design and build marine works
- Container terminals
- General cargo and multipurpose berths
- Liquid and dry bulk terminals
- Shipyards and dry docks
- Cruise ship and ferry terminals
- Structural assessments and repair for existing facilities
- Fishing harbors
- Marinas , small craft harbors and jetties
- Port infra-structure including roads, building and pavements
- Numerical modeling







# **ONSHORE & OFFSHORE PIPELINE**

#### **ONSHORE PIPELINE**

- Pipeline Design Basis
- Pipeline Techno-commercial feasibility reports
- Pipeline Wall thickness calculation / Steel grade selection
- Specifications and Data sheets for Linepipe, bends, fittings, appurtenances, coating
- Specification for cathodic protection
- Pipeline Route Plans
- Pipeline Alignment Sheets
- Pipeline Crossing Matrix and Crossing Drawing
- Valve Station design
- Pig launching / Receiving station design
- Pipeline Constructability Reports
- Flexibility Analysis
- Upheaval & Lateral Buckling Calculation for buried pipelines
   Pipeline MTO
- Provide Project Management and Engineering consultancy (PMC) service for onshore pipeline construction
- Facilitate HAZID, HAZOP, Constructability review

### **OFFSHORE PIPELINE**

- Pipeline Design Basis
- Pipeline Techno-commercial feasibility reports
- Sizing / hydraulic studies
- Route Selection
- Constructability Reports
- Wall thickness calculation / Steel grade selection
- On-Bottom stability calculation
- Anticorrosion coating selection / thickness calculation
- Cathodic protection design
- Specifications and Data sheets for Linepipe, Bends, Fittings, appurtenances, Pig launcher / Receiver, Coating, Sacrificial anodes
- Subsea layout / Pipeline route map
- Pipeline Alignment Sheets
- Flexibility Analysis
- Pipeline MTO
- Specification for Installation, testing and pre-commissioning
- Preliminary installation / Pipelay analysis
- Scope of work for pipeline route survey
- Provide Project Management and Engineering consultancy (PMC) service for route survey Installation of Offshore pipeline, Risers, Subsea Cable laying
- Facilitate HAZID, HAZOP, Constructability review





