



Our Services

Mechanical Engineering

- Piping Design, Layout, and Specification
- Vessel Design and Specification
- Pipe Stress Analysis
- Heat Transfer Analysis
- HVAC Design
- Equipment Specifications (Compressors, Pumps, Boilers, etc.)
- AutoCAD and CADWorx 3D Software Platforms
- Navis 3D Model Rendering Tools
- Drawing Packages – Site Plan, PFD, P&IDs, and Isometrics

Project Management

- Conceptual Design
- Pre-FEED Studies – if required
- FEED c/w DBM
- Scheduling and Project Reporting
- Cost Tracking Controls
- Cost Estimating

Instrumentation

- Instrumentation Design
- Automation and Safety Device Selection
- P&ID Development & Conceptual Design

Mechanical Engineering

- Process Simulation
- Process Design and Optimization
- PFD – Heat and Material Balance
- P&ID Process & Instrumentation Diagram
- Equipment Sizing
- Hydraulics and Line Sizing
- Process Data Sheets
- HAZOP and LOPA participation
- Pressure Relief System Analysis

Electrical Engineering

- Low, Med, High Voltage Systems
- Power Generation Facilities
- Variable-Speed and/or Frequency Drives
- Motor Control Centre Design
- Single Line Development
- PLC/DCS/SIS Panel Design
- Power Load Studies
- Thermoelectric Applications
- Solar Power Applications



Our Disciplines

Process Engineering

Mechanical Engineering

Pipeline Engineering

Electrical Engineering

**Instrumentation/ Control System
Engineering**

Structural Engineering

Architectural Engineering

HVAC/Plumbing Engineering

Cathodic Protection System

**IT and Communication
Engineering**



About Us

TVEC is a specialized engineering company actively engaged in Conceptual Design, Feasibility Study, Front End Engineering & Design (FEED), Detailed Engineering, Procurement, Construction and Commissioning (EPCC) of Process, Mechanical, Piping, Electrical, Instrumentation, Control, Automation and Telecom Systems with a highly successful track record. The significant contribution to the Oil and Gas industry in terms of quality and speed has made this organization a highly professional service provider to the regional and international Oil & Gas (Onshore & Offshore), Petrochemical, and Alternate Energy sectors.

With our JV partners and representative offices in India, we are competitive enough to handle bids and proposals for design, detail engineering and operation related projects. With our expertise we provide a wide range of engineering and project management skills to serve our clients in developing new facilities, as well as effectively applying innovative, sustainable and efficient technologies to upgrade and expand the existing facilities. We relish the international reputation of delivering every project and service we undertake with high standards of quality, commitment, reliability, and timeliness.

Our successful track records range from major projects for oil & gas onshore to offshore oil and gas including Process & Mechanical Topsides, FPSO, FSRU, FLNG FSO, Jack-up and Semi- submersible drilling rigs, Fixed Platforms and Wind Farms with the highest quality, and to agreed schedules. Our pride in having completed several pioneering projects for many major clients worldwide keeps us motivated. We have managed to emerge as one of the best engineering and energy solution providers worldwide



Our Vision

We Are A World class Architectural , MEP & Oil & Gas Engineering, Procurement, Construction, Commissioning Organization Committed to Integrity & Excellence.

Our Mission

We will conduct our business activities in a manner that is consistent with the international best practices providing timely and responsible solutions, and ensuring value for money to all our customers.
We recognize that our employees are the key to achieve the goals of the organization and we are committed to recruit, train and retain the competent people.

Our Core Values

- **CUSTOMER FOCUS**

We are dedicated to deliver our services in such a way that our customer can benefit them in the most efficient, cost effective and most satisfying manner possible.

- **QHSE**

We consider QHSE management and associated targets and objectives as a core value and it is part of every function.

- **PARTNERSHIP**

We work with our clients and vendors in a manner that our decisions and our style of interactions pay the way for success of both the parties.

- **INTEGRITY**

We are consistent with our values and will not be wavering due to outside influences, but standing strong in what we preach and agree which will be based on honesty, ethics, fairness and justice.

- **TEAMWORK**

We work as a single group of individuals committed to a common goal by having respect for individual contributions, consensus building, clear communication, persuasive speech and compromise.

- **VALUING PEOPLE**

We believe people are the most important asset of any organization. We respect and honour all people for their strengths and abilities regardless of their position, nationality, race, religion or gender.

- **SOCIAL RESPONSIBILITY**

We accept that our role and the responsibility as citizens of the world is to help improve society by taking a proactive move towards our social roles and we keep an implicit obligation to give back to the society.

- **COMPETENCY**

We are competent in our business by a combination of pooled knowledge and technical resources that enable us to provide significant benefit to our customers.

Fields of Expertise

- **Residential & Mixed Use**

- **Logistics & Industrial**

- **Commercial**

- **Retail & Leisure**

- **Infrastructure & Utilities**

- **Oil & Gas**

- **Power Transmission & Distribution**

- **Education**

TVEC – MARKETS

Our presence in the market is defined by our commitment to Efficiency, Sustainability and Customer Satisfaction. With our exclusive experience and multi-disciplined team, our market scope is wide, to provide a strong and focused based quality service. Our team, with a comprehensive, in-depth knowledge of processes, technologies, and resource availability will benefit any customer in search of Excellence. Our extensive experience in markets worldwide, empowers us to take a macro approach, apply best practices and synergies on the projects, serving our clients efficiently and effectively .

THE MARKETS WE SERVE INCLUDE:

- Oil and Gas Exploration & Production
- Onshore - Wellhead & completion, Production & Processing Plants, GOSP
- Offshore - Fixed Platforms & Topsides, Process & Mechanical Topsides, FPSO, FSO FSRU, FLNG FSO, Jack-up and Semi-submersible drilling rigs.

• Oil and Gas Pipelines & Transportation, Terminals and Refining

• **Energy Management** - Our independent energy audits can help businesses in optimizing power consumption. A key feature in our energy management approach is the ability to focus on the business benefits from environmental reductions to increased production. Our key services include producing energy balance, identifying strategies for energy consumption reduction, process optimization opportunities (quick wins) and improving energy awareness of personnel.

Our Capability

ENGINEERING

We offer multi-disciplined engineering design services for a wide range projects. We adopt a full lifecycle 'Total Installed Cost' approach to design and project implementation, to enhance project value without compromising safety, quality or schedule. Over the period of time we have grown and shaped engineering to such an extent that today we are widely recognized as one of the pioneers in the global engineering space. By utilizing 3D modeling and intelligent design systems, we maximize the benefits of data integration throughout the engineering, fabrication and construction phases of our projects. We can offer a full range of engineering services that complement our construction capabilities on Mechanical works, piping works and Cross country pipelines both Onshore & Offshore for a total solution to our Clients.

Our engineering delivery model is underpinned by extensive own highly qualified engineering resources and a global network of high value engineering centres.

- Concept Evaluation
- Project Feasibility Studies
- Basis of Design
- Front End Engineering Design (FEED)
- Detailed Design
- Specialised Process Engineering Design
- Engineering, Procurement, Construction Management (EPCM)
- Project Management Consultancy (PMC) Services
- Process Optimisation and Debottlenecking
- Industrial Solutions



We use advanced technology and over a decade of engineering and construction expertise to deliver a full suite of engineering services across the entire asset and feasibility studies through to design, delivery and long term production operations and optimization. Our engineers design with a Constructability and Maintainability perspective to maximize safety, cost, quality and productivity outcomes during the construction and operations phases of a project.

EPC

EPC

On EPC range, we offer the following specialized services and provide a complete range of engineering, procurement, construction, project management and commissioning for the following:

- Gathering & Distribution Piping Networks – Onshore & Offshore
- Mechanical & Piping Installations – Onshore & Offshore
- Compressor, Regulator, Metering & Pump Stations
- Tank Farms & Terminals
- Refineries & Gas Treatment Facilities
- Petrochemical Facilities

We have extensive experience in EPC, covering the spectrum from preliminary planning to completion and handover. Throughout history, offering total solutions had played an important role in our success and growth. We offer a comprehensive project approach that encompasses all phases of the EPC work cycle from small projects to multi-million contracts. Combined with our own strong construction team, we are able to provide a broad range of services related to EPC. Our technologically advanced tools & tackles give the capability to accurately update and reproduce the information on a complex EPC project. Our multi discipline staffs are comprised of highly technical and competent personnel having experience in EPC projects with a goal to provide quality and efficient services to our clients.



ELECTRICAL, INSTRUMENTATION & CONTROL SYSTEMS

We have built our capability to take on any critical and challenging tasks related to the markets we serve:

- Instrument Engineering / Systems Engineering Services
 - Design & implementation of Process Control System (PCS), Process Optimization System, Emergency Shutdown System (ESD), Integrated Control & Safety Systems (ICSS)
 - HAZOP, HAZID, QRA & SIL Studies - Evaluation/Verification
 - Design & integration of High Integrity Pressure Protection package (HIPPS) package
 - Design & supply of Liquid and Gas Fiscal Metering Packages/LACT units
 - Fire & Gas and Loss Prevention Studies – providing optimum coverage for plant areas for detection & suppression
 - Control Room & Control Systems Hot Cut-over
 - Sizing, Selection & Supply of Field Instrumentation, Control Valves, Regulators and Relief valves
 - Valve automation and actuation-SSVs, shutdown valves, motor operated valves
 - Design and Supply of Radio and Telecommunication systems (PAGA, VSAT, GMDSS, CCTV, PABX, FO Patch panels).
 - Design to meet International Standards and Regulatory Requirements
- Our Expertise and experience in Electrical & Power systems can make even the complex requirements look simple:
- Electrical system design for process plants
 - Power system analysis (using ETAP/EDSA)
 - Grounding system Substation (using Cymgrid)
 - Short Circuit Studies, Harmonic Analysis and Solutions
 - Load balancing and related studies
 - Heat Trace Systems - Design, Supply and Installation
 - Cathodic Protection System – Design, Supply and Installation
 - Hazardous Area Classification and Installation to meet International Standards.



Project Manajement

Our methodology and processes capture the experience of our past projects, and the toolkit that we have built of system tools was created using our experience of designing, building and operating real facilities, and driving genuine operational improvement and benefits. Our procurement benchmarking database provides us with the optimum prices at which facilities can be built, and give us a real advantage when managing the procurement phase for clients.

Our reputation for project management delivery is built on:

- Robust and consistent project management procedures that enable delivery safely, within schedule and on budget
- Clearly defined project controls integrity processes
- A project control model specific to PMC (Project Management Contractor) execution
- Engineering processes that are tailored to project development
- Engineering and estimating interfaces designed to ensure cost estimating integrity
- Robust procurement systems and processes
- A strong focus on health, safety, security and environment
- Industry-leading technical software backed by a global IT infrastructure
- Experienced project management personnel that deliver in accordance with our project management
- Procedures and project specific execution philosophies

Managing projects is what we do best. To find out more email us. We have completed over 200 EPC and EPCm projects in mature markets and emerging economies

Strong project management capabilities underpin safe and successful projects. Project management services are at the heart of our successful and sustainable project delivery capabilities.

The projects we deliver are typically large and complex, requiring strong management and control to reach a successful conclusion. Across our portfolio of lump-sum projects, in 2016 we delivered more than 200 million man hours and maintained an excellent safety record.

We use internationally recognized project management frameworks and processes as part of our quality management system for the management and control of all our projects, whether these are engineering, procurement, construction or commissioning projects. Project management teams are usually involved from start to finish of a project, and are critical to its success. Our people have proven delivery capabilities, from concept stage through to execution, delivery and start up. Our project personnel are encouraged to study to become Project Management Professionals (PMP), an industry recognised certification for project managers.

Today, many hold this certification. Scale and complexity is never a problem for us. We have the man-power to cover projects of any size, and we tailor our teams based on the individual requirements of the client and project.

Our services include:

- Project Management Contractor (PMC)
- Engineering, Procurement and Construction (EPC) as well as Engineering, Procurement and Construction Management (EPCm) contractor
- Project management services across the life cycle of an asset
- Health, Safety and Environmental services
- Project analysis: costs, schedule and risk management •



Supply Chain

Our supply chain group has teams based in all our major operating centres as well as in other key locations strategically selected to support our business activities. In addition, we have expert buyers, expeditors, logistics officers and material controllers. We also have first-class expertise in high-value order management.

With our international locations and the experience of our supply chain professionals, we can provide excellent sourcing, expediting and logistics support to our projects worldwide.

Where necessary, we have strong relationships with third party agencies who we can engage to enhance our service on a case by case basis. Thanks to our flexible commercial delivery models we can procure directly in support of your projects, returning value through a gain share approach. We are currently taking this approach for PDO. Local delivery has always been central to the way Petrofac works, underpinned by robust business practices, and we evaluate our impact by calculating in-country value (ICV). We work with local suppliers and develop local capabilities wherever possible, and all goods and services are procured in an ethical and cost-effective manner.

The key success factors to our supply chain operations are:

- An operational structure which permits prompt approvals and decision making
 - Building and maintaining excellent relationships throughout the vendor community
 - Early commitment to long lead items
 - Strong engagement with vendors at the proposal stage
 - Forward planning - looking and booking ahead
 - Pro-active expediting (desk and field), including extensive use of the support office network, resident inspectors and frequency of management visibility and visits
 - Our procurement benchmarking database where we maintain the latest best prices
 - Highly experienced team
 - Values driven behaviours in everything we do
- Petrofac works with approved vendor lists from our clients

Construuction

We deliver complex construction projects in challenging and diverse environments. The oil and gas installations we design and build have to survive extremely challenging and harsh environments, from desert heat to sub-zero arctic temperatures, and so require deep construction expertise, strong project management and a clear focus on safety, integrity and quality.

Our extensive experience (over 10 years), operational excellence and strong capabilities mean that we can deliver complex construction projects, whether these developments are greenfield or brownfield, onshore or offshore, upstream or downstream. We are commercially flexible, offering a range of different commercial models tailored to meet the needs of our clients. We have extensive lump-sum turnkey expertise (LSTK) in onshore engineering, procurement and construction (EPC) and offshore engineering, procurement, construction and installation (EPCI). We also provide engineering, procurement and construction management (EPCm) services too as part of our extensive portfolio.

As a responsible company, we employ local people, work with local suppliers and where there is a need, develop local capabilities. We measure the total number of jobs created by our projects, as well as the ratio between expatriate and local workers. This helps us calculate in-country value (ICV) - the net contribution that we make to the economies in which we operate, so that we leave a positive legacy after our involvement in the project has finished. We have been ranked number one EPC contractor four times in five years by Arabian Oil & Gas.





Vision Triangle

شركة مثلث الرؤية للاستشارات الهندسية



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