

A grayscale photograph of a complex industrial facility, possibly a refinery or chemical plant. The image shows a dense network of metal structures, including tall distillation columns, horizontal pipes, and multiple levels of walkways with railings. A large, prominent white pipe arches over the left side of the frame. The background is filled with more industrial equipment and structural elements, creating a sense of depth and complexity. The overall tone is industrial and technical.

General Profile

Enppi 

General Profile Content

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1. Introduction

Past, Present & future



Enppi signifies a legacy of engineering expertise and proficiency that was built over decades of hands-on practice and learning. The company is renowned as an international, leading provider of fully integrated engineering, procurement, construction supervision and project management services for the petroleum, petrochemicals, power and other industries. Enppi is globally recognized as a major engineering, EPC main contractor, and management contractor, with decades of experience in onshore and offshore projects in the oil and gas, refining and petrochemical industries.

Enppi was established in 1978 on the solid basis and knowhow of CF Braun Engineering and has since that time grown and expanded to become the trusted name of choice in the oil and gas industry across the entire region. Headquartered in Cairo, Egypt, Enppi branches and offices are spread in more than 15 countries around the world, with avid expansion plans being implemented with every passing year.

The main and most important asset in Enppi is its engineers. Enppi engineers are known for their invaluable expertise and knowhow, and their proficient work conduct is what makes the company's name a world renowned one. At Enppi, we are committed to retaining our engineering experts and talents by providing them with the work environment and support they require to thrive.

Enppi holds a long and pride-worthy track record of success stories in engineering projects that can be mapped across the globe. Our accumulated experience in engineering solutions is the cornerstone of our global reach, and the Enppi name is now internationally recognizable as a professional, efficient and trusted partner.

Vision & Mission

Our Vision

To attain a leading position among the international engineering and EPC / Lump-sum turnkey contractors; executing projects in the field of oil & gas, petrochemicals and process industries.

Our Mission

To execute projects in the field of the oil and gas, petrochemicals and process industries in the Middle East & Africa, and support the national economy, primarily through providing state of the art technologies, leadership and standards of excellence, while striving to exceed our customers expectations. This is achieved via Enppi's most valuable asset; its employees who are confident, competent, and caring.

Corporate Values

Commitment



To execute projects in the field of the oil and gas, petrochemicals and process industries in the Middle East & Africa, and support the national economy, primarily through providing state of the art technologies, leadership and standards of excellence, while striving to exceed our customers expectations. This is achieved via Enppi's most valuable asset; its employees who are confident, competent, and caring.

People



People are in the heart of our business, be them our team, our clients, our partners or stakeholders. At Enppi, our people are our greatest asset, and we continuously invest in their development, retention, proficiency and well-being. Our clients are our partners of success, and we work hard to redeem sustainable, fruitful relationships that can prosper with time.

Agility



Enppi is dedicated to adeptly face emerging challenges and adapt to market dynamics to cater to diverse industry evolution attributes. Our agility is what allows our peerless proficient experts to deliver optimal and creative solutions, and to swiftly fulfill

Engagement Models

Enppi is world renowned for successful client relationships, and this success is a direct result of the company's adherence to its corporate values, as well as consistent proficiency, respect, professionalism and responsiveness. By becoming a part of every client's team, Enppi utilizes the expertise of its engineers to achieve client goals and aspirations. The company's client engagement models reflect its values and the flexibility and creativity needed to fulfil all set goals, if not exceed them.



Main Contractor

As a main contractor, ENPPI undertakes full project responsibility for engineering, procurement, construction and project management, thus performing all required tasks, from initial planning studies to commissioning of turnkey



JV / Consortium

Enppi can enter into partnerships in the form of joint ventures or consortiums, with national and/or international firms. ENPPI's role in these partnerships ensues any and all of the services offered by the company, and this includes engineering and project implementation on turnkey basis.



Subcontractor

Enppi can act as a subcontractor in large-scale, multi-billion dollar projects, where the company's proficient engineers and valuable expertise can be utilized to

Our Partners

Since our foundation, Enppi has established successful business relationships with many international business partners, completing projects of massive scales and following through on its commitment to safety, value creation, optimized solutions and responsiveness. Enppi's clients expand across the entire globe with landmark projects in 12 countries for companies the likes of BP, Shell, BG, PDVSA, Saudi Aramco, KJO, KOC, QP, AGIP, KNPC and Total, to name a few.



Our Affiliated Companies



Our Capabilities

At Enppi, we are strong believers in human capital and consider our team of engineers and professionals to be our most important asset. Enppi is powered by its people, and it is their expertise and knowledge that make us who we are.

Today, Enppi proudly employs more than 2700 highly qualified team members who are integral to the success of the company as a whole. Over the years, Enppi has acquired credible, high calibre engineers who are proficient, reliable and committed to success. Our unique combination of proven expertise, long history of successful projects and fruitful partnerships has led to the leading status we hold today.

The company witnesses very low turnover rates, and this shows the extent of Enppi's efforts to retain its team. By holding continuous training and workshops for our employees, each in their fields of specialization, we further endorse their stature in the company and help them reach and exceed their potential as proficient engineers. These developmental courses are all certified and include achievements in:

- Project Management
- Health and Safety Management Systems
- Environmental Management Systems
- Information Technology
- Technical Specialization

2. Business Fields

Enppi expertise has been applied to a wide range of upstream/downstream onshore oil and gas projects as well as upstream offshore projects including oil and gas production facilities, onshore/offshore pipelines, boosting, pumping and compression stations for oil and gas, oil refining, gas processing, petrochemicals, terminal & storage facilities including Offsite and utilities.

The company also provides Health, Safety, and Environmental Services for most projects executed in various fields. The increasing awareness of environmental issues in Egypt and long-standing necessity of safety measures in petroleum installation by virtue of industry nature triggered Enppi to enhance Health, Safety, and Environmental factors in existing and new projects. This strategy was translated in executing environmentally friendly and safe projects.

Enppi expertise was to a wide range of onshore and offshore oil & gas projects, including:



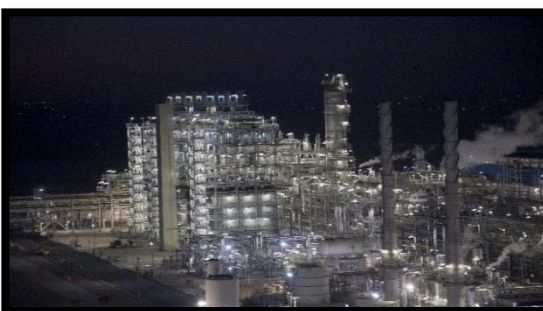
Oil Production & Refining

Crude Distillations Unit, Vacuum Distillation Unit, Vapor Recovery Unit, Sulphur Recovery Unit, Deasphalting Units, Hydro cracking Units, Hydro Treating Units, Tail Gas Treatment, Lube Oil Production & Blending, Isomerization, Reforming & CCR, Sour Water Stripping Unit, Amine Absorption and Regeneration Units, Hydrogen Manufacture Units



Gas Production & Processing

Onshore Production, Offshore Platform, Flared Gas Recovery, Receiving Terminals, Compression Station, Dew-Pointing Plant, NGL Recovery Plant, LPG Production Plant, Condensate Production and Stabilization, C2/C3 Production Plant, Acid Gas Removal, Dehydration, Mercury Removal, Co2 Removal



Petrochemicals & Chemicals and Fertilizers

Ethylene, Polyethylene, Linear Alkyl Benzene (LAB), Methanol, Polypropylene, Styrene, Polystyrene, Amonia Plant, Urea Plant , H2O2 Plant, Sulphuric Acid Production Facilities, Phosphoric Acid, Production Plant



Pipelines

Material Selection & Wall Thickness Assessment, Stress analysis, Thermal, Expansion Analysis, Cathodic Protection Design, Onshore, Offshore/ Subsea



Utilities & Offsites

Power generation and distribution, Water & Waste water treatment, Cooling towers, Flare systems, Steam generation, Instrument air systems, Fire detection and protection systems, Buildings, Earthing and lightning protection, Telecommunications and data networks



Tank Farms & Terminals

Tanks (atmospheric, low pressure and cryogenic), Tank design & sizing, Stress analysis, Loading / Unloading, Arms, Metering Skids, Terminal Management and Automation System, Automatic Tank gauging



Offshore

Jacket & Deck, Topside Facilities, Ports & Terminals, Offshore Platforms Assessment & Rehabilitation, Requalification, Construction support analysis, Weight control engineering



Subsea

Conventional design practices, Advanced subsea, pipeline engineering, Route surveys and analysis, Geo-hazard assessments, Landfall and shore approach design



Water Treatment

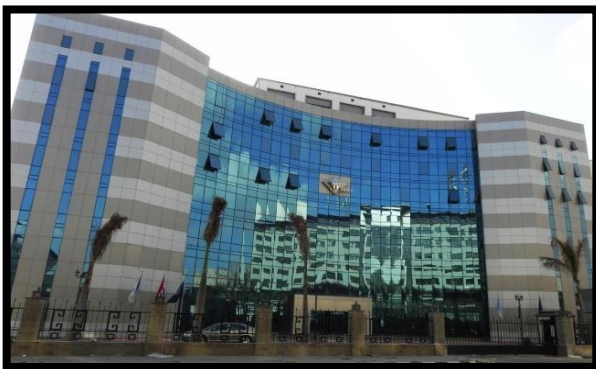
Filtration Systems (Microfiltration, cartridge, Nut shell, nanofiltration ,..etc), De-Salination System (Reverse Osmosis , (Electro De-Ionization (EDI) ,De-Mineralization ,Cation-anion exchange...etc), Zero Liquid Discharge (ZLD), Oily Water Separation System (API,CPI,DAF, Hydro cyclone ,..etc), Dewatering System (Brine Concentrator ,

Crystallizer , Sludge removal, decanter centrifugal ...etc), Biological Treatment System (Clarifiers ,Aeration , oxidation ,suspended growth, attached, growth,...etc), Ultraviolet Sterilization System, De-aerator System, Ozonation System, Phenol Removal System (chemical oxidation, etc..)



Power Plants and Renewable Energy

Gas Turbine power generation plant, Steam, Turbine power generation plant, Combined cycle power generation, Solar Power Units



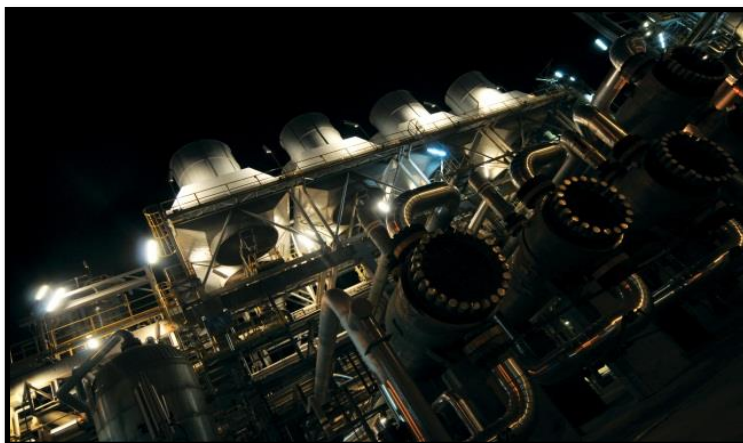
Architectural Design

Workshops, Laboratory buildings, Housing complexes, Offices and administration buildings, Control rooms and electrical substation building, Roads and site development.

3. Scope of Services

Scope of Services

Enppi strategy is to provide diversified services to clients in the global marketplace with proven safety records and at a competitive price. Enppi structure and access to local resources add a competitive advantage. Through cooperation with multinational companies, we are able to maintain international standard of quality, cost effectiveness, and offer the highest level of services available.



Enppi is continually expanding its field of activities and diversifying its services in response to the ever-changing demands of the industry. It initially provided design and management services to companies for development in the downstream sector of the petroleum industry. Over the past 20 years, its scope has widened to execute turnkey projects as EPC main contractor covering the upstream and downstream development.

Enppi provides a full range of services in Engineering, Procurement, Construction Supervision, and Project Management. In addition, specialized services can be provided as needed, including:

Feasibility/Techno-economic Studies

- Process design
- Process and Energy optimization
- Scheme selection
- Technology and Licensed Process evaluation and selection
- Debottlenecking studies
- Plant revamp studies
- Environmental studies
- Licensor evaluation & selection
- Equipment duty specification
- Steady state, transient and dynamic Simulation Studies



FEED / Basic Engineering

- Process description and PFDs
- Process plant optimization
- Plant operation, control and shutdown Philosophies
- Equipment sizing & specifications
- P&IDs, plot plans and layouts
- Pipeline route and layout drawings
- Instrumentation lists and data sheets
- Environmental Engineering
- Safety and loss prevention Basic Engineering
- General specifications and codes
- HSE activities



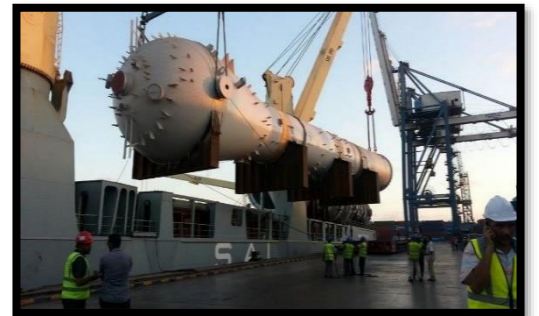
Detailed Engineering

- Process, utilities and off-sites detailed design
- Instrument and control systems
- Material specifications and requisitions
- Piping layouts, and detailed design
- Pipeline detailed design alignment sheets
- Electrical systems detailed design
- Site development, foundations, structures and buildings detailed design
- Vendor print review and evaluation
- Pre-commissioning, Commissioning and start-up Activities procedures
- Performance Test Activities



Procurement

- Provide a full range of professional services covering local and world-wide procurement services.
- Day to day control and coordination of all procurement operations aimed at achieving the main objective.
- Purchasing including materials requisitioning, bid evaluation and awarding
- Expediting
- Supplier quality surveillance
- Traffic and logistics
- Material management at site



Construction Management

- Sub-contracting for Construction work
- Construction contracting
- Construction planning, scheduling and monitoring
- Construction resources allocation
- Constructability studies
- Construction supervision
- Field technical support
- Project provisional and final acceptance procedure
- Health, safety and environmental control



Project Management

- Project procedures and execution plan
- Project Portfolio and program management
- Project QEHS plans
- Project management activities covering engineering, Procurement, construction management and commissioning phases
- Progress evaluation and reporting
- Planning and scheduling
- Cost engineering, budgeting and estimating
- Suppliers management and control
- Project administrations and accounting
- Prequalification & selection of Main Contractors, Suppliers and Construction firms
- Basic and detailed engineering review
- Construction management, pre-commissioning, commissioning and start up management



E&I Installation Works

- Installations, Pre-commissioning, Commissioning and Start-Up Activities of Electrical and Instrumentation, Fire Detection/Protection and Telecommunication Systems.
- The installations include Power Generation, Distribution Systems, Transformers, Lighting System, Grounding & Lightning Protection, Cabling Systems, race ways, instrument calibrations, instrument control systems (PLC, DCS, ESD, PCS, VMS, HIPPS, SCADAetc)
- Installations of Civil Work related to E&I Including substations and control room buildings, earth work, concrete and Finishing Activities
- Installations of Mechanical Work related to E&I Including HVAC System and fire fighting for buildings
- E&I Scope for Turnkey Projects
- Revamp of Existing Gas/Oil Petroleum Projects
- Upgrading and Modernization of Electrical Substations and Control systems
- Supply and Installations of Electrical, Instrumentation, Fire Fighting and Fire Detection Systems



- Supply & Installation of Civil, Mechanical related to E&I work
- Pre-Commissioning Scope
- Commissioning & start-up Assistance
- Installations Management & Supervision

Pre-Commissioning and Commissioning & Start-up

- Implementation, Supervision and assistance of projects Commissioning and Start-up phase up to final handover to the end Users (Operation & Production). Execution of all commissioning specialized services (i.e. leak test, drying, inerting, chemical cleaning, lube oil flushingetc).
- Prepare commissioning & Start-up manual/Strategy and guidelines for the projects.
- Prepare the initial startup and shutdown procedure / sequence.
- Establish Commissioning & Start up Execution plan/schedule.
- Establish & Approve the Operational Test Procedures.
- Establish & Approve vendors mobilization plan / schedule.
- Establish Systems Hand-over procedures & Strategy.
- Assist for issuing master plant operational planning.
- Assist & Perform with operations startup & test run.
- Prepare performance test procedures
- Training of customer operations personnel



Specialized Services

Asset Integrity Management (AIM)

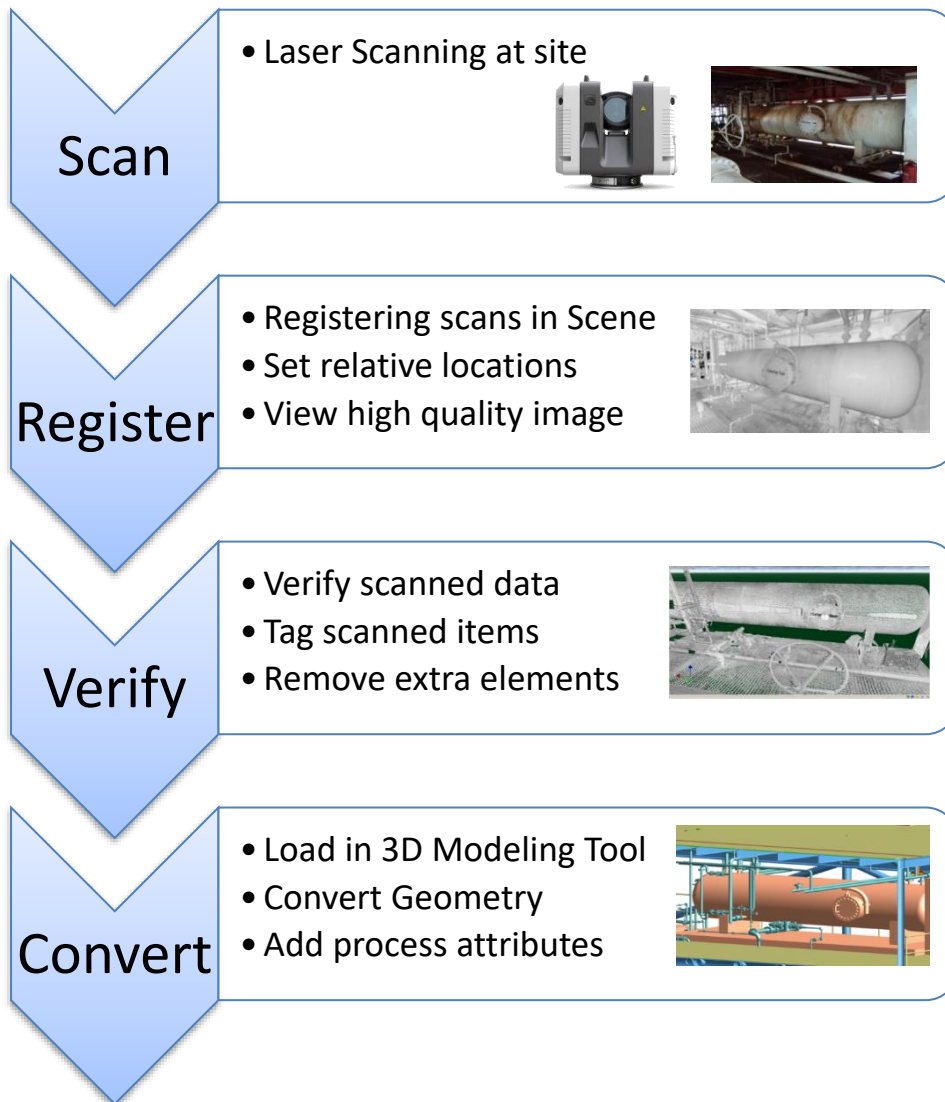
Along the past five years, Enppi has integrated its services and developed a model for implementing an efficient AIMS along Asset life cycle starting from conceptual design till operations and decommissioning covering all types of assets whether it is upstream, midstream, downstream relying on a highly qualified multidisciplinary AIM team and applying latest codes and standards in Asset Management, risk based inspections and maintenance i.e. ISO 55001, ISO 55002. API 580, API 581 ...etc.

Our services cover all AIM services including assisting our business partners to digitize its Asset Management System to ensure efficient integrity management.

Laser Scanning & 3D Modeling

Enppi has developed a wide capabilities and tools in using new technologies such as laser scanning and radar mapping to create and develop AS-IS 3D models and documentations, out of As-Built documents or even without As-Built data. Using most of known software's to create all types of AS-IS models from primitive 3D Model, Semi Intelligent 3D Model or fully intelligent 3D model as part of Enppi Digitalization solutions.

Export data from reality to 3D model workflow



4. Areas of Expertise

Areas of Expertise

The following presents a detailed description of the major areas of expertise:

Process Technology

Enppi has considerable experience in the design of oil and gas, onshore/offshore production facilities, gas processing, oil refining and Petrochemicals with relevant expertise in the areas of:

- Process and Energy optimization and Scheme selection
- Process and Pipelines Studies (techno economic & technical)
- Debottlenecking and revamps
- Safety (i.e. HAZOP, HAZID, QRA, SIL,..etc.), Firefighting and Fire&gas detection systems Studies
- Conceptual, basic, FEED and detailed engineering
- License evaluation and selection
- Review of basic engineering for others



Mechanical Engineering

Enppi employs qualified specialists in all aspects of mechanical engineering. The following services are offered to support detailed design activities or independently as specialized services;

- **Static equipment design covering:**
 - Reactors
 - Process Columns & Towers including internals.
 - Coke Drums
 - Pressure vessels in various materials and wall thickness
 - Fixed and Floating Roof Storage Tanks.
 - Sphere and Cigar tanks.
 - Spheroids and low pressure tanks.
 - Heat exchangers and Air coolers.
 - Low temperature & Refrigerated tanks.
 - Filters or Strainers of various types.
 - Skid Mounted Process and utility Equipment
 - Fire and water tube Boilers Packages.
 - Waste Heat Recovery Unit (WHRU)
 - Heat Recovery Steam Generator (HRSG)
 - Incinerators
 - Preparation of equipment Mechanical Data Sheet and/ or Detailed Engineering Drawing.
 - Technical evaluation of bids received from static equipment suppliers/ manufacturers.



- Review of equipment design and fabrication documents received from static equipment suppliers/ manufacturers
- Rotating equipment covers compressors, gas and steam turbines, pumps, turbo expanders, HVAC, cranes ...etc.
- **Material selection covering:**
 - Material selection guides
 - Cathodic protection

Electrical Engineering

Enppi has expertise and capabilities in electrical Systems engineering & design. The following services are offered to support detailed design activities:

- Electrical Systems' Analytical and Special studies
- Grid-Connected Power Generation Plants.
- High Voltage Grid-Connected Substations
- MV Overhead Transmission Lines
- Island and Field Interconnected Power Generation Plants.
- MV and LV Power Distribution Systems (Indoor, Outdoor and Explosion Proof)
- Electrical Prefabricated Substations, Modules and Kiosks.
- AC & DC UPS systems
- Power Factor Improvement capacitor banks.
- Solar Power units
- Cabling and Raceways Systems
- Lighting Systems
- Grounding and Lightning Systems
- Navigational Aids
- Electrical Heat Tracing



Civil/Structural /Architectural Engineering

Enppi possesses considerable design experience in different phases of Civil/Structural/Architectural works, which covers the following activities for plant facilities and onshore structures:

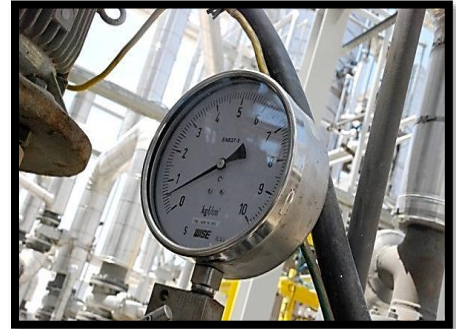
- Civil Design
- Structural Design
- Architectural Design
- Calculation reports
- 3D Modeling
- Detailed Drawings
- Review Steel Workshop Drawings
- General Specifications
- MRQs , MRPs and Bill of Quantities
- Revamping and Structural Integrity Reports
- Site Technical Supports



Instrument & Control and Telecommunication Engineering

Enppi Instrument & Control and Telecommunication Engineering covers:

- Field instrumentation
- Process controls system such as: pneumatic, hydraulic, electronic & microprocessor (PLC & DCS), etc...
- Safety related systems; ESD, F&G and HIPPS, etc...
- SCADA systems such as fiber optic, microwave, satellite, etc...
- Custody transfer metering systems
- Pipeline management systems
- Automatic tank gauging systems
- Oil & Gas wellhead control systems
- Asset Integrity Management For ICSS and plant Control Components
- Subsea Hydraulic network analysis
- Subsea Power distribution analysis
- Tele-communication systems e.g.:
 - Private automatic branch exchange (PABX)
 - Public address & alarm system (PA & A)
 - Wireless systems (Satellite, Microwave, VHF/OHF)
 - Security systems
 - Video conference and voting systems
 - Final control elements such as control valves, on-off valves, safety relief valves, etc..



Offshore Engineering

Offshore structural design capabilities cover the following areas:

- Offshore platforms (jackets & decks)
- Subsea facilities
- Static in-place structural analysis
- Pile analysis
- Dynamic & fatigue analysis
- Earthquake analysis
- Construction support analysis
- Cathodic protection design
- Weight control engineering
- Platforms prequalification



Piping Engineering

The principal documentation generated by Piping Engineering is:

- Plot plans for equipment location plans.
- Build 3D CADD model.
- Piping general arrangement drawings for the aboveground piping.
- Standard details.
- Orientation drawings for Tower, vessel, tank, etc.
- Piping Isometrics for all lines
- Stress analysis reports for critical lines using the Caesar II program & pipe support design.
- Piping calculations.
- Piping material specification, supply specification for packages.
- Underground piping design for all U/G piping systems
- As-Built
- Field assistance for construction and start-up.
- Detailed & block plastic model building.



Pipeline Engineering

Enppi employs qualified specialists in its Pipeline Engineering Department to be responsible for all aspects of onshore/offshore pipeline engineering.

The main pipeline engineering activities cover the following:

- Techno-Economic and Feasibility Studies
- Pipeline Basis of Design
- Pipeline Route Selection (and Survey)
- Pipeline Hydraulics & Flow Assurance (also covering 2-Phase flow)
- Complete mechanical design of pipelines

The following section gives detailed description of the above services:

Onshore & Offshore Pipelines

- Pipeline Functional Specifications
- Pipeline Material Specifications
- Pipeline Coatings Specifications
- Material Selection & Wall Thickness Assessment
- Alignment Sheets and Route Layouts
- Stress Analysis
- Thermal Expansion Analysis
- Buoyancy Control
- Buckling Calculations
- Cathodic Protection Design
- Material Take-Off's
- Material Requisitions & Purchase Orders



Subsea Pipelines

- Pipeline Functional Specifications
- Pipeline Material Specifications
- Stability Analysis
- Free Span Analysis
- Bottom Roughness (Seabed irregularities) Analysis
- Upheaval and Lateral Buckling analyses
- Alignment Sheets
- Riser and Spools Design
- Pipeline Installation Studies
- Pipeline Trenching Studies
- Design of Subsea Pipelines for Deepwater Applications
- Tenders for Subsea Pipeline (Survey, Installation and Trenching)



Project Management

Project management is the discipline of initiating, planning, executing, controlling, and closing the work of a team to achieve specific goals and meet specific success criteria.

Project Management is responsible for directing and coordinating human and material resources throughout the project duration using modern management techniques to achieve pre-determined objectives of scope, cost, time, quality and HSE

Project management is responsible for:

- Preparation of project strategy plan and project procedures
- Participation in contract negotiation and preparation
- Contract execution, planning, monitoring and reporting
- Meeting and coordination with client
- Direction, control and coordination of project task force
- Control All project communications
- Budget and expenditure control
- Subcontract administration
- Project financing administration
- Project risk management
- Control scope boundaries and apply change control
- Perform proper project close out

Cost Engineering

Cost Engineering division provides cost estimates ,cost control, value engineering , feasibility studies, risk assessment and company operating budget control during different project phases in accordance with the international standards and quality management systems, utilizing the up to Date techniques & soft-wares.

Capabilities in this area cover:

- Investment cost analysis
- Budget development & maintenance
- cost breakdown structure
- Expenditure/commitment plan
- Contingency and risk assessment
- Scope change control
- Cost estimating
- Project cost trends
- Economic analysis and feasibility studies
- Value engineering
- Overall company operating budget control

Planning & Scheduling

Project planning and scheduling addresses the overall management and control of a project from the conceptual design phase to the hand-over of the completed installation to the customer. Planning & scheduling utilizes modern project controls software such as Primavera in addition to other in-house developed applications.

Capabilities in this area cover:

- CPM Networks preparation
- Planning & scheduling execution plan
- Network analysis
- Schedule preparation techniques
- Progress evaluation and reporting
- Project trend analysis
- Schedule and performance analysis
- Forecasts
- Manpower profiles

Procurement

Enppi has carried out worldwide basis complete procurement services for a wide range of projects for both onshore and offshore developments. Our experienced procurement team offers local and international procurement services to customers and maintains current data relating to the largest manufacturers in Egypt, Middle East, Europe, USA, and the Far East.

These services include:

- Vendor List
- Purchasing (international & local)
- Expediting
- Inspection
- Logistics
- Material Control

Construction Management

Enppi offers construction management as part of its overall project management or turnkey capabilities.

Construction Management activities cover:

- Constructability studies
- Survey works
- Construction execution plan
- Loss prevention policy and safety precautions
- Sub-contractors pre-qualification
- Tender package for Construction work
- Sub-contract for construction works administration (preparation & finalization)

Moreover, our construction supervision team performs, on a full time basis, the technical supervision on the following site activities:

- Site preparation
- Civil and architectural works
- HSE Supervision
- Structural steel (fabrication & erection)
- Mechanical works and equipment/package installation
- Underground piping
- Drainage
- Piping (fabrication, erection and testing)
- Pipelines
- Electrical works and instrumentation works
- Surface preparations and painting applications
- Insulation, coating and wrapping applications
- Tanks works
- Offshore activities including Platform & Pipelines
- Building

Equipment Integrity Assessment, FFS, Repair and Alteration

Additionally, Enppi have the capability to assess the mechanical integrity of in-service static equipment, advise the repair requirements, design the necessary modifications/ alteration then manage and coordinate the execution activities at site according to international standards.

Commissioning & Start-up

In addition to the design and construction supervision activities, Enppi also assumes a major role in the commissioning and start-up of process facilities and plants in order to achieve the successful testing and start-up of its projects. **This mainly covers:**

- Implementation, Supervision and assistance of projects Commissioning and Start-up phase up to final handover to the end Users (Operation & Production).
- Execution of all commissioning specialized services (i.e. leak test, drying, inerting, chemical cleaning, lube oil flushingetc).
- Prepare commissioning & Start-up manual/Strategy and guidelines for the projects.
- Prepare the initial startup and shutdown procedure / sequence.
- Establish Commissioning & Start up Execution plan/schedule.
- Establish & Approve the Operational Test Procedures.
- Establish & Approve vendors mobilization plan / schedule.
- Establish Systems Hand-over procedures & Strategy.
- Assist for issuing master plant operational planning.
- Assist & Perform with operations startup & test run.
- Prepare performance test procedures
- Training of customer operations personnel

Contracts Administration

Enppi has been involved at all levels with a variety of operators establishing contracting strategies for a complete range of projects both onshore and offshore. This has encompassed all aspects of projects from defining authority levels, through contractor Prequalification and selection to final claims negotiation and contract close out. Enppi can assist in preparing basic types of contracts applicable for all project phases.

Enppi Academy

Enppi Academy is an integral element in the company's continuous strive for improvement and development. It was establishment with the aim of upgrading new graduates' capabilities to keep pace with the ongoing changes in technological developments, the increasing workload and employees' turnover.

Duration of study at Enppi Academy:

- For new graduates: 6-8 months theoretical and practical training in labs and sites of petroleum companies
- For experienced engineers: 1-2 months in-house orientation and theoretical technical training

Achievements at Enppi Academy:

- Graduation of Enppi Academy 2nd group consisting of 30 Egyptian engineers, after completing their on- job training program in mechanical engineering, civil engineering and I&C engineering
- Graduation of 70 engineers from PDVSA Gas (Venezuela) after completion of 6-8 months of professional training in civil engineering, electrical engineering, mechanical engineering, I&C engineering, process technology and project controls

5. Quality, Environmental, Health & Safety and Energy Management Systems

Out of international / national interest of the quality, environment, energy and occupational health & safety and in line with Egypt's vision 2030 for achieving sustainable development and the company interest with the customers satisfaction and continual improvement, Enppi has the leadership in obtaining certificates of international standards for:

- Quality Management Systems (ISO 9001)
- Environmental Management Systems (ISO 14001)
- Occupational Health & Safety Management Systems (ISO 45001)
- Energy Management Systems (ISO 50001)

The implementation of the requirements of these international standards was effectively considered in all of the company's projects and activities in all stages (design, procurement and construction supervision) through an integrated management system to monitor, evaluate and improve Enppi's performance in the Quality, Environmental, Energy, Occupational Health & Safety and Customer Support Management Systems.

It is worth mentioning that Enppi is certified by the National Quality Institute (NQI) for providing consultation and training services in the field of the Quality, Environmental, Energy, and Occupational Health & Safety Management Systems.





ISO 45001



ISO 14001



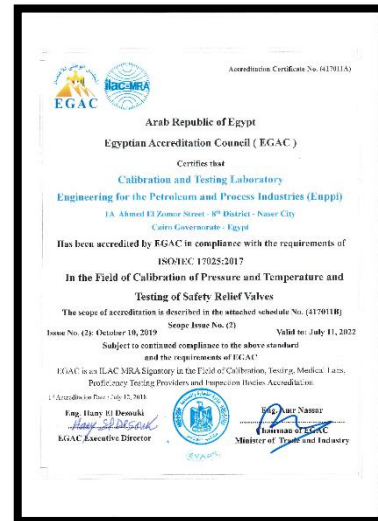
ISO 9001



ISO 50001



NQI Consult Certificate



ISO 17025

6. Enppi Safety Awards

Certificate of Appreciation awarded to Enppi for achieving 2 Million Man hours without lost time injury (LTI)

Client: APRC

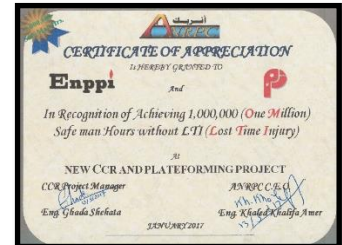
Project: Upgrading Phenol Extraction Unit Project



Certificate of Appreciation awarded to Enppi for achieving 1 Million Man hours without lost time injury (LTI)

Client: ANRPC

Project: New CCR & platforming Project



Certificate of Appreciation awarded to Enppi for achieving 35 Million Man hours without Fatality

Client: ETHYDCO

Project: ETHYDCO Complex Project



Certificate or recognition awarded to Enppi for achieving 7 Million Man hours without lost time injury (LTI)

Client: YASREF

Project: Yanbu Export Refinery Project Tank Farm Package – SP1



Certificate of recognition awarded to Enppi for achieving 4 Million Man hours without lost time injury (LTI)

Client: SUMED

Project: Expansion of SUMED Storage Capacity (6 Tanks)



Certificate of recognition awarded to Enppi for achieving 4 Million Man hours without lost time injury (LTI)

Client: Total

Project: Kharir Development Project – Phase 1 (Basement Processing Unit)



Certificate of recognition granted to Enppi for completing 4 Million Man hours without lost time injury (LTI)

Client: GASCO

Project: C2 & C3 Maximization Project



Safety Award to Enppi for completing 11 Million Man hours without lost time incidents

Client: UGDC/ENI/BP/GASCO

Project: NGL Project at Port Said and Damietta Export Facilities



Certificate of Recognition awarded to Enppi / Petrojet / Rawabi as Prime Contractor for the Expansion of Hout Crude Onshore Production Facilities for achieving 0.8 Million Man hours without lost time incidents

Client: Al-Khafji Joint Operations (KJO)

Project: Expansion of Hout Crude Onshore Production Facilities



Certificate of Recognition awarded to Enppi for the successful completion of 3 Million Safe Construction Man hours with Zero Lost Time Incident

Client: Saudi Aramco

Project: Yanbu Gas Plant Expansion



Certificate of Recognition awarded to Enppi / Petrojet, for achieving 2 Million working Man Hours without any Lost Time injuries during the fabrication phase in Ma'adia fabrication yard.

Client: Al-Khafji Joint Operations (KJO)

Project: KJO Field Development Project, Offshore Phase 1



7. Resources & Capabilities

Enppi Headquarters

Enppi Headquarters is located in Cairo, with a massive area of 40,000 Sq. Mt. It is located in Nasr City, which is 8 Km from Cairo international airport. The building represents a landmark in the neighborhood providing an ideal working environment to 3000 employees.

Modern office facilities are made available to project teams and task forces including:

- Fully integrated computer & CAE network
- Video conference facilities
- Modern reprographic center
- Inclusive task force facilities
- Internal broadcasting network
- Internet & intranet service
- E-Mail service
- Security and maintenance services
- Fax and local/long distance phone facilities
- Clinic, dining hall, gymnasium, shaded parking, etc...
- Library
- Intranet
- Training & Enppi Academy



In addition to 2 other buildings nearby the HQ for task force and non technical divisions.



8. Information Technology

1. IT Strategy

Enppi IT Division is in line with corporate strategy of becoming a top EPC contractor worldwide, to that effect, IT provides an up-to-date infrastructure that facilitates the use of advanced software packages required by the various engineering projects. Furthermore, IT avails the necessary collaboration and interaction tools to maintain teamwork, and collaboration for remote workers. With this blend of on-site and off-site operation, IT maintains data security by striving to follow, and comply with international standards in securing Enppi digital infrastructure.

2. IT Project Organization

All Enppi Projects receive the full support of the IT Division, in the form of a dedicated Focal Point within the division, to ensure the Project IT plan is executed flawlessly. Furthermore, Projects with an IT related scope receive a Discipline leader, other than the dedicated IT Engineer, for the satisfaction of the project needs. The Dedicated IT Engineer is responsible for the project digital infrastructure during the design phase, as well as the execution phase within the site, if applicable.

3. Enppi CAE Systems

3.1 Historical overview

Enppi has a long Engineering Design history, with the introduction of CAD systems over 30 Years ago. Now a days Enppi Engineering and design teams have access to best in breed CAE Systems for 3D plant, equipment, structural modeling software. Design, and clash checks, isometric extraction. This results in the design system model database being the only source for drawings, and report generation during execution, ensuring consistency.

3.2 CAE Software Tools

Enppi Engineers utilize many software packages from top vendors such as Intergraph, AVEVA & Bentley among others. The following is quick overview of said packages, indicating in-house developed software.

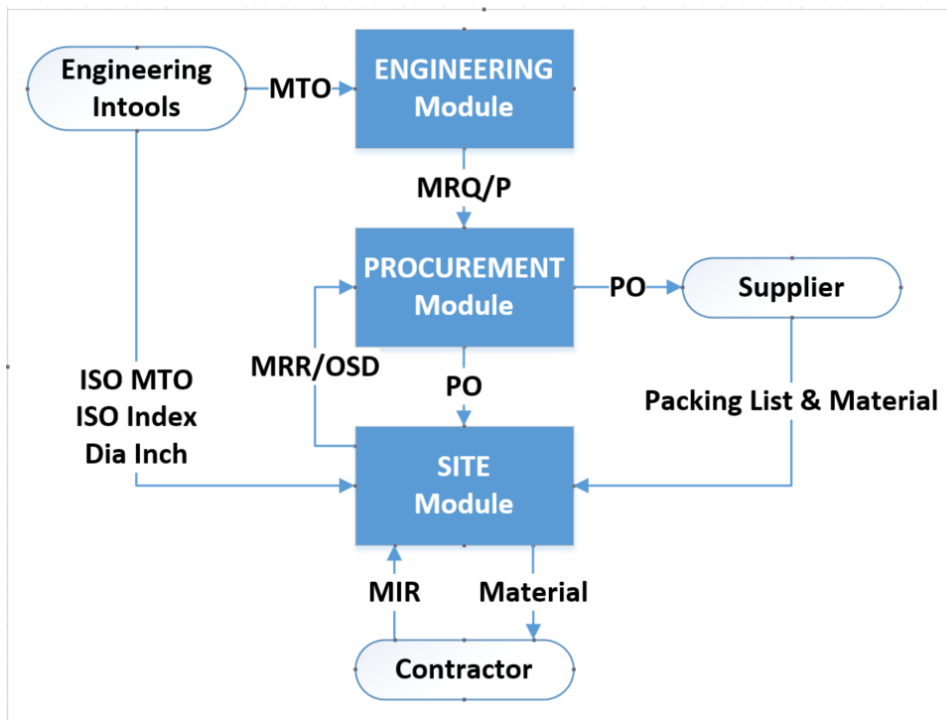
Below is a sample list of the main software tools utilized in Enppi with brief description:

Function	Software Tool
2D Drawings	AutoCAD, MicroStation
3D Modeling	PDS/SP3D, PDMS/E3D
3D Modeling for Buildings	Revit
3D Model Review	SP Review, AVEVA Review, Navisworks
Process Design & Simulation	HYSIS, Autoplant, FlareSim, FlareNet, UniSim, RPMS, SIMSCI
Gas Dispersion, Fire & Explosion Control	FLACS
HVAC System Design	HAP Carrier
Heat Exchange	HTRI
Process HAZOP	PHA-PRO
Schematic Drawings P&IDs	SP&ID, AVEVA P&ID
Piping Stress Analysis	CAESAR II, FE/Pipe
Piping Material Management	SPRD
Laser Scanning Modeler	LFM Laser Scan, AVEVA Laser Scan Modeler
Offshore Platform Structural Analysis	SACS
Pressure Vessel Design	PVELITE
Electrical Material Design	SPEL, ETAP
Instrumentation Material Design	SPI (INTOOLS), AVEVA INST.
Civil Structure Analysis	STAAD Pro, ETABS, SAFE, SAP, Tekla Engineering, Tekla Steel Detailing
Project Planning and Scheduling	Primavera, MS Project
Project Risk Analysis	Primavera risk Analysis, @Risk
Material Management and Construction Site Management	In-House Developed, on top of Oracle Forms and Reports
Document Management	In-house Developed, on top of OpenText Documentum
Document Review	Adobe Acrobat
Spread Sheets	MS Excel

3.3 Enppi Material Management System (EMMS)

3.3.1 Overview Data Flow Diagram

An in-house developed software package, used to manage the material requisition and purchasing process, enabling seamless integration between engineering activities, and procurement activities



3.3.2 Engineering Modules

- **Piping Engineering Module provides**
 - Standardized catalogues and material specifications
 - Automatic loading of Material Take off (MTO)
 - Automatic generation and update of material status
 - Automatic generation of MRQ and MRP
 - Defining criticality rating
- **Other Disciplines Module provides**
 - Load MRQ and MRP from excel sheets into the database

3.3.3 Procurement Modules (EPS)

- **Purchasing**
 - Issue Request for Quotation
 - Invited Supplier Register
 - Track Purchasing Progress
 - Commercial Bid Tabulation
 - Fax of Commitment Issuance
 - Purchase Order Issuance

- **Expediting**
 - Line Item Status
 - Highlights, and Completion Tracking
 - Inspection Notification

- **Inspection**
 - Third Party Inspector Register
 - Visit Preparation
 - Release for Shipment Note Issuance
 - QSDR Management

- **Transportation (Logistics)**
 - Material Moving Ticket (MMT) Creation
 - Invoice Tracking (Customs, demurrage, etc)
 - Shipment & Insurance Details.

- **Site Module**
 - Full Control over Material issuance and receiving
 - MRR, and OSD Report generation
 - Outstanding Material availability check
 - Material status & surplus check
 - Look ahead reports

3.4 Enppi Document Management System (EDMS)

Enppi in-house developed document management system, is built on top of OpenText Documentum, which is a proven Enterprise grade document management system. The in-house developed customization ensures the system performs according to corporate procedures and provides Enppi IT the ability to customize the system according to project requirements. The system also provides several processes to automate some of the most common activities within Enppi projects, such as Supplier Document Review, inter-disciplinary Document review, Document Issuance, and many more.

Furthermore, the system allows for the generation of multiple reports pertaining to project status, and progress.

4 IT Infrastructure and Capabilities

4.1 Datacenter

A restricted-access, temperature, and humidity controlled “Datacenter”, design with compliance to enterprise operational standards in mind, used for hosting Enppi IT Services with:

- Firefighting system
- Redundant CRAC units with temperature and humidity control
- Double Power feeders, with separate power distribution lines and dual dedicated uninterrupted power supply (UPS)
- Emergency Power Source
- Logged Access control
- CCTV surveillance
- SNMP-based monitoring & Control System

Datacenter Servers, are maintained with the aim of delivering high computing capacity, considering redundancy and fault tolerance. Storage is provided through

- Central SAN Storage unit
- NAS Storage Unit
- Disk Library with deduplication and Write Once Read Many (WORM), for both short retention backup requirements as well as archiving.

Enppi has taken to use virtualization using various technologies such as VMWare, MS Hyper-V, and Oracle OVM, to facilitate any special requirements that might arise for any of the IT services provided, or different project needs.

Finally, Enppi Datacenter, offers a comprehensive backup solution, capable of supporting full, incremental, and differential levels of backup. With file or block-based methods.

4.2 Network

Enppi network is a 1 GB/10 GB based highly available Datacenter network, with access switches supplying POE to endpoint outlets, serving IP telephony, desktops and wireless networks alike.

Communication and Internet Connectivity

- The network has the following general characteristics
- High speed internet (over 100 Mbps) bandwidth supplied by two different service providers, over different options of “Last Mile” Connectivity (local loops, wireless, and fiber optic links)
- Network communication links connecting HQ with affiliated branches and sites either within the Arab republic of Egypt, or overseas.
- Overseas connections are performed using VPN links either through leased line VPN, or IPsec/SSL internet VPN tunnels.
- Wireless network for use by guests, and external entities with valid contracts

Such network configuration allows seamless delivery of the entire stack of Enppi IT Services to any project, regardless of its location.

As for the security of the network, that is provided through a multi-tier firewall design, with IPS, and sandboxing capabilities.

4.3 Standard Users Workstation Tools

User Endpoints are availed to staff according to their workloads, and needs, with workstations provided to Enppi CAE Systems users. In general, all end points are equipped with

- MS Windows Operating Systems
- MS Outlook Email Client, with Enterprise Vault email archiving
- MS Office Productivity Suite
- Adobe Acrobat Viewer, and AutoCAD Viewer
- End Point Detection & response Suite
- Printing & Scanning capability
- Internet Connectivity

5 IT Services

5.1 Email

Enppi IT provides email service to all Enppi Employees, and projects using Microsoft Exchange, with Outlook Web Access, for web access, and mobile devices. The email service is equipped with archiving service, to decrease mailbox size, and is accessible through desktop clients, and online clients as well.

5.2 Intranet

Enppi IT provides an employee portal for easy access to employee services, such as Medical care, Time Management, division sites for collaboration, and many other services.

5.3 Learning Management System

Enppi most valuable resource are our talented workforce, to that effect Enppi IT manages a learning Management system, used for online delivery of several courses, holding digital awareness campaigns, performing screening exams for potential new hires, delivering online training to external parties, etc.

5.4 IP Telephony

Enppi IT utilizes a Unified Call Manager, allowing for secure, reliable, and scalable communication to all Enppi Staff, and projects regardless of location. Jabber (a mobile application) is also deployed to extend employee communication to employee smart phones, and other devices.

5.5 Video Conferencing

Video Conferencing solutions are provided to all staff, as well as project teams using several technologies, such as Cisco WebEx, MS Teams, and MS Skype. This allows Enppi IT to fulfill a wide array of telepresence requirements, according to the different contractual obligations.

5.6 Software Development

Enppi IT software development team develops all applications used by Administration, HR, and financial divisions. Software development teams consider the requirements and use the appropriate tools and database engines. The following is a listing of in-house developed applications:

- Financial Systems
 - Payroll, Taxation & Insurance
 - Pension Fund
 - Accounting Information System
 - General Accounting
 - Expenses Analysis
 - Cost Accounting
 - Budget
 - Cash Management
 - Accounts Receivable
 - Projects Accounts Payable
 - Taxes Systems
 - House Loans Accounts
 - Bank Accounts & Checks Issuance
- Project Cost Control
- Administration System
 - Personnel
 - Annual Appraisal
 - Time Control
 - Mobile Bills
 - Medical Care
 - Store Management
 - Public Relations and Enppi Club
- Human Resource Management System
- Isometric Control System
- Configuration Management DB

5.7 Service Desk

Enppi IT supports the provided IT services, through dedicated support personnel manning the IT service desk. Service desk is reachable through a service desk portal, a unified email address, a unified phone extension, and an MS Teams channel. The service desk provides first line support, with escalation to a second line support to experts within the IT division, and finally in case required to external support to the various vendors.

6 Disaster Recovery Site

Enppi Business Continuity Plan dictates the presence of an off-site disaster recovery facility. Enppi disaster recovery site contains dedicated resources, with both an active/passive, and active/active mode of operation according to the system criticality.

7 IT Management

7.1 Change Management

Change Management procedures are in-place to control changes to Enppi Digital infrastructure and maintain a consistent level of service. The change advisory board (CAB) is made up of all departments of the IT division to ensure a thorough investigation of all changes to promote teamwork and ensure no unforeseen complications from any introduced change.

7.2 Configuration Management

Configuration management procedures, as well as database are in place to keep record of all assets HW/SW used by Enppi.

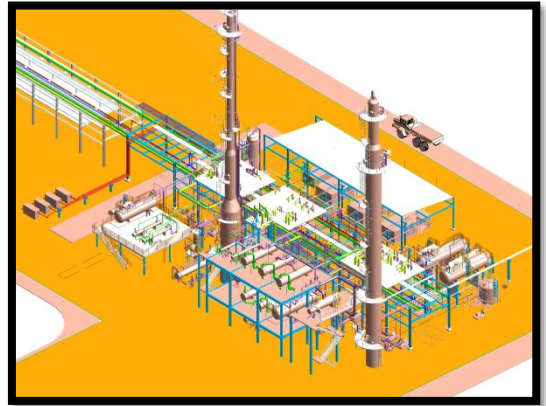
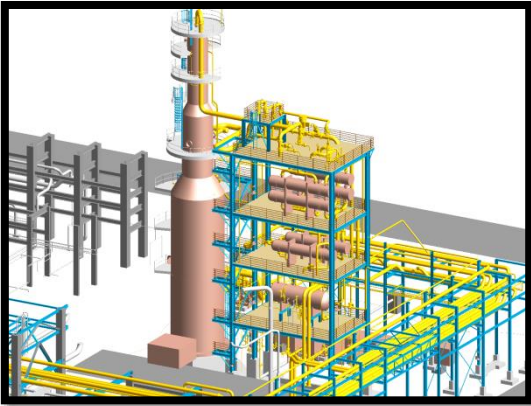
8 Information Security

Information security pertains to the assurance of Confidentiality, integrity, and availability of Enppi Digital infrastructure, and project data. To that effect Enppi adheres to local laws, and regulations relevant to information security, as well as laws and regulations in areas where Enppi maintains a physical presence through branches. Furthermore, Contractual obligations to safeguard and protect project data, are taken into consideration, and are audited according to customer requirements.

9. Projects & Experience

I. Oil Refining & Petrochemicals and Chemicals Experience

Oil Refining



ANOPC Hydrocracking Complex – EPC Early Works 2020 - 2023

Client: Assiut National Oil Processing Company (ANOPC)



Project Description

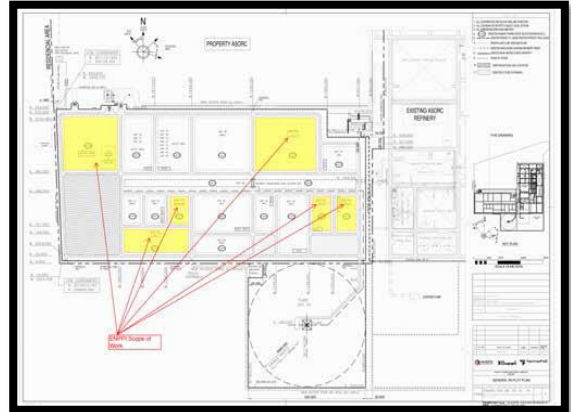
The project aims to convert low value Fuel Oil (Mazot) into more valuable products (Diesel, Naphtha & LPG). The Project is expected to produce 2.74 Million Tons per year (Diesel), 360000 Tons per year (Naphtha), 91000 Tons per year (LPG), 331000 Tons per year (Coke) and 57000 Tons per year (Sulphur).

Contract Type

Sub-contractor for Technip for the following units: Vacuum distillation unit (VDU), Distillate Hydrotreating unit (DHT) and Sulphur Recovery units In plot / off plot storage areas

Scope of Work

Detailed Engineering for all units in the SOW, Procurement Services for All Major equipment and Bulk Materials, Construction Supervision activities



Midor Refinery Expansion Project 2019 - 2022

Client: Middle East Oil Refinery (MIDOR)



Project Description

The project aims to increase the Midor plant refining capacity by 60% from design capacity (100,000 BPSD in addition to 15% increase after the first phase of expansions), by adding new units such as new crude & vacuum distillation unit with capacity of 60,000 BPSD, diesel hydrotreating unit to comply with the international standards with capacity of 44,000 BPSD as well as solvent deasphalting unit with capacity of 14,000 BPSD in addition to the hydrogen production unit with capacity of 56500 m³/h. **Licensors:** UOP



Contract Type

EPC Sub-contractor for Technip for the following units:

- New crude & vacuum distillation units
- Solvent deasphalting unit
- Some offsites and utilities

Scope of Work

Detailed Engineering, Procurement, Construction in addition to precommissioning & Start-up for new crude & vacuum distillation units and solvent deasphalting unit in addition to some offsites and utilities.



Rehabilitation of SOPC Coker 2018 - 2023

Client: Suez Oil Processing Company (SOPC)

Project Description

The Project aims to rehabilitate the Coker Complex in SOPC company to increase production to reach 5000 MTBD that includes the following units:

- Vacuum Distillation Unit “VDU” (Unit 10) - 5000 MTBD.
- Kerosene Hydro treating Unit (Unit 11) - 1500 MTBD.
- Delayed Coker Unit (Unit 12) and Vapor Recovery Unit “VRU” (Unit 14) – 3400 MTBD (both units)
- Diesel Hydro treating Unit (Unit 13) – 5250 MTBD.
- Amine “Sweetening” Unit (Unit 15) – 400 MTBD.

Some units will be revamped and the others will be replaced.

Contract Type

Lumpsum Price for professional Services – Cost Plus for procurement services

Scope of Work

Basic and detailed engineering, procurement services and construction supervision

Provision of Engineering Services for Mostorod Refinery 2012 - 2018



Client: Egyptian Refining Company (ERC)

Project Description

The Project aims to upgrade the Atmospheric Residues of Cairo Refinery by constructing three major new units; Vacuum Distillation Unit (VDU), Hydro-Cracker Unit (HCU) and Delayed Coker Unit (DCU). Middle distillate and Naphtha produced from each unit and Cairo Refinery will be treated at newly installed Naphtha Hydro Treating Unit (NHT) and Distillate Hydro Treating Unit (DHT). This project includes Utility and Offsite facilities to fully support new units to process targeted feed and products. Also, integration with existing facilities with neighboring companies shall be developed.

Contract Type

Reimbursable Man-Hours for professional services

Scope of Work

Provision of personnel to perform consultations work for Engineering, Procurement, Construction Supervision and project control activities related to project execution by ERC and other project contractors.

New CCR & Platforming Project **2015 – 2018 (with 10 weeks ahead of project schedule)**



Client: Alexandria National Refine & Petrochemical (ANRPC)

Project Description

The project aims to increase the value added of the new Naphtha hydro- treated unit to accommodate hydro-treated heavy naphtha which is currently exported to produce a reformat of a high octane number by processing 604,000 T/Y. In addition to the production increase of LPG & Hydrogen

Contract Type

EPC Main Contractor, with Lumpsum for Detailed Engineering & Construction, cost plus for material supply and reimbursable man hours for pre-commissioning and commissioning

Scope of Work

Detailed Engineering, Procurement, Construction for Civil works, Mechanical works, Electric & Instrumentation works, Fire Detection & Firefighting System, Cathodic Protection System, Pre-Commissioning and Commissioning activities.



Asorc Naphtha Complex (ISBL)- (Inside Battery limit) **2017 – 2021**

Client: Assiut Oil Refining Company (ASORC)

Project Description

The project aims to maximize the utilization of ASORC infrastructure and the existing facilities to increase the domestic production of high octane Gasoline and reduce its imported amounts in addition to establish an integrated petroleum industry. The Project design capacity 660, 000 tons/year of Naphtha (FEED) to produce high Octane gasoline and increase the LPG production to 187 tons/day.

Contract Type

EPC Lumpsum turnkey through a consortium with wood

Scope of Work

Detailed Engineering, Procurement, Construction, Pre-commissioning, Commissioning & Startup and Performance Test



New Vacuum Distillation Unit 2014 - 2017



Client: Suez Oil Processing Company (SOPC)

Project Description

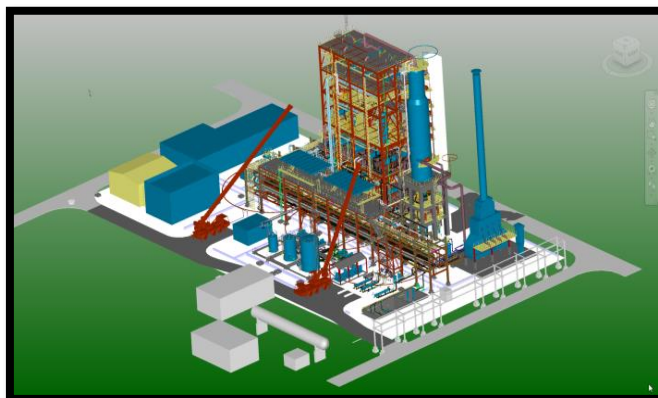
The project aims to install a new vacuum distillation unit for asphalt production by removing lighter fraction from long residue that is produced from the atmospheric distillation units processing Land, Marine Balaiem or equivalent crude oil. The new VDU for Asphalt production should be designed to produce 1,200 ton/day of asphalt and vapor gas oil.

Contract Type

Lump sum for professional services and material supply cost plus

Scope of Work

Basic & detailed engineering, procurement services, construction supervision, commissioning, start up assistance and overall project management



New Vapor Recovery Unit 2014 - 2017



Client: Suez Oil Processing Company (SOPC)

Project Description

The project aims to install a new vapor recovery unit instead of the demolished existing Unit to accommodate the off gases from various gas streams generated by processing units in addition to a new electrical substation and a new control room. The new VRU unit design capacity is 200,000 T/Y.

Contract Type

Lump sum for professional services and material supply cost plus

Scope of Work

Basic & detailed engineering, procurement services, construction supervision, commissioning, start up assistance and overall project management



New Preflash Column System

2014 - 2016



Client: Middle East Oil Refinery (MIDOR)

Project Description

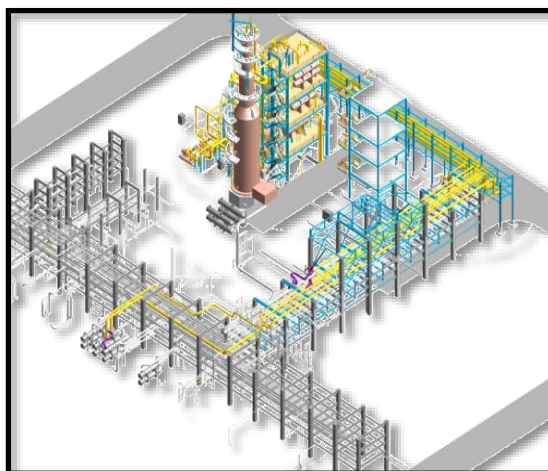
The project aims to install a New Pre-Flash Column to decrease the Vapor Load at Crude fired Heater in order to achieve design Unit throughput during processing Crude Oils with Higher API gravity and/or increase the CDU/VDU Unit-01 capacity to 115% in case of processing Crude Oil with same design API.

Contract Type

Lump Sum

Scope of Work

Basic and Detailed Engineering, Commissioning and Start-up Assistance



New Vapor Recovery Unit

2014 - 2016



Client: Assiut Oil Refining Company (ASORC)

Project Description

The objective of the project is to establish the New Vapor Recovery Unit with a feed capacity of 400,000 TON/Year to recover 97% of the butanes to produce 80,000 TON/year of on-spec LPG to serve upper Egypt LPG requirements.

Contract Type

Lump-sum Professional services, Cost Plus Material Supply, Commissioning and start-up assistance reimbursable MHRS.

Scope of Work

Basic and detailed engineering, procurement, E&I Installation Works, construction supervision pre-commissioning, commissioning and start up assistance.



**Installation of a New Naphtha Hydro Treating Unit
2009 - 2012****Client:** Alexandria National Refine & Petrochemicals Co. (ANRPC)**Project Description**

The project aims to install a new Naphtha Hydro Treating Unit with a capacity of 824000 metric ton per year treated Naphtha

Licensor: UOP**Contract Type**

EPC Consortium with Petrojet (Enppi Leader)

Scope of Work

Detailed engineering, procurement services, consortium activities including construction supervision and management, commissioning and start-up supervision

**Engineering and Design Services Project
2008 - 2010****Client:** Deir El Zor Petroleum Company (DEZPC)**Project Description**

Provision of integrated technical services to execute various projects in Syria for Deir Ezzor Petroleum Company (DEZPC). Through this contract, Enppi will avail an integrated project team of various specialists throughout the contract duration (2 years).

Contract Type

Reimbursable

Scope of Work

Engineering services

**Assiut Grass Root Refinery, 2.5 MM T/Y
1999 - 2001****Client:** Assiut Oil Refining Company (ASORC)**Project Description**

The project aims to increase the refining capacity by 2 MT/Y to produce:

- 516,000 T/Y Diesel - 283,000 T/Y Naphtha
- 189,000 T/Y Kerosene - 1,000,000 T/Y Fuel Oil

Contract Type

Lump-sum for professional services, cost plus for material supply & construction

Scope of Work

EPCM contractor: detailed engineering, procurement, construction, commissioning & start-up assistance, overall project management.



Light Naphtha Isomerization Plant

1997 – 1999

Client: Cairo Oil Refining Company (CORC)

Project Description

The project aims to install an Isomerization unit with a feed capacity of 1000 T/D to improve the Octane number of light Naphtha by using UOP license.

Licensor: UOP

Contract Type

EPL turnkey – maximum ceil

Scope of Work

Detailed engineering, procurement, construction, supervision, commissioning & start-up and overall project management



Naphtha Isomerization

1997 - 1999

Client: Amreya Petroleum Refining Company (APRC)

Project Description

The project aims to install an Isomerization unit with a feed capacity of 500 T/D to improve the octane number of light Naphtha and using UOP License.

Licensor: UOP

Contract Type

EPCM: Lump-sum professional services, material supply disburseable and construction

Scope of Work

EPCM Contractor: detailed engineering, procurement, construction, commissioning & start-up assistance and overall project management



Spent Lube Oil Re-refining Project

1994 - 1996

Client: Alexandria Petroleum Company (APC)

Project Description

Spent lube oil refining plant 30,000 tons/year feed of spent oil based on KTI, gas oil remover, high vacuum distillation, lube hydro-finishing & fractionation.

Licensor: KTI Know-how

Contract Type

EPCM: Lump-sum for professional services, material supply disburseable and construction

Scope of Work

EPCM Contractor: detailed engineering, procurement, construction, commissioning & start-up assistance and overall project management





Assiut Grass Root Refinery, 2.5 MM T/Y

1985 - 1987

Client: Assiut Oil Refining Company (ASORC)

Project Description

A grass root refinery 2.5 MM Tons/Year crude distillation unit, a vapor recovery unit and LPG, Naphtha caustic wash units.

Contract Type

Lump sum for services & guaranteed maximum for materials

Scope of Work

Enppi performed front end study, basic & detailed engineering, procurement services & material supply, pre-commissioning & start-up. Enppi also arranged the project finance from Lloyd's bank, ECGD & SAE.



Gas Oil & Lube Oil Dewaxing

1994 – 1995

Client: Amerya Petroleum Refining Company (APRC)

Project Description

- Gas Oil Rate: 6,500 BPSD
- Lube Oil Rate: 2,500 BPSD

Licensor: MOBIL research & development

Scope of Work

Completion of MOBIL process package up to basic engineering, Detailed engineering and Assistance in commissioning & start-up



Furfural Extraction Unit Revamp Project

2007 - 2019

Client: Alexandria Petroleum Company (APC)

Project Description

The project aims to replace the hazardous Furfural dissolvent with the environmental friendly NMP dissolvent which meets the environmental regulations, in addition to upgrading the Lubricant Oil Production Unit and reducing its NMP consumption.

Licensor: Bechtel

Contract Type

Lumpsum for all Professional Services

Scope of Work

Detailed Engineering, Procurement Services, Construction Supervision, Commissioning & Start Up Assistance





Phenol Extraction Unit Upgrading to MP Refining Project

Client: Amerya Petroleum Refining Company (APRC)

Project Description

Converting the extraction method using Phenol as an extraction solvent to using NMP (Normal Methyl 2-Pyrolidone) because of the following:

- NMP is environmentally better than Phenol.
- NMP chemical characteristics that prefers it as a solvent.
- Shortage in Phenol production.

Contract Type

Detailed Engineering services

Scope of Work

- Carrying out the detailed design of the MP Refining Unit Revamp, reviewing and finalizing the P&ID's with full piping, designations (including pipe specifications, insulation thickness, valve, Designations), vendor equipment data and drain points and reviewing hydraulics system and plot layout to ensure unit performance matches equipment specifications

Licenser: Bechtel

II. Petrochemicals and Chemicals



Phosphatic & Compound Fertilizers Complex Project 2016 – 2020



Client: El Nasr Company for Intermediate Chemicals (NCIC)

Project Description

The project aims to establish a Complex to Produce Phosphatic & Compound Fertilizers in the Industrial Zone at Ain Sokhna to achieve the self-sufficiency from Phosphatic Fertilizers needed for agricultural development Projects and to export the Surplus. The Complex consists of 9 Factories distributed over 5 Sectors as follows:



- **Sector-1:** Two plants for Concentrated Sulphuric Acid of capacity 2 X 1900 MTPD and producing 2 X 23 MW Electricity.
- **Sector-2:** Two Plant for Phosphoric Acid with commercial grades of capacity 2 x 600 MTPD and purified Phosphoric Acid of capacity 2 x 150 MTPD.
- **Sector-3:** One Plant for Water Soluble Crystalline Mono-Ammonium Phosphate (MAP) / Daio-Ammonium Phosphate (DAP) of capacity 300 MTPD.
- **Sector-4:** Two Plant for Granulated Daio-Ammonium Phosphate G-DAP of capacity 1200 MTPD and Granulated Triple Super Phosphate G-TSP of capacity 750 MTPD.
- **Sector-5:** Utilities and Common Services for the Complex and Off-Site Water channel.
- Fertilizers Storage & Port Facilities at Sokhna Port and Auxiliary Administrative & Living Facilities.

Contract Type

Fixed percentage from the project total EPC Lumpsum contract

Scope of Work

Project Management consultant (PMC) covering the review of the engineering design; follow up of each of procurement, construction supervision & commissioning / start- up to ensure that EPC contractor fulfills all the contractual obligations



Hydrogen Peroxide Plant Project

2017 - 2019

Client: El Nasr Company for Intermediate Chemicals (NCIC)

Project Description

The project aims to produce about 23,000 Ton per year (70 MTPD) which shall be used for Chemical purposes (Medicine, Cosmetics industries) and Industrial purposes (water Treatment process). The Plant consists of 9 major Areas: H₂O₂ Building Area / Utility Area / Product Dispatch Shed Area / Storage Tank Area / MCC Room / H₂ Compressor Area / Chemical Storage Area / PA Compressor Area / Cooling Tower The Main equipment for the project are: Oxidizer / Hydrogenator / Extractor / Distillation Column which will be fabricated at Vendor premises at India and will be dispatched to site as segments and to be assembled at site by Const. contractor

Contract Type

Fixed Percentage of EP contract + Percentage of Construction Contractor (for Mechanical and Electrical work) contract

Scope of Work

Construction Supervision works for Mechanical works (equipment and Tanks Fabrication and erection, Piping Fabrication and erection, Steel Structure fabrication and erection) as well (Electrical work supervision)

New Ammonia/Urea Plant PMC

2011 - 2019



Client: Egyptian Chemical Industries (KIMA)

Project Description

The project aims to build a new Ammonia /Urea complex with Ammonia production capacity of 1200 MTPD. 300 Tons of the produced Ammonia will be utilized in industrial used gas by KIMA & 900 Tons will be utilized in producing UREA.

Contract Type

Fixed percentage from the project total EPC Lumpsum contract

Scope of Work

Project Management consultant (PMC) covering the review of the engineering design; follow up each of procurement, construction supervision & commissioning / start- up to ensure that EPC contractor fulfills all the contractual obligations. The EPC main contractor is Maire Tecnimont.

Waphco Phosphoric Acid Production Plant 2017 - 2019



Client: El Wady for Phosphate Industries and Fertilizers (**WAPHCO**)

The project aims to develop a grass root Phosphoric Acid Plant to be constructed in Abu Tartour. The Initial plan is to install a 500,000 MTPY Phosphoric Acid facility along with the associated sulfuric Acid Plant and power Generation station.

Contract Type

Lumpsum for FEED and overall project management.

Scope of Work

FEED Technical Engineering Deliverables Execution for Utilities / Offsites. PMC for bidding and technical evaluation process of the EPC & finance offers. Review the pilot plant studies and process design package of licensors (Prayon/K-Tech)

New Polyethylene Plant 400,000 MT/Y 2011 - 2015



Client: The Egyptian Ethylene and Derivatives Company (**ETHYDCO**)

Project Description

The project aims to building a Polyethylene plant in Alexandria with a Total capacity of 400 KTA, Linear Low Density Polyethylene (LLDPE) and High Density Polyethylene (HDPE) Through two trains of a capacity 200 KTA each, using polymer grade ethylene as feed stock.



Licensor: UNIVATION TECHNOLOGIES LLC

Contract Type

EPC LSTK – Joint Venture Enppi / Toyo engineering Corporation

Scope of Work

Engineering, Procurement, Construction and Overall Management

Ethylene Cracker Project

2011 - 2015

Client: The Egyptian Ethylene and Derivatives Company (ETHYDCO)

Project Description

The project aims to execution of the EPC scope of work of the 460 KTA Ethylene and 20 KTA Butadiene project at Ameriya in Alexandria, Egypt.

Licensor: ABB LUMMUS, Global / BASF TEL

Contract Type

EPC LSTK – Joint Venture Enppi / Toyo engineering Corporation

Scope of Work

Engineering, Procurement, Construction and Overall Management



Ethydco Complex New Flare System

2013 - 2015

Client: The Egyptian Ethylene and Derivatives Company (ETHYDCO)

Project Description

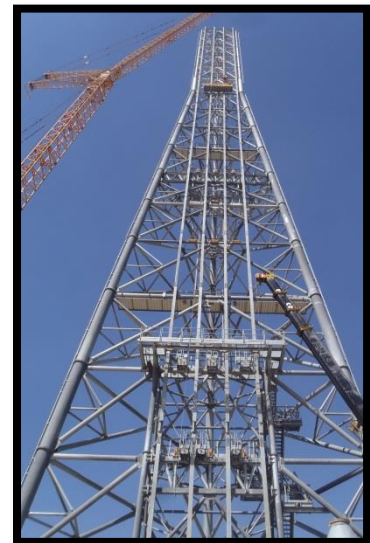
The project aims to execute a new flare system for the Ethylene Derivatives Complex in Alexandria.

Contract Type

Lump Sum for Professional Services

Scope of Work

Basic and Detailed Engineering, Procurement, Construction, Commissioning and start-up Assistance.



Polystyrene Plant (EPC Phase) 2008 - 2012



Client: Egyptian Styrenics Production Company
(E-Styrenics)

Project Description

The new 200,000 tons/year polystyrene unit produces high impact and general purpose high quality grades of polystyrene, in addition to the supporting utilities and Feed & Product storage & handling facilities.

Licensor: INEOS

Contract Type

EPC LSTK – Consortium with Petrojet (Enppi Leader)



Scope of Work

Detailed engineering, material supply, commissioning, construction supervision, start-up &, overall management as consortium leader

Damietta Methanol Project 2007 - 2009



Client: Techint / E-Methanex

Project Description

Execution of Methanol plant with production capacity of 3600 MTPD at Damietta-Egypt free zone

Contract Type

Professional services lump-sum

Scope of Work

Engineering services as S/C – Technit, Enppi main engineering activities; process engineering, mechanical, piping, civil, Electrical & Instrumentation



Project Management Services for Egyptian Polypropylene Project

2007 - 2010

Client: Egyptian Propylene & polypropylene Company (EPP)

Project Description

The petrochemical complex; 350,000 MTA of polymer grade propylene and 350,000 MTA polypropylene (PP) as well as all associated utilities and off-sites



Contract Type

Lump-sum for professional services

Scope of Work

Project Management Services on behalf of EPPC, UHDE is the EPC main contractor, Enppi scope covers all phases of engineering, procurement and construction.



Egyptian Linear Alkyl Benzene Project (ELAB)

2007 - 2009



Client: Egyptian Linear Alkyl Benzene (ELAB)

Project Description

The plant capacity is 100,000 ton per year of linear Alkyl Benzene. The main feeds for the complex are Kerosene / Jet A-1 fuel from Alexandria Petroleum Company (APC) & Ameriya Petroleum Refining Company (APRC), as well as, reformat and Hydrogen from Alexandria National Refine & Petrochemicals Company (ANRPC). **Licensor: UOP**

Contract Type: EPC LSTK

Enppi Scope of Work

(PHASE I) Professional services - license selection, basic engineering based on UOP license

(PHASE II) Professional services - detailed engineering through consortium GS E&C Leader / Enppi / Petrojet

UHDE Granulation Plant 2003 - 2005



Client: Krupp, UHDE GmbH

Project Description

The Project aims to fulfill the granulation process requirements of both Suez Fertilizer Company & Alexandria Fertilizer Company. The granulation process aims to produce 1,200 T/D Ammonia and 1,925 T/D Urea including utilities and off-site facilities.

Contract Type

Lump sum for professional services

Scope of Work

Detailed engineering & procurement Services

Lube Oil Blending Plant 1993 - 1995



Client: Misr Petroleum Company (MISR)

Project Description

The Project aimed to install Lube oil blending plant of capacity 150,000 tons/year (one shift).

Licensors: CELLIER know-how

Contract Type

EPC Turnkey, lump sum for professional services, disburseable for material supply and construction

Scope of Work

EPC Turn-key



III. Gas Production & Processing



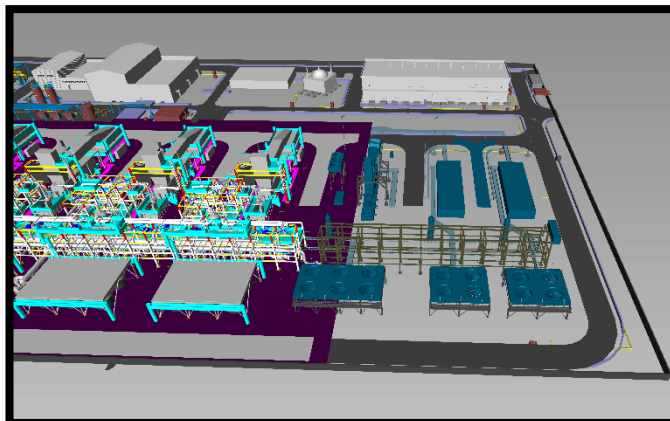
Dahshour Compression Station Units 5 & 6 Project

2018 – 2022

Client: Egyptian Natural Gas Company (GASCO)

Project Description

The project aims to extend Dahshour existing Compression Station by adding two new compressors units (5 & 6) to the existing Four Compressor Units Packages through a loan from the European Bank for Reconstruction and Development (EBRD). Unit 5 consists of a Gas Turbine Driven Compressor Train and unit 6 consists of two Electrical Motor Driven Compressors train in addition to five Waste Heat Recovery Units (W.H.R) installed at the outlet of each gas turbine.



Organic Ranking Cycle (ORC Technology) System shall be utilized to recover the heat from the exhaust of Gas Turbines to generate the necessary electricity required for driving the Electric Motors Driven Compressor and supply the electrical power needed by the compression station self-consumption.

Contract Type

Lump sum for professional services, construction supervision and pre-commissioning and dispensable for Material Supply

Scope of Work

Basic & detailed engineering, procurement services, construction supervision activities and pre-commissioning assistance

Satah Off Gas Compressor Project at ZIRKU's Island

2019 – 2022

Client: ADNOC Offshore

Project Description

A new Off Gas Compressor (OGC) and associated facilities will be installed at Zirku Satah plant to perform the function of the existing Amine Bypass Compressor in Bypass mode (unit 412). Following the implementation of the project, the existing Amine Bypass Compressor will be operated in Export Mode in parallel with the Export Gas Compressor (unit 411) to increase the export gas handling capacity at Zirku As The existing Export Gas Compressor, with a capacity 65 MMSCFD, is expected to become bottleneck beyond year 2021 to handle the forecast export gas profile.

Contract Type

EPC LS - Main Contractor

Scope of Work

Engineering, Procurement, Fabrication, Transportation, Construction, Pre-Commissioning, Commissioning, Handover, Startup and completion of Performance Test



Replacement & Segregation of Khuff Gas at Uthmaniyah Gas Plant (UGP)

2018 – 2021

Client: Saudi Aramco



Project Description

The project aims to the replacement & segregation of KHUFF Gas Piping at UGP shall replace the existing stainless-steel header and branch connection piping at the KHUFF Gas Trains that is failing due to Chloride Stress Corrosion Cracking (CI- SCC) with CI-SCC resistant material carbon steel internally clad with 3mm Alloy 825.

The project also necessitates to segregate the KHUFF Gas Trains into two independent trains which will improve operational flexibility and minimize the impact on the KSA Master Gas System.

Contract Type

EPC LSTK- Main Contractor

Scope of Work

Detailed Engineering, Procurement, Construction, Pre-commissioning and Commissioning & Startup Assistance

Zohr Development Project – Phase I

2015 - 2019



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to establish the onshore plant facilities of Zohr Development Project with a capacity of 2800 MMSCFD on several phases. The first phase targets to reach production capacity of 1400 MMSCFD of gas at a pressure of 84 barg and condensates at a daily production rate of 3500 standard barrels, in addition to high-quality Sulphur with purity up to 99.9% to be converted to solid shape for export with a daily production rate of 50 tons through a set of main production units for gas treatment, condensate separation and Sulphur production in its solid shape.



Contract Type

Lumpsum for professional services and procurement services in addition to engineering site support

Scope of Work

Detailed engineering and procurement services in addition to material management and engineering site support during the construction Phase

Zohr Development Project - Phase II (Onshore Plant Facilities) 2017 - 2020



Client: Belayim Petroleum Company (Petrobel)

Project Description

The Second phase “Ramp Up to Plateau Project” is planned to achieve Zohr Development Project target production capacity of 2800 MMSCFD of gas at a pressure of 84 barg, by adding 3 more gas trains (and provisions for a future 4th train) to the currently in progress 5 trains (EPF train + ASU 4 trains) including all required storage facilities, gas processing equipment & utilities, etc.

Contract Type

Lumpsum for professional services and procurement services in addition to engineering site support

Scope of Work

Feed, detailed engineering, procurement services in addition to engineering site support during the construction Phase



EPC works for Rosetta Sharing Facilities

2016 – 2019

Client: Burullus Gas Company

Project Description

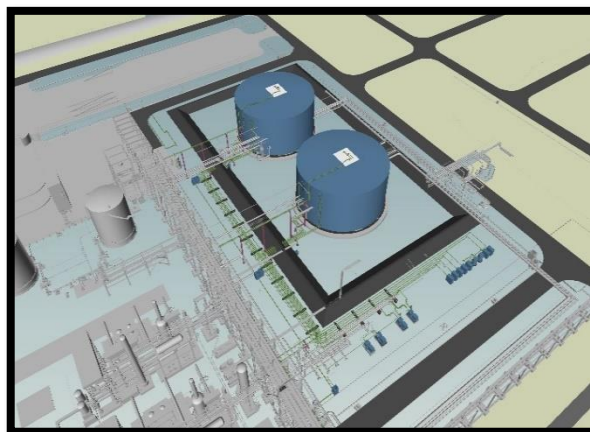
The project aims to modify the existing IDKU onshore terminal facilities and build new facilities within the existing terminal battery limits to enable the development of other gas fields adjacent to the WDDM concession area.

Contract Type

EPC Main Contractor, Lumpsum for Engineering, Procurement and Construction

Scope of Work

Engineering, procurement, construction, pre-commissioning, commissioning and start-up assistance.



Taurus Libra Onshore Modifications EPC Project

2015 - 2017



Client: Burullus Gas Company (Burullus)

Project Description

The project aims to perform the required modifications in the onshore facilities of Burullus Gas Company to be able to accommodate the additional gas production from the Taurus Libra offshore fields



Contract Type

EPC lump-sum contract for technical services, material supply and construction

Scope of Work

Detailed engineering, procurement services, construction supervision, commissioning, start-up assistance and overall project management

Assil & Karam Gas Development Project

2011 - 2016

Client: Badr Petroleum Company (Bapetco)



Project Description

Phase 1 of the project aims to produce 164 MMSCFD of gas from Karam gas field and 60 MMSCFD from Assil gas Field in the Alam El Shawish West Block Western Desert. The scope of work includes a carbon dioxide removal plant, Piping works and Modification to existing BED-3 Facilities. **Phase 2** aims to the Installation of Vapor Recovery Unit to reuse the exhausted vapors instead of venting it which will increase the efficiency of the plant and reduce the emissions and protect the environment



Contract Type

EPC LSTK for Professional Services & Construction works and Disbursable Material

Scope of Work

Detailed Engineering, Procurement, Construction Works, Electrical and Instrumentation Installation Works, Pre-commissioning, Commissioning and Start-up Assistance including Pipelines and tie-in to the wells CO2 Removal Plant BED 3 tie-ins works and modifications

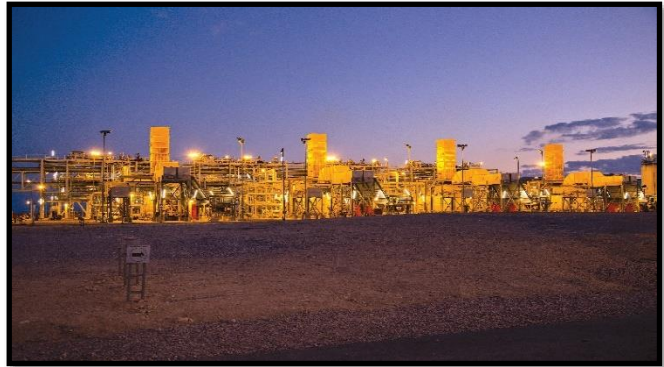
Qasr Gas Compression Project 2012 - 2015



Client: Khalda Petroleum Company (KPC) / Apache (Egypt)

Project Description

The project will add pressure boosting facilities (Turbo-Gas Compressor) and associated utilities to the existing Qasr, start-of-line (SOL) Plant located in the Egyptian Western Desert.



Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Engineering, procurement, Construction, Commissioning & Start-up and overall management

West Harbor Expansion Project 2010 - 2015 (Additional Scope 2017)



Client: Pharaonic Petroleum Company (PhPC)

Project Description

The West Harbor Expansion Project basic scope of work is to develop the existing facilities to increase its capacity to reach 585 MMSCFD.

An additional scope has been performed through an additional By-Pass line to connect PhPC plant to Petrobel Plant to secure the Gas production during PhPC plant Shutdown.



Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Engineering, Material Supply, Construction, Commissioning and Start-up and Overall Management

Atoll Development Project

2016 – 2021



Client: Pharaonic Petroleum Company (**PhPC**)

Project Description

The project aims to process the production from Atoll offshore field at the existing West Harbor onshore plant at Port Said with a daily production of 360 MMSCFD of gas and 15,000 BPD of condensate. The Project comprises the installation of new equipment and the modification and development of the existing facilities to accommodate the additional produced quantities.



The project scope also includes laying of a new 6" pipeline with a length of 6 km to deliver the separated condensate from West Harbor plant to El Gamil plant.

Contract Type

Lumpsum for professional Services ,Cost Plus for Procurement Services and reimbursable time sheets for Construction Supervision

Scope of Work

Basic & Detailed Engineering, Procurement Services & Construction Supervision

Phase VII Main Compression Onshore Project

2009 - 2012

Client: Burullus Gas Company (**Burullus**)

Project Description

The project aims to the installation of a new 5x25% gas turbine driven compression trains, for Burullus Gas Company (a joint venture with BG), with a capacity of 642 Million Standard Cubic Feet per day in the 7th phase of Idku Hub plant, to accommodate the pressure declination of the plant inlet pressure from 58 to 30 bar gauge. It also includes a new Finger type slug catcher, High Pressure Separators and all supporting utilities.



Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Basic & detailed engineering, Project Management, material supply, construction, commissioning & start-up

Yanbu Gas Plant Expansion 2006 - 2009



Client: Saudi Aramco

Project Description

The project aims to expand Yanbu NGL plant capacity from 390 to 585 MBOD. The work scope includes 195 MBOD de-Ethanizer with ancillaries and propane, refrigeration system, feed to the existing de-Propanizer and de-Butanizer columns, construction of substation with process interface room and expansion of DCS and ESD systems.



Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Detailed engineering, material supply, construction, commissioning & start-up

Extraction and Compression Project



Client: Petróleos de Venezuela, S.A. (PDVSA)

Project Description

The project aims to install a new NGL extraction plant in San Joaquin with a processing capacity of 1000 MMSCFD of natural gas.

Contract Type

Lump-sum for professional services & material supply cost plus

Scope of Work

Basic & detailed engineering & procurement services



PAGMI Project Phase I & II Gas conditioning for Domestic Market 2007 - 2013 (Different Phases)



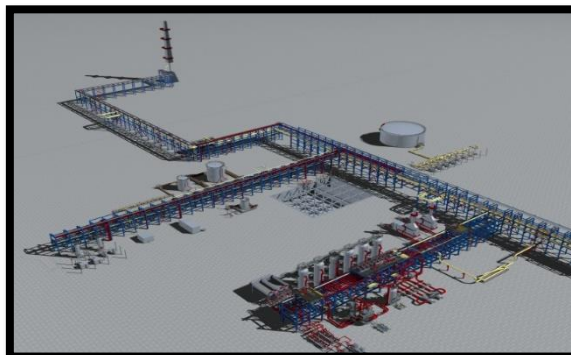
Client: Petróleos de Venezuela, S.A. (PDVSA)

Project Description

Treating & Conditioning of gas produced from the offshore area in Northeastern Venezuela to be used in the domestic market in the PDVSA Complex, located in Güiria, Estado Sucre – Venezuela.

Phase I: Conditioning of 600 MMSCFD from Dragon field (mainly Methane saturated with water), molecular sieve dehydration package and all required utilities to accomplish the domestic market requirements.

Phase II: Treatment of 1000 MMSCFD gas & 20197 STD bpd condensate. There will be an additional dehydration module (module B) parallel to module A in PAGMI phase I with a capacity of 600 MMSCFD with different outlet water content.



Contract Type

EPCM – Lump-sum for professional services, material supply cost plus and unit rates for construction works

Scope of Work

Basic engineering review, detailed engineering and procurement services for long lead equipment, construction management and overall management for phase I. Conceptual engineering and basic and detailed engineering for phase II

Khursaniyah Gas Plant

2005 - 2006

Client: Saudi Aramco / Bechtel



Project Description

The Khursaniyah gas plant includes two gas-conditioning trains, ethane and natural gas liquids recovery units process 1000 MMSCFD of natural gas, produce 550 MMSCFD sales gas, 240,000 BL/D ethane / natural gas liquids, and 1,800 metric tons / day sulfur. The complex will process natural gas from three onshore fields in the eastern province: Abu Hadriya, Fadhili, and Khursaniyah.

Contract Type

Professional services - reimbursable basis

Scope of Work

Engineering services (main contractor – Bechtel)

Ethane Recovery Project



Client: Petróleos de Venezuela, S.A. (PDVSA)

Project Description

Installation of 2200 MMSCFD gas sweetening plant to completely remove the CO₂ / H₂S and CO₂ dehydration for the natural gas upstream. The extraction facilities in ANACO and the dehydrated CO₂ (200 MMSCFD) will be used for well gas lift, in addition to retrofit of the San Joaquin extraction facilities Trains A & B to achieve 98 % ethane recovery. The scope includes provision of molecular sieve dehydration package along with its regeneration (H₂O plus CO₂ 200 MMSCFD – well gas lift.)



Contract Type

Lump sum for professional services

Scope of Work

Basic & detailed engineering for sweetening package (ISBL), detailed engineering for C₂ extraction unit (ISBL) and overall project management & coordination

Fractionation Capacity Increase at Jose (ACFJ) Project



Client: Petróleos de Venezuela, S.A. (PDVSA)

Project Description

Development of new facilities to process the increase of NGL capacity to 50000 BPD in order to cover the requirements of the 1st phase of NGL production increase. Each fractionation train will be designed to produce propane, ISO-butane, n-butane, pentanes, gasoline, and heavy ends.

Contract Type

Lump sum for professional services / material supply cost plus



Scope of SerWork

Conceptual design, basic & detailed engineering, procurement services and construction supervision

Al-Khafji Field Development – Phase 1 2006 - 2010



Client: Al-Khafji Joint Operations (KJO)

Project Description

The field development for Khafji has been developed to maintain the maximum sustainable capacity of 300,000 Barrel Oil per Day and production of 125 Million Standard Cubic Feet Per Day of Associated gases, as well as, 50 Million Standard Cubic Feet Per Day gas lift, by installation of 6 new platforms, 8500 tons total structure weight and modification of 9 existing platforms, in addition to subsea pipelines with a total length of 110 kilometer sizing 24 inches, 28 inches, 36 inches and 42 inches and laying of 59 km subsea cables.



Contract Type

Consortium (Enppi – Petrojet - PMS - Rawabi) LSTK

Scope of Work

Engineering, material supply, supervision of onshore structure fabrication & offshore laying/installation, overall management, consortium leader and commissioning & start-up

Obayied Pre-Compression Project 2006 - 2009

Client: Badr Petroleum Company (BAPETCO)

Project Description

The project aims to restore Obayied Gas Plant (OGP) compression capacity by 420 MMSCFD through the installation of 2x50% compression train facilities to upgrade OGP pressure from 25 to 86 barg.

Contract Type

EPC turnkey – Lump-sum for professional services and construction works and disburseable for material supply

Scope of Work

Detailed engineering, procurement, construction supervision, commissioning & start-up assistance and overall project management



Sapphire Gas Development Project 2003 - 2005



Client: Burullus Gas Company (**Burullus**)

Project Description

Extension to the onshore existing Scarab/Saffron and Simian/Sienna facility to treat 665 MMSCFD of natural gas produced from Sapphire offshore deepwater fields to feed the onshore Egyptian LNG Plant.



Contract Type

EPC Lump-sum turnkey – consortium

Scope of Work

Consortium leader, overall Project management, basic & detailed engineering, procurement services, construction supervision, commissioning & start-up assistance

Simian / Sienna Gas Development Project 2003 - 2005



Client: Burullus Gas Company (**Burullus**)

Project Description

Extension to the onshore existing Scarab/Saffron facility to treat 665 MMSCFD of natural gas produced from Simian / Sienna offshore deep water fields to feed the onshore Egyptian LNG Plant.



Contract Type

EPC Lump-sum turnkey – consortium

Scope of Work

Consortium leader, overall project management, basic & detailed engineering, procurement services, construction supervision, commissioning & start-up assistance

Maximization of C2 / C3 from Western Desert Gas Fields 2005 - 2012 (Different Phases)



Client: The Egyptian Natural Gas Company (**GASCO**)

Project Description

The project aims to maximize C2 & C3 recovery in the Western Desert Gas Complex and Amerya Liquefied Petroleum Gas (LPG) plant. The recovered C2 & C3 in Amerya LPG plant will be transferred to Western Desert Gas Complex through a 12 inch pipeline to be processed within Western Desert Gas Complex, where the storage and loading facilities exist.



The project was executed in **three** phases; the **1st** tends to reach a production of 600 million standard cubic feet per day, the **2nd** stage tends to reach a production of 800 million standard cubic feet per day, and finally to reach by the **3rd** phase a total production of 900 million standard cubic feet per day.

Contract Type

Lump-sum for professional services / material supply disburseable

Scope of Work

EPCM: Techno-Economic / Feasibility Study, Basic and Detailed Engineering, Procurement, Construction Supervision, Commissioning & Start Up Assistance & Overall Project Management.

Western Desert Gas Complex 1997 - 2000



Client: The Egyptian Natural Gas Company (**GASCO**)

Project Description

The project aims to the treatment of 550 million standard cubic feet per day of natural gas produced from the western desert (Obaiyed, Salam and Tarek), to produce ethane & propane mixture of downstream ethylene and polyethylene production, commercial propane, sales gas, Liquefied Petroleum Gas (LPG) and condensate.

Contract Type

Lump-sum for professional services and disburseable for material supply

Scope of Work

EPCM: Techno-Economic / Feasibility Study, Basic and Detailed Engineering, Procurement, Construction Supervision, Commissioning & Start Up Assistance & Overall Project Management.

**NGL Project at Port Said
2001 - 2004**

Client: United Gas Derivatives Company (UGDC) (BP / Eni / GASCO)

Project Description

Installation of processing facilities for 1100 MMSCFD feed of natural gases produced from El- Gamil & HA'PY fields to produce propane, LPG, and condensates (dehydration package: 1100 MMSCFD molecular sieve one train).

**Contract Type**

Lump-sum for professional services and material supply disburseable

Scope of Work

EPCM: Basic Engineering Review, Detailed Engineering and Procurement, Construction, Commissioning & Start-Up Assistance and Overall Project Management

Damietta Export Facilities**2001 - 2004**

Client: United Gas Derivatives Company (UGDC)

Project Description

Installation of Marine export facilities – cryogenic tank capacity (30,000m³) for propane storage produced from Port Said NGL process facilities

**Contract Type**

EPC turnkey – consortium (Enppi / Tractebel) – lump-sum for professional services, cost plus fees for material supply and construction work

Scope of Work

FEED & detailed engineering, procurement, construction, commissioning, & start-up assistance

Professional Services for Denise Platform 2006 - 2008



Client: Belayim Petroleum Company (**Petrobel**)
Project Description

Upgrade of TNW2 existing platform to suit Denise gas field production, transmit additional capacity to onshore via 61 KM 32" offshore pipeline and 1 KM 32" pipeline onshore and upgrade of El Gamil onshore facilities.

Contract Type

Lump sum for professional services

Scope of Work

Basic & detailed engineering and procurement services

Semman Field Development 2006 - 2008



Client: Belayim Petroleum Company (**Petrobel**)
Project Description

Installation of new Semman platform (tripod plus deck) and laying of new 18" sea line from Semman to existing Darfeel platform with total length 20 Km.

Contract Type

Professional services reimbursable

Scope of Work

Basic engineering review, detailed engineering and procurement services



Taurt Onshore Detailed Engineering 2006 - 2007



Client: Gulf of Suez Petroleum Company (**GUPCO**)
Project Description

GUPCO intends to develop Taurt field through a sub-sea production system (SPS) that consists of 7 sub-sea wells tied with a manifold with well testing capability.

Contract Type

Professional services reimbursable

Scope of Work

Detailed Engineering for onshore part of Taurt gas field development project

Offshore North Sinai Field Development ONS 2005 - 2007 - NOSPACO



Client: Nospaco

Project Description

Development of Tao offshore gas field, 60 km north of Rommana producing 130 MMSCFD of gas. The development includes offshore production wells, production platform, submarine pipeline, onshore gas treatment plant and sales gas pipeline, in addition to gas dehydration.



Contract Type

Lump-Sum for professional services and disbursable for material supply

Scope of Work

Detailed engineering for offshore topside facilities and onshore gas central processing facility, overall procurement services except pipelines and offshore structure steel, and construction supervision

Temsah – 4 Platform

2005 - 2007



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

Installation of a new platform: 4 legs, 12-slot unmanned fixed offshore production platform at 85 m water depth and a capacity of 10 MMSCMD gas plus 3000 BPD condensate.



Contract Type

Lump-sum for professional services

Scope of Work

Basic & detailed engineering and procurement services

Baltim-N Platform 2003 - 2005



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install 4 legs 9-slots tubular steel frame jacket, and a fixed offshore production platform with a capacity of 4.7 MMSCMD Gas. Gas & Condensate are directed to Baltim east existing platform through an 18" Pipeline.

Contract Type

Lump sum for professional services

Scope of Work

Basic & detailed engineering and procurement services

Barboni Platform 2003 – 2005



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install a new platform in 91 m Water Depth, Capacity of 4.4 MMSCMD. Gas is transmitted to Noras P.L.E.M. via 26" subsea pipeline.

Contract Type

Lump-sum for professional services

Scope of Work

Basic & detailed engineering and procurement services



Rashid-2 Platform Project

2003 – 2004

Client: Rashid Petroleum Company (**RASHPETCO**)



Project Description

The project aims to install 4 legged unmanned steel jacket platform located at Rosetta 49 m water depth with a capacity of 265 MMSCFD and weighing 450 tons. The gas is transmitted through a 24" subsea pipeline to the onshore terminal for final processing, along with 3 (1X70 mm²) XLPE 12/20 KV 61 KM submarine cable with optical fiber bundle

Contract Type

Lump-sum for professional services

Scope of Work

Basic & detailed engineering and procurement services



Amerya LPG Recovery Plant**Client:** Egyptian General Petroleum Corporation (EGPC)**Project Description**

The project aims to install LPG recovery plant with inlet gas production capacity of 300 MMSCFD producing 360 T/D of LPG. The scope includes dehydration: 330 MMSCFD molecular sieve one train.

Contract Type

Lump-sum for professional services and disburseable for material supply and construction work

Scope of Work

Basic & detailed engineering and procurement services, construction supervision, commissioning & start-up assistance

**Damietta LNG project****2002 - 2005****Client:** SEGAS - Union Fenosa – M.W. Kellogg – UK**Project Description**

The Project aims to install LNG plant at Damietta with production of 4.7 MMTY of LNG.

Contract Type

Lump-sum for engineering services, reimbursable for procurement services & construction supervision

Scope of Work

Detailed engineering for fractionators unit, procurement services & construction supervision

**Egyptian LNG Project****2002 – 2005****Client:** The Egyptian Liquefied Natural Gas Company (ELNG)**Project Description**

The 1st LNG project in Egypt, two trains LNG plant with a capacity of 3.6 MMTY LNG productions each, located In Idku, Beheira - Northern Coast of Egypt.

Contract Type

S/C. Lump sum for engineering services – Bechtel Houston

Scope of Work

Detailed engineering for: Inlet treating unit, buildings for power generation, LNG storage, flares, marine facilities & utilities



Rosetta Gas Field Development

1998 - 2000



Client: Rashid Petroleum Company (RASHPETCO)

Project Description

The project aims to install offshore production platform with a capacity of 275 MMSCFD. Gas is transmitted through a 24" gas subsea P/L 67 km to onshore terminal.

Contract Type

Lump sum for basic & detailed engineering reimbursable for construction supervision, commissioning and start-up assistance

Scope of Work

Detailed engineering, procurement services, construction supervision, commissioning & start-up assistance

Qantara Field Development

2000 - 2001

Client: Qantara Petroleum Company (QPC)



Project Description

Development of Qantara field with a total capacity of 8 MMSCFD to produce:

- 6 MMSCFD sales gas transferred to GASCO gas grid manifold through a 6" Pipeline 0.4 Km.
- 1000 BBL/Day transferred to the petroleum pipeline company 12" condensate pipeline through 4" pipeline to the Suez Refinery.

Contract Type

EPC Lump-sum turnkey

Scope of Work

Detailed engineering, material supply, construction, commissioning & start-up

Transgulf LPG Plant

1995 - 1999

Client: Egyptian General Petroleum Corporation (EGPC)

Project Description

Inlet gas production 130 MMSCFD - produce 960 T/D of LPG. The scope includes provision of molecular sieve dehydration package along with its regeneration 130 MMSCFD one train.

Contract Type

EPC turnkey - Lump sum for professional services and disburseable for material supply and construction works

Scope of Work

Detailed engineering, procurement services, construction supervision, commissioning and start-up assistance



Bed 2 Field Development

Client: Egyptian General Petroleum Corporation (EGPC)

Project Description

Bed 2 gas field includes a gas gathering and gas liquid separation, one gas production train, 180 MMCFD, train contains production separator, glycol dehydration unit and inter field pipelines between Bed-2 & Bed-3, in addition to third gas train in Bed-3. The scope also includes provision of TEG Dehydration package along with its regeneration.

Contract Type

Reimbursable MHR's

Scope of Work

Basic and detailed engineering as subcontractor through COMPRIMO



Bed 3 Field Development

Client: Egyptian General Petroleum Corporation (EGPC)

Project Description

Two identical gas conditioning trains, 90 MMSCFD capacity each, trains contains production separator, glycol dehydration unit, turbo-expander, LTS and sales gas compressor, the third train was added due to increase Bed-2 supply increase, oil production trains produces oil at 3 different levels with total capacity of 40,000 BBLD. The scope includes provision of Triethylene Glycol Dehydration package along with its regeneration.

Contract Type

Reimbursable MHR's

Scope of Work

Basic engineering, (subcontract of detailed engineering – International Bechtel Incorporation IBI UK) in addition to procurement services

Abu Sannan Condensate Recovery Plant

1988 - 1990

Client: General Petroleum Company (GPC)

Project Description

Gathering of 85 MMSCFD of natural gas from three gas fields (T, Y & Bed 1) through pipelines and delivered to a central processing area where condensate is recovered and spiked into GPC existing crude pipelines. The scope also includes provision of Tri-ethylene Glycol Dehydration package along with its regeneration.

Contract Type

Lump sum for professional services & disburseable for material supply and construction work reimbursable

Scope of Work

Detailed engineering, material supply, construction, commissioning & start-up



Abu Madi LPG Recovery

1989 - 1992



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The plant is designed to treat 260 MMSCFD produced at existing LTS units in order to recover LPG and condensate and deliver sales gas to users - dehydration: 260 MMSCFD Molecular Sieve.

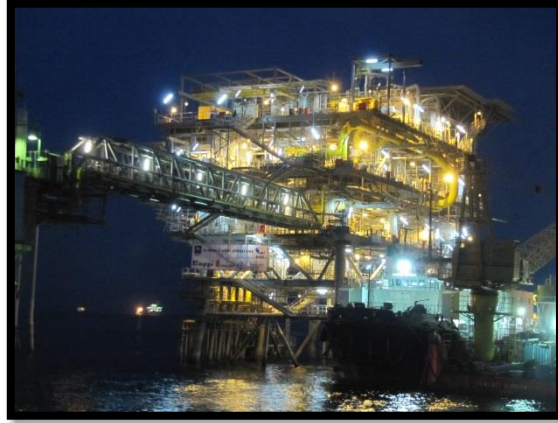
Contract Type

Reimbursable maximum ceil man-hours

Scope of Work

Project management including basic and detailed engineering review and procurement services, in addition to partial detailed engineering and survey services as subcontractor to Snamprogetti

IV. Crude Oil Production



**Debottleneck Safaniyah Onshore Plants
2019 - 2024****Client:** Saudi Aramco**Project Description**

The project aims to sustain the future oil production rate of 1300 MBCD, while increase the capacity of the produced water treatment facilities in Safaniyah Onshore Plants from 810 MBCD to 1500 MBCD maintaining the oil in water (OIW) content below 50ppmv. The Arab Heavy crude production will also be increased from 1200 to 1300 MBCD whilst meeting the specifications as given in the Aramco standards, salt content and BS&W.

Contract Type

EPC LSTK- Main Contractor

Scope of Work

Engineering, Procurement, Construction, Pre-commissioning, Commissioning & Start-up assistance.

**Produced Water Re-Injection for Sitra
2017 – 2020****Client:** Badr Petroleum Company (BAPETCO)**Project Description**

The Sitra field, located approximately 10 km south-east of the BED-3 plant, was discovered in 1982. Due to uninspiring early drilling results, the field was largely neglected until 2008 when a series of appraisal wells confirmed that the reservoir was substantially larger than initially believed.

The Phase 1 Redevelopment included an additional 15 wells by 2011, and Phase 2 followed with a further 16 wells by 2015. Recent drilling, and a renewed focus on water flood, has confirmed that there may be significant upside potential to the Sitra fields.

However, the BED-3 facility is currently liquids constrained. An exercise has been undertaken to identify & propose solutions for bottlenecks that will increase the plant oil capacity from 23 kbpd to 30 kbpd. In addition, the water rates are expected to rise sharply from 2016. This project will raise the water capacity for Sitra to 20 kbpd, and the overall BED-3 plant to 30 kbpd.

Accordingly, Bapetco intends to install a project to de bottleneck BED3 liquid processing facilities.

Contract Type

Lumpsum for Professional Services and Cost plus for Procurement Services

Scope of Work

Engineering project management, Detailed engineering, Procurement services, assistance during pre-commissioning and commissioning

**New Crude Oil Tank Farm
2019 - 2022**

Client: EGPC

Project Description

Establish new crude tank farms with total capacity of 32 million BBL by installation of new 29 tanks (1.1 million BBL capacity for each).

Contract Type

EPC LSTK - Consortium (Enppi – Petrojet)

Scope of Work

Detailed Engineering, Procurement & Construction Management

**Kalabsha Development Project
2010 - 2012**

Client: Khalda Petroleum Company (KPC)

Project Description

The project aims to develop the facilities at Kalabsha and overcome the downstream bottlenecks till the receiving point at El Hamra facilities.

- 1st Phase: To produce 20,000 BOPD (completed)
- 2nd Phase: To produce 40,000 BOPD

Contract Type

EP scope: Lump-sum for Professional services and Cost Plus for Material Supply

Scope of Work

Basic and Detailed Engineering, procurement and Material supply



Kharir Development Project 2008 - 2010



Client: Total E&P Yemen

Project Description

The project aims to the installation of crude stabilization unit with capacity of 30,000 Barrel per day. The unit includes oil separator, water bath heater, crude storage and export pumps, as well as, supporting utilities. The Project is situated in Kharir at Hadramout, 600 Kilometer from Sana'a in Yemen

Contract Type

EPC LSTK Consortium with Petrojet (Enppi Leader)

Scope of Work

Engineering, material supply, construction supervision, project management, commissioning, start-up assistance & consortium leader

Safaniya Water Disposal System Upgrade

2006 - 2009

Client: Saudi Aramco



Project Description

The project will expand Safaniya Arabian Heavy Crude and Utilities Plants to maintain the plant's crude oil demand until 2011. New facilities shall be added to overcome the expected increase of Water Content from 17% to 35% in Safaniya Crude oil by 2011; which allows for increasing maximum sustain rates & water wash from 383 to 805 MBOD:

- 3 Low Pressure Production Trap (LPPT) phase separators – 1053 MBOD separation
- 3 Formation Water Draw-off pumps – 318 MBOD
- 6 Corrugated Plate Interceptors CPI's – Total rating 364 MBOD
- Formation Water Treatment – Rated by 847 MBOD
- Additional 230 KV electric feeders, Others: Substation / Control System / Utilities



Contract Type

EPC LSTK (Main Contractor)

Scope of Work

Engineering, material supply, construction, commissioning & start-up and overall management

Al-Khafji Field Development – Phase 1**2006 - 2010****Client:** Al-Khafji Joint Operations (KJO)**Project Description**

The field development for Khafji has been developed to maintain the maximum sustainable capacity of 300,000 Barrel Oil per Day and production of 125 Million Standard Cubic Feet Per Day of Associated gases, as well as, 50 Million Standard Cubic Feet Per Day gas lift, by installation of 6 new platforms, 8500 tons total structure weight and modification of 9 existing platforms, in addition to subsea pipelines with a total length of 110 kilometer sizing 24 inches, 28 inches, 36 inches and 42 inches and laying of 59 kilometer subsea cables.

Contract Type Consortium (Enppi – Petrojet - PMS - Rawabi) LSTK**Scope of Work**

Engineering, material supply, supervision of onshore structure fabrication & offshore laying/installation, overall management, consortium leader and commissioning & start-up

**GUPCO Rehabilitation Project****2005 - 2017 (Long-Term Contract)****Client:** Gulf of Suez Petroleum Company (GUPCO)**Project Description**

The project aims to the Rehabilitation of BP offshore facilities including steel structural platforms, topside facilities and subsea pipelines. The offshore facilities consist of 9 complexes & 69 satellites (with an overall count of 119 platforms and 400 wells) and 1600 km of sub-sea pipelines. The aim of the overall rehabilitation project was to make sure that the whole system could safely operate for at least additional 25 years maintaining the best possible operating conditions and capacities. A qualitative risk based approach had been followed for the whole 119 platforms in order to evaluate the hazard of structural failure.

Expected completion date

September 2017 for phase IV (Morgan 36 Platform)

Contract Type

Professional services and cost plus for material & subcontractors

Scope of Work

EPCM: basic & detailed engineering, procurement services & construction management

Tanak / Omar Vapor Recovery / Tanak Water Injection**2001 - 2003****Client:** Al Furat Petroleum Company**Project Description**

2 associated vapor recovery units, capacity 2.7 MMSCFD & 3.5 MMSCFD ; new Water injection unit 900 cubic meter/hour at Tanak area, related pipelines 36 Km 10", 11 Km 8", 4 Km 4" and utilities.

Contract Type

Lump-sum turnkey

Scope of Work

Basic & detailed engineering, construction, procurement, material supply, commissioning & start-up

**SABAN / JARNOF - AZRAK / MALEH****1999 – 2000****Client:** Al Furat Petroleum Company**Project Description**

Upgrade the maximum production capacity of Saban/Jarnof field to 45,000 b/d and upgrade production capacity of Azraq / Maleh field from 35,000 to 55,000 b/d and installation of a new 8.4 km - 10" pipeline.

Contract Type

EPC LSTK (Main Contractor)

Scope of Work

Basic / detailed engineering, construction, procurement, material supply, commissioning & start-up

**Crude Treatment Plant (RAS BAKR)****1999 – 2001****Client:** General Petroleum Company (GPC)**Project Description**

Treatment for oil with a capacity of 50,000 B/D, including water separation and desalination units.

Contract Type

Lump-sum professional services, disburseable for material supply and construction

Scope of Work

Basic / detailed engineering, construction, procurement, material supply, commissioning & start-up and Overall Management





Meleiha Field Development

1997 - 1999

Client: Agiba Petroleum Company (**AGIBA**)

Project Description

Upgrade the existing production facilities to accommodate the additional condensate received from El Obayed Field.

Contract Type:

Lump-sum for professional services, disburseable for material supply and construction

Scope of Work

Basic / detailed engineering, construction, procurement, material supply, commissioning & start-up

Ras Qattara (El Faras) South Field Development

1996 – 1997

Client: Agiba Petroleum Company (**AGIBA**)

Project Description

Production capacity is 10,000 BBL/D. The project includes pipeline, gathering system, flow station, utilities and storage. Pipeline system includes transfer pumps, pipeline 55 Km, 6 inch to tie-in flow station with BAPETCO.

Contract Type

Lump sum for professional services, disburseable for equipment, materials and construction

Scope of Work

Basic & detailed engineering, procurement, construction supervision, commissioning, start-up and project management services



Port Fouad Gas Field Development

1994 - 1996

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

1. Offshore Facilities: Four legs (27m water depth) Unmanned platform for the installation of the wellheads, test and production separators, glycol injection facilities produced water separation, treatment and disposal pig traps.
2. Sealines: 12" mixed phase sealine (44 km) for the transportation of the recombined gas and condensate stream, 3" sealine for glycol supply.
3. Onshore Facilities: slug catcher, LTS unit, condensate stabilization unit, and floating roof tanks to store gasoline, dry gas centrifugal compressor.
4. Transportation to Port Said: 14" pipeline (20 km) for dry gas transportation.

Contract Type

Reimbursable, Lump sum

Scope of Work

Basic engineering review, engineering and procurement assistance for onshore facilities



SUMED Pipeline Throughput Achievement**1992 - 1994****Client:** Arab Petroleum Pipelines Co. (SUMED)**Project Description**

Crude pipeline throughput achievement from 80 to 117 MM T/Y consisting of three areas as follows:

- **Ain Sukhna:** Effluent treatment System (1000 M3/H) Expansion
- **Dahshour:** Two new pumping Stations (three pumps 8000 M3/H each) site facilities
- **Sidi Kreir:** three pumps 4000 M3/H each

Contract Type

EPCM Contractor: Lump-sum for professional services, disburseable for material supply and construction

Scope of Work

Basic & detailed engineering, procurement services, construction supervision, commissioning, & start-Up

V. Pipelines Experience



a. Offshore Pipelines Experience



**Baltim South West Development Project
2017 - 2019**

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install new production platform in addition to new 26" multiphase offshore pipeline with 18 Km length connecting between Baltim concession in the Mediterranean Sea and Abu-Madi plant

Contract Type

Lumpsum for Detailed Engineering & Procurement services.

Scope of Work

Detailed Engineering and Procurement services

**Al-Khafji Field Development – Phase 1
2006 - 2010**

Client: Al-Khafji Joint Operations (**KJO**)

Project Description

The field development for Khafji has been developed to maintain the maximum sustainable capacity of 300,000 BOPD and production of 125 MMSCFD of associated gases, as well as, 50 MMSCFD gas lift, by installation of 6 new platforms, 8500 tons total structure weight and modification of 9 existing platforms, in addition to subsea pipelines with a total length of 110 km sizing 24", 28", 36" and 42 " and laying of 59 km subsea cables.

Sizing / length

Total Pipelines length 110 km, sizes 24" / 28" / 36" / 42" and laying of subsea cables with a total length of 59 km

Contract Type

Consortium (Enppi – Petrojet - PMS - Rawabi) LSTK

Scope of Work

Engineering, material supply, supervision of onshore structure fabrication & offshore laying/installation, overall management, consortium leader and commissioning & start-up



Semman Field Development**2006 - 2008****Client:** Belayim Petroleum Company (**Petrobel**)**Project Description**

Installation of new Semman platform (tripod plus deck) and laying of new 18" sea line from Semman to existing Darfeel platform with a total length of 20 Km, top site facilities of Semman platform will be operated by Blown down system.

Sizing / length

18" 20 km subsea P/L

Contract Type

Lump Sum for professional services

Scope of Work

FEED review, detailed engineering and procurement services

**Professional Services for Denise Platform****2006 - 2008****Client:** Belayim Petroleum Company (**Petrobel**)**Project Description**

Upgrade of TNW2 existing platform to suit Denise gas field production, transmit additional capacity to onshore via 61 KM 32" offshore pipeline and 1 KM 32" pipeline onshore.

Sizing / length

61 KM 32" Offshore Pipeline & 1 KM 32" Onshore

Contract Type

Lump Sum for professional services

Scope of Work

FEED, detailed engineering and procurement services

**Anshoga Field Development Project****Client:** Belayim Petroleum Company (**Petrobel**)**Project Description**

Anshoga filed one tripod platform accommodate two wells & 18" sealine, 6.2km to transport produced gas to existing platform at Nouras "A" area.

Sizing / length

18" 6km

Contract Type

Lump Sum for professional services

Scope of Work

FEED, detailed engineering and procurement services



Temsah – 4 Platform

2005 – 2007

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install 4 legs, 12-slot unmanned fixed offshore production platform at 85 m water depth and capacity of 10 MMSCFD gas plus 3000 BBLD condensate.

Sizing / length

24" gas pipeline 5.5 Km, 10" condensate P/L 5.5 Km, 4" produced water 5.5 Km and 3" instrument gas 5.5 Km-offshore

Contract Type

Lump Sum for professional services

Scope of Work

FEED, detailed engineering & procurement services



Temsah N.W. Platform TNWP-2

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

New Temsah North West platform TNWP-2 and associated sealine

Sizing / length

24" 2km gas, 10" 2km condensate, 4" 2km water and 3" 2km glycol

Contract Type

Lump Sum for professional services

Scope of Work

Engineering and procurement services



Baltim-N Platform

2003 - 2005

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install 4 legs 9-slots tubular steel frame jacket, and a fixed offshore production platform with a Capacity of 4.7 MMSCMD Gas. Gas & Condensate are directed to Baltim east existing platform through an 18" Pipeline.

Sizing / length

18" gas pipeline 20km & 4" produced water 20km offshore

Contract Type

Lump Sum for professional services

Scope of Work

FEED, detailed engineering & procurement services



PF-D & RPP Development 2003 - 2005



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install sealine; new well, new offshore structure PF-D will be located on the well to deliver the production through 12" sealine to RPP platform

Sizing / length

26" gas 55km, 12" multiphase 5km and 3" 5km instrument gas

Contract Type

Lump Sum for professional services

Scope of Work

FEED review, detailed engineering & procurement services

b. Onshore Pipelines Experience



Nooros El Gamil Pipeline Project 2017 – 2020

Client: Belayim Petroleum Company (Petrobel)



Project Description

The Project aims to construct:

- **24"** gas pipeline with length **31 Km** starting from NIDOCO Well Head to Abu Madi plant passing through station NIDOCO 6, NIDOCO 11 and QARAA.
- **32"** gas pipeline with length **92 Km** from Abu Madi Plant to ELGAMIL in Portsaid.
- **26"** gas pipeline with length **27 Km** starting from West Baltim offshore platform to Abu Madi plant.

In addition to some modifications in the tie-in and piping work and connecting points to these stations.

Contract Type

Lumpsum price for the detailed engineering and procurement services

Scope of Work

Detailed engineering and procurement services

Downstream Pipeline Haradh Increment (HUG-2)

2017 – 2021

Client: Saudi Aramco



Project Description

The project aims to Safely and efficiently transport treated rich gas from HAWIYAH to UTHMANIYAH for natural Gas liquid recovery before injection into the Master Gas System (MGS).

Contract Type

EPC LSTK- Main Contractor

Scope of Work

Engineering, Procurement, Construction, Pre-commissioning and Commissioning & Startup Assistance

56 Km North Jordanian Gas pipeline project 2017- 2021



Client: Jordanian Egyptian FAJR Company

Project Description

The project aims to install 36" gas pipeline to transport natural gas from Jordanian North West border to the interconnection point to the existing Arab Gas pipeline with a total length of 56 Km in order to feed power plants and other domestic users.



Contract Type

EPC Main Contractor Lump sum

Scope of Work

Engineering, Procurement, Construction, Pre-commissioning and Commissioning & startup

Upgrade Fuel Oil Loading System Project 2016 / 2018



Client: Saudi Aramco

Project Description

The project aims to develop the fuel oil loading and unloading system at Yanbu refinery by installing two 24" and 30" pipelines with a total length of 4.4 km both thermally insulated, in addition to 42 tie-in points inside Yanbu refinery and the harbor. The project includes modifications in the various electrical substations and instrument and control systems in addition to the pipeline crossing of the Royal Commission road from warehouse storage area to the marine area.

Contract Type

Lumpsum turnkey Main Contractor for Procurement, Construction, Pre-commissioning and Commissioning & Start-up assistance.

Scope of Work

Procurement, Construction, Pre-commissioning, Commissioning & Start-up assistance

Provision of PMC for Missan Oil Export Pipeline (MOEP)

2013 - 2015

Client: PetroChina Company Limited

Project Description

Missan 42" Oil export pipeline is designed to handle 1,000,000 BOPD, and starts at the designated Halfaya junction point (meeting point of Halfaya and Buzurgan oil field branch pipelines) in Missan Governorate.

The pipeline is divided into two segments; Segment "A" extends for 121 km between Halfaya and Bin-Umr, while Segment "B" extends for 151 km between Bin-Umr and Faw terminal. The pipeline is fitted with SCADA system and 15 block valve stations along its entire route.

Contract Type

PMC – Reimbursable MHRS

Scope of Work

Project Management Consultancy services, including review Basic/Detailed Engineering, procurement and construction supervision



Crude Oil Supply from Yanbu Crude Oil Terminal (YCOT)

Client: Yanbu Aramco Sinopec Refining (YASREF)

Project Description

The project aims to supply YASREF crude oil tanks with Arab Heavy crude oil from YCOT existing plant through existing YCOT YR Pumps. The project starts at the common discharge U/G header of YCOT tanks T-1, 2 and 3 where a new interconnecting A/G pipeline will be connected to reach the Existing YR pumps. The YR pumps discharge will then be connected to a new metering skid before connecting to the interface point with SP2 inside YCOT fence.

Contract Type

EPC LSTK

Scope of Work

Basic & detailed engineering, procurement and construction



**El Nubaria / El Sadat & El Sadat / El Fayoum Pipelines
2010 - 2012****Client:** The Egyptian Natural Gas Company (GASCO)**Project Description**

The project aims to install two gas transmission pipelines and associated facilities:

- 32" Nubaria / El Sadat city - 70 Km
- 42" El Sadat / El Fayoum - 80 Km

Contract Type

Lump Sum for Professional Services, Material Supply & Subcontracts - Cost Plus

Scope of Work

Engineering & Procurement services / Material Supply

**Assiut / Aswan Gas Pipeline and
Dahshour Compression Station****2008 - 2012****Client:** Egyptian Natural Gas Holding Company (EGAS)**Project Description**

Installation of gas transmission pipelines (500 KM) from Assiut to Aswan as follow:

- PHASE I: Assiut / Gerga P/L 120 km – 32"
- PHASE II: Gerga / Aswan P/L 380 km – 30"
- PHASE III: Compression Station in Dahshour

Contract Type

Lump Sum for professional services , Material Supply
Disbursable

Scope of Work: Route selection, surveying, basic and detailed engineering, procurement Service, construction supervision and overall project management.

**Neem Export Pipeline****2006 - 2008****Client:** Greater Nile Petroleum Operating Company (GNPOC)**Project Description**

The project aims to install a 16"- 100 km long crude oil export pipeline and transport the dehydrated crude to Diffra field production facility (DFPF) – S.W. Sudan 760 Km from Khartoum.

Sizing / length

16 inch 100 KM

Contract Type

Lump Sum for professional services

Scope of Work

Basic & detailed engineering and procurement Services



Arab Gas Pipeline Phase I: Inter Sinai Gas Pipeline Project 1999 - 2001



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install 36", 193 km - gas pipeline from East Bank of Suez Canal to terminal area eastward of el Arish city, in addition to communication systems, leak detection systems & cathodic protection systems.

Sizing / length

36", 193 km

Contract Type

Lump Sum for professional services

Scope of Work

Basic engineering review, detailed engineering, procurement services, prepare and issue construction tender package and project management



Arish-Taba Gas Pipeline 2001 - 2003



Project Description

The project aims to install 36" P/L 250 KM from Arish to Taba 10 BCM / Year to export the Egyptian sales gas across the Gulf of Aqaba, in addition to executing new control building at Taba. The scope included pipeline communication systems, leak detection systems & cathodic protection systems.

Sizing / length

36", 250 km

Contract Type

Lump Sum for professional services, Material supply disburseable

Scope of Work

Arish / Taba Gas pipeline topographical survey, basic, detailed engineering & procurement services



Aqaba Thermal Power Station 2002 - 2003



Client: East Gas Company (EGC)

Project Description

The Project aims to execute a receiving and metering station for the gas transmitted from Taba in Egypt to Aqaba - Jordan along with the associated facilities

Contract Type

Lump Sum for professional services

Scope of Work

Basic engineering and commissioning & start-up assistance



Arab Gas Pipeline Phase II:

1st Stage: Aqaba to Rehab Power Station P/L 2004 - 2006



Client: Jordanian Egyptian FAJR for Natural Gas Transmission and Supply Co. Ltd. (FAJR)

Project Description

The project aims to transmit and compress Egyptian gas from Aqaba to Rehab power station by installation of Aqaba compression station, **36", 394 km** pipeline – 10 BCM/y gas, metering, and SCADA system. **Sizing / length: 36", 394 km** up to Rehab north power station

Contract Type

Lump Sum for professional Services & Construction, Material supply disburseable



Scope of Work

EPC Turn-key consortium, techno-economic study, feasibility study, review funding mechanism, set project financial scheme, conceptual design & feed, basic & detailed engineering, procurement services, material supply, construction supervision, commissioning & start up assistance, overall management and consortium leader

Arab Gas Pipeline Phase II:**2nd Stage: Rehab Power Station to Jordan/Syrian Borders P/L****2006 – 2008****Client:** Jordanian Egyptian FAJR for Natural Gas Transmission and Supply Co. Ltd. (**FAJR**)**Project Description**

The project aims to transmit natural gas from Rehab power station to Jordanian / Syrian borders through a **36"**, **30 km** pipeline – 10 BCM/y gas, metering skids, and SCADA system

Sizing / length:

36", 30 km from Rehab north power station to the Jordanian and Syrian borders.

Contract Type

Lump Sum for professional services & Construction, Material supply disburseable

Scope of Work

EPC Turn-key consortium, techno-economic study, feasibility study, review funding mechanism, set project financial scheme, conceptual design & feed, basic & detailed engineering, procurement services, material supply, construction supervision, commissioning & start up assistance, overall management & consortium leader

**Tanak / Omar Vapor Recovery****2001 - 2003****Client:** Al Furat Petroleum Company**Project Description**

Installation of 2 associated vapor recovery units with a capacity of 2.7 MMSCFD & 3.5 MMSCFD at Tanak & Omar areas; and installation of a new water injection unit 900 cubic meter/hour at Tanak area in addition to the related pipelines and utilities.

Sizing / length

- 10" 36km (Tanak Omar Gas Pipeline) Carbon Steel (API 5LX42)
- 8" 11 Km (Maleh water pipeline) Carbon Steel (API 5L X42)
- 4" 4 Km (Omar CBF / Omar GSA gas condensate pipeline) Carbon Steel (API 5L X42)

Contract Type

Main Contractor LSTK

Scope of Work

Basic & detailed engineering, construction, procurement, commissioning & Startup





QARUN PETROLEUM CO.

New Karama Pipeline

2007 - 2008**Client:** Qarun Petroleum Company (QPC)**Project Description**

Installation of a new 10" / 120 km pipeline from Karama to Qarun and installation of 2 transfer pumps at Karama area

Sizing / length

20,000 B/D (10" 120 Km crude) between Qarun & Karama

Contract Type

Lump Sum for professional services

Scope of Work

Detailed engineering services



Management Services for 3 Natural Gas Pipelines

Client: Egyptian Natural Gas Holding Company (EGAS)**Project Description**

Installation of three new natural gas pipelines:

- Taba / Sharm El Sheikh (20" 208km)
- Banisuef / Abu Qurkas (phase1) (32" 150km)
- Shukair / Hurghada (phase1) (24" 127km)

Sizing / length

20" 208 km/ 32" 150 km/ 24" 127 km

Contract Type

Reimbursable MHRs

Scope of Work

Management Services

Egyptian Natural Gas
Holding Company

Sharara Mellitah Pipeline Extension

2004 – 2005**Client:** AGIP**Project Description**

30" Crude Oil Pipeline from Sharara area to Melittah - 750 km, where the new pipeline will be executed three sections including Metering skids, Scada System.

Sizing / length

30" 750 KM

Contract Type

Lump Sum for professional services

Scope of Work

Basic & detailed engineering services

**Agip**

Sapphire Condensate Export Pipeline

2004 - 2005



Client: Burullus Gas Company (**Burullus**)

Project Description

10" O.D condensate Pipeline from Idku pumping station to Damanhur and a new 12 O.D pipeline from Damanhur to Tanta, in addition to 2 new tanks at Tanta terminal

Sizing / length

10" and 12" - total length is 100 KM

Contract Type

Main Contractor LSTK

Scope of Work

Basic & detailed engineering, procurement, construction & start-up assistance, Lump sum, including material supply and construction works

Off-fence Pipeline & Facilities

1998 - 2001



Client: Middle East Oil Tankage and Pipelines (**MIDTAP**)

Project Description

The project aims to install crude pipeline (26"12 Km), gasoline pipeline (20"18 Km), kerosene/diesel pipeline (21 Km), multi-purpose heavy products exchange pipeline (21 Km) and effluent water pipeline. The scope also includes pipeline communication systems and leak detection system.

Sizing / length

Crude P/L 26" 12Km, Gasoline P/L 20" (18 Km), Kerosene/diesel P/L (21 Km), Multi-purpose heavy products exchange P/L (21 Km), effluent water P/L 16" 6.5 KM / carbon steel material

Contract Type

Lump Sum for professional services, Material Supply Disbursable

Scope of Work

Basic & detailed engineering, procurement services/material supply and assistance for commissioning & start-up

VI. Offshore Capabilities & Experience



Zohr Field Development Project Offshore Control Platform - Phase I 2016 – 2019

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

Long-distance (200 km long) subsea tie-back of new deepwater gas wells (20 in total) in about 1100-1600 m water depth to shore at the new Zohr onshore gas processing plant (Port Said - El-Gamil) via a new 30"/26"/14" subsea pipelines & 14" infield flowlines network, and associated PLEM's/PLEM's/HIPPS and Jumpers systems, in addition to SDU's and Umbilicals systems and shallow water control platform.



Contract Type

Scope of Work

Subcontract for Installation Engineering (lifting analysis, transportation analyses and sea-fastening design on installation barge) for PLET Structures, in addition to the Detailed Engineering of the subsea pipelines/flowlines Alignments Sheets (jointly with Saipem)

Two New Platforms at NAO And HH Fields

Client: General Petroleum Company (**GPC**)
2015 – 2018



Project Description

The project aims to construct two new Offshore Platforms at NAO and HH fields with production capacity of 9,500 BPD at Gulf of Suez, The production from the new (NAO & HH) Platforms will be transferred directly to existing (AMER-8) Platform via new 6" Pipeline 8 km long.

Contract Type

EPC LSTK - Consortium (Enppi-Petrojet-PMS)



Scope of Work

Engineering, Procurement, Fabrication and Installation of Two new Offshore Platforms & offshore pipeline and Pre-Commissioning, Commissioning and Start Up works

Offshore Production Unit With Drilling Offshore Jack Up Rig 2018 - 2019



Client: PETROSALAM

Project Description

The project comprises one platform , 2 subsea pipelines & 22 onshore receivers.

Enppi has subcontracted 2 specialized subcontractors for platform installation & pipeline / receivers construction. Petrojet shall fabricate the platform (deck + jacket)

Contract Type

EPC LSTK - Consortium with petrojet

Scope of Work

Engineering, Procurement and Construction

DEKA (Denis – Kawaran) Subsea Field Development 2012 - 2014



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to develop Denis and Karawan areas by drilling 5 new wells and collecting the produced gas be PLEMs, and protecting the pipelines using HIPPS, and controlling the wells throw umbilicals, utilizing Subsea X-mas tree technology

Contract Type

Lump-sum for professional services

Scope of Work

Technical Support and issuance of technical evaluation report for project equipment suppliers



SETH Offshore Development Project 2011 - 2012

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install a new platform in water depth of 83.3m at PTB Seth gas field in the Ras El Barr Concession West Nile Delta area (Mediterranean Sea), total field production flow rate is 4.5 MMSCMD.

Contract Type

EPC LSTK – Consortium of Enppi / Petrojet / Tecnomare (Enppi Leader)

Scope of Work

Detailed engineering for topside facilities, procurement services and material supply and assistance for commissioning and startup



GUPCO Rehabilitation Project 2005 - 2017 (Long-Term Contract)

Client: Gulf of Suez Petroleum Company (GUPCO)

Project Description

The project aims to the Rehabilitation of BP offshore facilities including steel structural platforms, topside facilities and subsea pipelines. The offshore facilities consist of 9 complexes & 69 satellites (with an overall count of 119 platforms and 400 wells) and 1600 km of sub-sea pipelines. The aim of the overall rehabilitation project was to make sure that the whole system could safely operate for at least additional 25 years maintaining the best possible operating conditions and capacities. A qualitative risk based approach had been followed for the whole 119 platforms in order to evaluate the hazard of structural failure.

Expected completion date

September 2017 for phase IV (Morgan 36 Platform)

Contract Type

Professional services and cost plus for material & subcontractors

Scope of Work

EPCM: basic & detailed engineering, procurement services & construction management



Al-Khafji Field Development Phase 1, Offshore Facilities 2006 – 2010



Client: Al-Khafji Joint Operations (KJO)

Project Description

The field development for Khafji has been developed to maintain the maximum sustainable capacity of 300,000 Barrel Oil per Day and production of 125 Million Standard Cubic Feet Per Day of Associated gases, as well as, 50 Million Standard Cubic Feet Per Day gas lift, by installation of 6 new platforms, 8500 tons total structure weight and modification of 9 existing platforms, in addition to subsea pipelines with a total length of 110 kilometer sizing 24 inches, 28 inches, 36 inches and 42 inches and laying of 59 kilometer subsea cables.

Contract Type: Consortium (Enppi – Petrojet - PMS - Rawabi) LSTK

Scope of Work: Engineering, material supply, supervision of onshore structure fabrication & offshore laying/installation, overall management, consortium leader and commissioning & start-up



Hilal Re-Development Project (FEED Stage) 2010 - 2011



Client: Gulf of Suez Petroleum Company (GUPCO)

Project Description

The project aims to replace the old Hilal platform which was damaged due to a ship Collision by installing a 4 legged, nine-slot normally unmanned production platform at 80 m water depth.

Contract Type

Lump-sum for professional services

Scope of Work

Front End Engineering Design (FEED) including engineering of the platform jacket, topsides and tie-ins to subsea pipelines, long lead requests for RFQs, project cost estimate and FEED technical package.





Amer 8 Platform and related Onshore & Offshore Facilities Development Project 2008 - 2013

Client: General Petroleum Company (GPC)

Project Description

The project aims to install a 4 legged, six-slot production platform with 1100 tons lift weight at 24 m water depth. The production capacity is 10,000 BPD. The platform is designed to support two risers & two J-tubes. The platform is equipped with Bell 412 helideck.

Contract Type

EPC – Consortium (Enppi/Petrojet/PMS) – (Enppi Leader)

Scope of Work

Basic & detailed engineering, procurement services, construction, offshore installation works, commissioning & start-up and overall management.



Re-Feed for Northwest October Field 2010 –2011



Client: PETROSALAM (J.V. with Arabian Oil Company Ltd. - AOC)

Project Description

The project aims to develop of a single nine-slot platform with ESP, 10" subsea pipeline 22 km total length, and onshore receiving facilities at Gulf of Suez. Expected production rate 10,000 BOPD.

The offshore platform will be installed by using the Mobile Offshore Application Barge (MOAB) system (design concept by Overdick GMBH – Germany)

Contract Type

Lump Sum for professional services

Scope of Work

Front End Engineering Design (FEED)

Global Re-Assessment of Structures in MM & BH-PH 2009 - 2010

Client: Qatar Petroleum (QP)

Project Description

The re-assessment of the platforms structure consists of the following:

16 platforms 22 connecting bridges
3 support jackets 3 satellite platforms
54 wellhead platforms 4 flare systems

Contract Type

Lump-sum for professional services

Scope of Work

Engineering Services



Northwest October Field Development (FEED Stage) 2008 - 2009



Client: Arabian Oil Company Ltd (AOC)

Project Description

The project aims to develop a single six-slot platform at the Gulf of Suez with ESP, subsea 8" multiphase pipeline, subsea 6" water injection pipeline and onshore receiving facilities within SUCO Ras Badran existing facility. The expected production rate is 6,000 BOPD. The onshore receiving facilities will have a three-phase production separator, metering equipments and onshore control room. The separated fluids will be further treated onshore.

Contract Type

Lump-sum for professional services – reimbursable for number of specialized studies (e.g. RAM, EIA, etc...)

Scope of Work

Front End Engineering Design (FEED)



North Idku Development Project 2008 - 2010



Client: Suez Oil Company (SUCO)

Project Description

The project aims to install two new platforms and topside facilities as well as the export pipeline and flow line systems at North of Idku in addition to the required modifications at WEPCO plant in Maadi.

Contract Type

Lump-sum for professional services

Scope of Work

Engineering services for the platform structure and topside facilities including issuance of MRQ's and participation in technical evaluation.



TUNA Field Development 2008 – 2010



Client: Belayim Petroleum Company (Petrobel)

Project Description

PETROBEL intends to develop Tuna field at the Mediterranean Sea by installing a new platform (4-legged platform approx. 82 m of water) and connecting pipelines (24" subsea pipeline approx. 15 km from Tuna platform to new PLEM and eventually to the existing Denise-A SSIV and 32" P/L to onshore plant near T-NW2 existing platform) to support the production of 4.5 MMSCFD.

Contract Type

EPC LSTK– Consortium of Enppi, Technomare and Petrojet (Enppi Leader)

Scope of Work

Detailed engineering, procurement services for subsea pipeline and material supply of topside facilities



North Bardawil Development 2007 - 2008



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to upgrade the Barboni Platform (topside and structure) to accommodate the new gas production of Assad and Zaraf fields, including a new sub-sea system, umbilical, control and subsea pipeline tied from Assad & Zaraf fields to Barboni platform, 14", 25 km.

Contract Type

Lump-sum professional services

Scope of Work

Basic engineering review, detailed engineering and project management

Denise Platform 2006 – 2008



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

Upgrade of TNW2 existing platform to suit Denise gas field production, transmit additional capacity to onshore through 32" 61 Km offshore pipelines and 32" 1 KM onshore and upgrade of El Gamil onshore facilities.

Contract Type

Lump-sum for professional services

Scope of Work

Basic and detailed engineering and procurement services

Baltim-NW2 Platform 2003 - 2005



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install a 12-slots RULE platform with a capacity of 10 MMSCMD Gas. Gas, water, & condensate are transmitted onshore through 24", 10" & 4" and subsea PLEM-2km distance

Contract Type

Lump sum for professional services

Scope of Work

Basic & detailed engineering and procurement services

Rashid-2 Platform Project

2003 – 2004

Client: Rashid Petroleum Company (RASHPETCO)



Project Description

The project aims to install 4 legged unmanned steel jacket platform located at Rosetta 49 m water deep with a capacity of 265 MMSCFD and weighing 450 tons. The gas is transmitted through a 24" subsea pipeline to the onshore terminal for final processing, along with 3 (1X70 mm²) XLPE 12/20 KV 61 KM submarine cable with optical fiber bundle.

Contract Type

Lump-sum for professional services

Scope of Work

Basic & detailed engineering and procurement services

Semman Field Development

2006 - 2008

Client: Belayim Petroleum Company (Petrobel)



Project Description

Installation of new Semman platform (tripod plus deck) and laying of new 18" sea line from Semman to existing Darfeel platform with total length 20 Km.

Contract Type

Professional services reimbursable

Scope of Work

Basic engineering review, detailed engineering and procurement services



Al Hamd Platform

2004 - 2005

Client: General Petroleum Company (GPC)



Project Description

The project aims to install 1000 tons well head platform at 37 m water depth with a capacity of 12,000 BPD crude oil. The production is transmitted onshore through an 8" pipeline and submarine power cable at Ras Bakr.

Contract Type

EPC main contractor: Lump sum for professional services, construction, and offshore fabrication works disburseable for material supply

Scope of Work

Basic & detailed engineering, procurement services, construction, offshore fabrication works, commissioning, start-up, and overall management



Offshore North Sinai Field Development ONS 2005 - 2007

Client: North Sinai Petroleum Company (NOSPCO)

Project Description

Development of Tao offshore gas field, 60 km north of Rommana producing 130 MMSCFD of gas. The development includes offshore production wells, production platform, submarine pipeline, onshore gas treatment plant and sales gas pipeline, in addition to gas dehydration.

Contract Type

Lump-sum for professional services and disburseable for material supply

Scope of Work

Detailed engineering for offshore topside facilities and onshore gas central processing facility, overall procurement services except pipelines and offshore structure steel, and construction supervision



Temsah – 4 Platform

2005 - 2007

Client: Belayim Petroleum Company (Petrobel)

Project Description

The project aims to install 4 legs, 12-slot unmanned fixed offshore production platform at 85 m water depth with a capacity of 10 MMSCFD gas plus 3000 BBLD condensate.

Contract Type

Lump-sum for professional services

Scope of Work

Basic & detailed engineering and procurement services



Barboni Platform 2003 – 2005

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install a new platform at 91 m water depth, capacity of 4.4 MMSCMD. Gas is transmitted to Noras P.L.E.M. through 26" subsea pipeline.

Contract Type

Lump-sum for professional services

Scope of Work

Basic & detailed engineering and procurement services

Baltim-N Platform

2003 - 2005

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install 4 legs 9-slots tubular steel frame jacket, and a fixed offshore production platform with a Capacity of 4.7 MMSCMD Gas. Gas & condensate are directed to Baltim east existing platform through an 18" Pipeline.

Contract Type

Lump sum for professional services

Scope of Work

Basic & detailed engineering and procurement services

Simian / Sienna Control Platform

2002 - 2004

Client: Burullus Gas Company (**Burullus**)

Project Description

Development of the Simian / Sienna field through deep water subsea facilities, tied back to the existing Scarab / Saffron offshore pipeline system - control platform – upgrading / modification onshore gas plant facilities.

Contract Type

Lump-sum (Subcontract services to Technip)

Scope of Work

Engineering for the platform structure and utilities, in addition to platform control system



West Delta Deep Marine Concession Scarab / Saffron Development Project 2000 - 2003



Client: Burullus Gas Company (Burullus)

Project Description

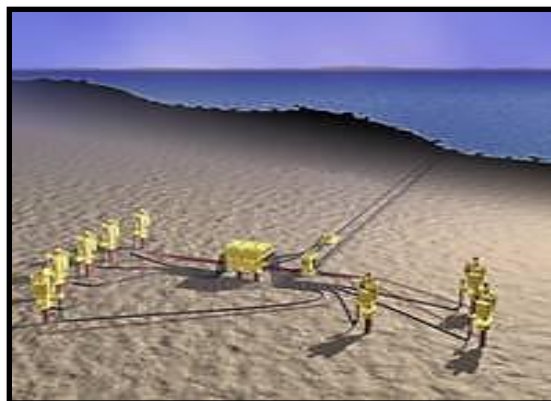
Development of the deep marine Scarab / Saffron field located 90 km offshore the West Delta Coast to produce 600 MMSCFD of gas. The production is transmitted through two P/L systems to onshore long distance subsea tieback.

Contract Type

Reimbursable man-hours

Scope of Work

FEED Design & Detailed Engineering, Procurement, Construction, Commissioning & Start-Up.



West Akhen Field Development

2001 – 2003

Client: Gulf of Suez Petroleum Company (GUPCO)

Project Description

The project aims to install a 6-slot 4-pile fixed offshore platform at 82m water depth in the Mediterranean Sea with one full deck producing 80 MMSCFD gas plus 4500 B/D condensate and installation of 3" glycol, 6" condensate, and 14" gas subsea pipelines connecting West Akhen.

Contract Type

Lump-sum for professional services

Scope of Work

Detailed engineering, construction support engineering and installation analysis for the offshore platform structure (Jacket – with launching configuration – deck, piles and appurtenances) plus three subsea pipelines



Rosetta Field Development

1998 - 2000

Client: Rashid Petroleum Company (RASHPETCO)

Project Description

The project aims to install offshore production platform with a capacity of 275 MMSCFD. Gas is transmitted through a 24" gas subsea P/L 67 km to onshore terminal.

Contract Type

Lump-sum for basic & detailed engineering, reimbursable for construction supervision, commissioning & start-up assistance

Scope of Work

Basic & detailed engineering, procurement services, construction supervision, commissioning & start-up assistance



North July Offshore Field Development

1999 – 2000

Client: Gulf of Suez Petroleum Company (GUPCO)

Project Description

Offshore facilities to develop north July field comprising a Tripod-3 Slots Platform at 52m water depth initially including Christmas trees, well head control panel, production & test manifold. The NJ-10 & GUPCO offshore facilities shall be connected through an 8", 9 km pipeline.

GUPCO offshore J-10 shall be modified to include the three-phase separator, gas & liquid metering equipped with common prover to accommodate the production of Fanpetco NJ-1.

Contract Type

Reimbursable for professional services

Scope of Work

Basic and detailed engineering work for FANPETCO facilities; including offshore platform and pipeline. In addition to engineering of tie-ins to GUPCO facilities on J-10, and study to investigate adequacy of the J-10 flare and blow down system to accommodate the new FANPECTCO production.



A/Q Phase II Topsides Facilities

1990 – 1992

Client: Western Desert Operating Petroleum Company (WEPCO)

Currently (Abu Qir Petroleum Company)

Project Description

The projects aims to install a new production platform (six legged) at 35m water depth. The platform is equipped with process and utility facilities for 150 MMSCFD and connected to the existing platform through a 45m bridge.

Contract Type

Lump-sum turnkey

Scope of Work

EPC turnkey, detailed engineering of topsides, structural modifications of existing platform, weight control, procurement services, load out of fully equipped deck, commissioning & start-up





A/Q Offshore Gas Compression (Utility Modules) 1993 - 1995

Client: Western Desert Operating Petroleum Company (WEPCO)
Currently (Abu Qir Petroleum Company)

Project Description

The project aims to install two new gas compression platforms A/Q P1-C and A/Q P2-C. The platforms are connected through a bridge to the existing P1 & P2 platforms at 20m water depth. The platforms support two turbo compressor trains and associated process & utility topside facilities.



Contract Type

Lump-sum

Scope of Work

Detailed engineering of topsides, structural modifications and procurement services for the utility / process modules

North AMER Offshore Platform 1986 - 1987



Client: General Petroleum Company (GPC)

Project Description Two offshore wellhead platforms at water depths 62m and 64m; topside includes work over rig, suction pump, pig launcher manifold, X-MAS trees and power generation package

Contract Type

Lump-sum for professional services

Scope of Work

Basic & detailed engineering of jackets, deck and topsides, in addition to sea bed survey and soil investigation



Repair of Belayim Offshore Installations - 3 Phases Project 1989 - 1992



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

1st Phase: Data bank generation and cathodic protection retrofitting for 40 of Belayim offshore installations, repair intervention of 13 installations, including 3 platforms and 10 templates.

2nd Phase: Structural re-qualification and repair intervention for 7 installations including 3 platforms, 1 cluster and 3 templates.

3rd Phase: Structural re-qualification and repair intervention of 23 installations including 5 platforms, 4 clusters and 13 templates.

Contract Type

Reimbursable for phase 1 and Lump-sum for phase 2 & 3

Scope of Work

- Detailed engineering including structural analysis assessment, repair works, long term inspection plan, maintenance and repair program, tender package preparation, technical bid evaluation and construction supervision.
- Repair work interventions budgetary cost estimate.



Transgulf Gas Utilization Project (Phase I)

1991 - 1994



Client: Egyptian General Petroleum Corporation (**EGPC**)

Project Description

The project aims at transporting and processing 107 MMSCFD of associated gases at GUPCO Ras Bakr processing unit. The gases are collected from Belayim fields in Sinai and GUPCO offshore October field.

Contract Type

Lump-sum turnkey for services, reimbursable for materials and construction

Scope of Work

Techno-economic study, basic and detailed engineering for onshore facilities and 12" diameter sub-sea pipeline, procurement services, construction supervision, overall management commissioning & start-up



SIDKY "B" Platform Topside Facilities

1992 - 1993

Client: Gulf of Suez Petroleum Company (GUPCO)**Project Description**

Topside facilities to produce 10 000 b/d of crude oil and 24 MMSCFD of associated gases

Contract Type

Lump-sum

Scope of Work

Detailed engineering for topsides including:

- Supply of material & equipment
- Commissioning & start-up assistance

**Belayim Incremental Recovery**

1991 - 1993

Client: Belayim Petroleum Company (Petrobel)**Project Description**

Installation of 2 unmanned platforms mwp-3 & mwp-4 at 34 & 37 m water depths

The project also included:

- 8" production subsea pipeline
- 6" test subsea pipeline
- Two water injection subsea pipeline (8" & 4")
- Two submarine electrical cables from mwp-4 to mwp-3

Contract Type

Lump-sum

Scope of Work

Basic & detailed engineering of topsides, including procurement assistance for mwp-3 & mwp-4 platforms



Ras Ghara Production Facilities (Phase I, II) 1990 - 1992

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

Ras Ghara oil field development to produce 10 000 BSD, comprising:

- Offshore platform & topside facilities
- On/offshore launching / receiving traps
- Onshore production facilities, utilities & power generation
- 104 km onshore transfer pipeline to Petreco area
- 6"/10" 3 km sub-sea pipeline - Tie-ins to the existing storage facilities

Contract Type

Reimbursable

Scope of Work

- Techno Economic Study (Phase I)
- Project Management (Phase II)
- Inspection Services (Phase II)



Gemsa Crude Field Development 1990 - 1991

Client: Badr Petroleum Company (**Bapetco**)

Project Description

- Installation of prefabricated deck on the existing piles
- 8", 12 km subsea pipelines

Contract Type

Reimbursable

Scope of Work

Basic & detailed engineering of jacket, decks, topsides, and subsea pipelines



A/Q Phase II Offshore Gas Production

1983 - 1985



Client: Western Desert Operating Petroleum Company (**WEPCO**)
Currently (Abu Qir Petroleum Company)



Project Description

The project aims to install a 6 legged production platform (P2) at 20m water depth. The platform production capacity is 125 MMSCFD and transmitted through a 20 km subsea pipeline.

Contract Type

Reimbursable

Scope of Work

Project management including construction management, supervision, and start-up services

Belayim Topside Facilities

1984 - 1985



Client: Belayim Petroleum Company (**Petrobel**)

Project Description

Topside facilities on four new installed platforms & modifications of the topside of four existing platforms to upgrade oil production to 200 000 B/D and separate 60 MMSCFD of associated gas.

Contract Type

Reimbursable

Scope of Work

Project management including construction management and supervision, engineering review, commissioning, and start-up assistance



VII. E&I Installation



Debottleneck Safaniyah Onshore Plants 2019 - 2024



Client: Saudi Aramco

Project Description

The project aims to sustain the future oil production rate of 1300 MBCD, while increase the capacity of the produced water treatment facilities in Safaniyah Onshore Plants from 810 MBCD to 1500 MBCD maintaining the oil in water (OIW) content below 50ppmv. The Arab Heavy crude production will also be increased from 1200 to 1300 MBCD whilst meeting the specifications as given in the Aramco standards, salt content and BS&W.

Contract Type

EPC LSTK- Main Contractor

Scope of Work

Engineering, Procurement, Construction, Pre-commissioning, Commissioning & Start-up assistance.

Yanbu Tank Farm (E&I Installation Works) 2013 – 2015



Client: Yanbu Aramco Sinopec Refining Company (**YASREF**)

Project Description

The Project aims to install a new refinery with capacity of 400,000 Barrel/Day. The Tank farm package of Yanbu export refinery includes 33 storage tanks with different diameters (12.5 to 120 mt), sizing up to 1.2 Million Barrels and 13 spherical tanks 60,000 barrels each.

Project in Figures:

- **Total cable lengths: 1,750,000 meters**
- **Total cable trays: 33,792 meters**
- **Total conduits and tubing: 50,420 meters**
- **Number of lighting poles / fixtures: 1,890**
- **Number of power transformers: 36**
- **Number of LV & MV switch gear: 183 cubicle**
- **Number of LV panel board: 19**
- **Number of instrument: 952**

Contract Type

EPC LSTK – Enppi Main Contractor

Scope of Work

Enppi: Engineering, material supply, construction (subcontracted to several Saudi and Egyptian companies), commissioning & start-up and overall project management

E&I Scope**▪ Electrical works**

Installation of medium voltage switchgear, low voltage switchgear/MCC, UPS, DC Supply, power transformers, power distribution panels, lighting & small system, earthing system, cable trays, laying cables, termination, testing & pre-commissioning, Assistance during Commissioning & Start-Up.

▪ Instrument works

Installation of control panels, FFB, DCS, ESD, System / Marshaling panels, field instruments, tubing, calibration, air network, laying cables, cable trays, conduits, termination, installation of fire & gas system, loop checks, testing & pre-commissioning, Assistance during Commissioning & Start-Up.

**MTBE Supply Facilities (E&I Installation Works)
2015 / 2016**

Client: Yanbu Aramco Sinopec Refining Company (YASREF)

Project Description

The project aims to build two new tanks for the storage of MTBE “Methyl Tertiary Butyl Ether” product complete with all the relevant utilities and tie- in with existing facilities.

Project in Figures:

- **Total cable length: 93,725 meters**
- **Total cable trays: 6,630 meters**
- **Total conduits and tubing: 1553 meters**
- **Number of lighting poles / fixtures: 128**
- **Number of instrument: 129**

Contract Type

EPC LSTK

Scope of Work

EPC Main Contractor for basic & detailed Engineering, construction and pre commissioning

E&I Scope**▪ Electrical works**

Installation of cathodic protection system, lighting & small power system, earthing system, cable trays, conduits, laying cables, termination, testing & pre-commissioning, Assistance during Commissioning & Start-Up.

▪ Instrument works

Installation of junction boxes, field instruments, tubing, calibration, air network, laying cables, termination, cable trays, conduits, installation of fire & gas system, loop checks, installation of telecommunication system, testing & pre-commissioning, Assistance during Commissioning & Start-Up.

YASREF Warehouse Facilities (E&I Installation Works) 2016 / 2016



Client: Yanbu Aramco Sinopec Refining Company (**YASREF**)

Project Description

The warehouse facility is designed to construct 8000 m2 storage area in two different buildings for YASREF material storage purpose. The overall facility plot size is 20,000 m2. The facility consist the following buildings and its required utilities:

- Warehouse-I (3250 m2)
- Warehouse-II (4595 m2)
- Security Guard House and Security Fencing
- Access Roads to warehouse
- Main and Emergency Gates
- Utilities (Power, Potable Water System, Fire Water System, Sewage and Septic Tank)
- Open Yards

Project in Figures:

- **Total cable lengths: 32,000 meters**
- **Total cable trays: 1,400 meters**
- **Total conduits and tubing: 8,500 meters**
- **Number of lighting poles / fixtures: 372**
- **Number of power transformers: 8**
- **Number of LV & MV switch gear: 4 cubicle**
- **Number of LV panel board: 13**

Contract Type

EPC LSTK

Scope of Work

Engineering, material supply, construction and overall management

E&I Scope

▪ **Electrical works**

Installation of MV switchgear, Pad mounted power transformer, dry type power transformer, LV MCC, lighting & small power system, earthing & lightning system, cable trays, conduits, laying cables, termination, testing & pre-commissioning, Assistance during Commissioning & Start-Up.

▪ **Instrument works**

Installation of fire & gas system, laying cables, cable trays, conduits, termination, installation of fire & gas system, installation of telecommunication system, testing & pre-commissioning, Assistance During Commissioning & Start-Up.

Client: Saudi Aramco

Project Description

Saudi Aramco started to rehabilitate, restore and integrate Al Mu'ajjiz Terminal (AMT) with Yanbu Terminals in order to accommodate the E-W pipeline expansion (7,000 MBD capacity), facilitate Arabian heavy crude oil supply to local refineries (Yasref, Jazan and Jeddah refineries).

Project in Figures

- **Total cable lengths: 771,953 meters**
- **Total cable trays: 14,843 meters**
- **Total conduits and tubing: 30,000 meters**
- **Number of lighting poles / fixtures: 3,061**
- **Number of instrument: 445**
- **Number of GIS switchgears: 1**
- **Number of power transformers: 60**
- **Number of LV switchgears: 4**
- **Number of MV switchgears: 5**
- **Number of panel boards: 62**

Contract Type

EPC LSTK (Main Contractor)

Scope of Work

Detailed engineering, material supply, construction, commissioning & start-up

E&I Scope

- **Electrical works**
 - i. Demolishing of Existing Synchronizing Panel, Existing MV Switchgears, LV/MCC switch gear, lighting panels, power transformer.
 - ii. Installation of medium voltage switchgear, low voltage switchgear/MCC, UPS, DC Supply, power transformers, power distribution panels, lighting & small power system, earthing system, cable trays, conduits, laying cables, installation of PSA system, termination, testing & pre-commissioning, Assistance during Commissioning & Start-Up.
- **Instrument works**
 - i. Demolishing of PAS cabinets, cables, marshaling cabinets, cable trays, field instruments.
 - ii. Installation of control panels, PAS System / Marshaling panels, field instrument, tubing, air network, laying cables, termination, cable trays, conduits, installation of fire & gas system, installation of telecommunication system, loop checks, testing & pre-commissioning, Assistance during Commissioning & Start-Up

Yanbu Export Refinery Project Tank Farm Package – SP1 2010 - 2014



Client: Yanbu Aramco Sinopec Refining (YASREF)

Project Description

The Project aims to install a new refinery with capacity of 400,000 Barrel/Day. The Tank farm package of Yanbu export refinery includes 33 storage tanks with different diameters (12.5 to 120 mt), sizing up to 1.2 Million Barrels and 13 spherical tanks 60,000 barrels each:

Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Enppi: Engineering, material supply, construction (subcontracted to several Saudi and Egyptian companies), commissioning & start-up and overall project management

Expansion of Hout Crude Onshore Production Facility 2006 - 2009



Client: Al-Khafji Joint Operations (KJO)

Project Description

Expand storage capacity at Hout onshore production facility by installation of additional 4 storage tanks (500 to 80,000 m3 capacity floating and fixed roof), in addition to booster pumps, instrumentation, piping, fire fighting and a new electrical substation.

Contract Type

EPC LSTK Consortium with Petrojet – (Enppi Leader)



Scope of Work

Engineering, Material Supply, Construction, Project Management, Commissioning and Start-Up Assistance.

**WEPCO, New Automation Control System (DCS) at El-Hamra terminal
2019-2021****Client:** Western Desert Operating Company (WEPCO)**Project Description**

Execution of automation and control system for El-hamra export terminal at mediterranean sea including providing El- Hamra terminal with a distributed control system (DCS), automatic tank gauging system (ATG) Crude oil custody metering system, UPS System, fire & gas and telecommunication systems.

Project in figures

- LV Cables: 62000 m
- Instrument Cables: 124000 m
- Fiber optic Cables: 10000 m
- Total cable trays: 21500 m
- Total conduits: 3500 m
- Total panels: 23
- UPS: 1
- LV Switchrack: 11
- Junction boxes:40
- Instruments: 93
- F&G Instruments: 96
- Control Loops: 1460

**Enppi E&I scope of work**

Perform installations, precommissioning and assistance during commissioning and start up of electrical, instrumentation, Fire detection, Firefighting and telecommunication systems along with execution of civil and mechanical works associated with the E&I works such as excavation and back filling for cable trenches, concrete pouring for pedestals and cable tray supports, etc...

ASORC Naphta Complex Project 2014 – 2019

Client: Assiut Oil Refining Company (ASORC)

Project Description

The project aims to increase the production of gasoline and its petroleum products to satisfy the increasing local market demand by building a new naphta complex within ASORC premises.

ASORC NAPHTHA COMPLEX includes two distinct Projects:

1. PROCESS AREA OF ASORC NAPHTHA COMPLEX (NHT, CCR, Isomerization)
2. UTILITIES AND OFFSITE OF ASORC NAPHTHA COMPLEX

Contract Type

EPCC Turnkey including Detailed Engineering, Procurement, Construction, Pre-commissioning, Training, Commissioning, Start-up & Performance Testing.

Enppi E&I Scope of Work

Perform installations, precommissioning and assistance during commissioning and start up of electrical, instrumentation, Fire detection, Firefighting and telecommunication systems.

PETRECO Treatment Plant New DCS/ESD/PSD System Implementation 2012-2019

Client: Belayim Petroleum Company (PETROBEL)

Project Description

The Project aims to upgrade the existing single loop controllers by new DCS/ESD System in addition to the upgrading of 6 exiting heaters by replacing the fuel gas system, revamping for ignition system with the relevant Burner management system.

Project in Figures:

- Excavation: 500 m³
- Concrete work: 430 m³
- Installation of Fuel Gas skid: 6 EA (6 ton each)
- Total cables: 110,000 meters
- Number of instruments/ Fire & Gas devices: 620 Each
- Signals to be migrated: 1420 Each
- Total cable trays: 2600 m

Enppi E&I Scope of Work

Performing the construction of BMS building and Extension for existing control room building. Scope also includes mechanical, electrical, instrumentation, fire detection works, electromechanical, Pre-commissioning, commissioning and signals migration from existing to new control/shutdown system.



Qasr Gas Compression Project

2012 - 2015

Client: Khalda Petroleum Company (KPC) / Apache (Egypt)

Project Description

The project will add pressure boosting facilities (Turbo-Gas Compressor) and associated utilities to the existing Qasr, start-of-line (SOL) Plant located in the Egyptian Western Desert.

Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Engineering, procurement, Construction, Commissioning & Start-up and overall management



West Harbor Expansion Project

2010 - 2015 (Additional Scope 2017)

Client: Pharaonic Petroleum Company (PhPC)

Project Description

The West Harbor Expansion Project basic scope of work is to develop the existing facilities to increase its capacity to reach 585 MMSCFD.

An additional scope has been performed through an additional By-Pass line to connect PhPC plant to Petrobel Plant to secure the Gas production during PhPC plant Shutdown.

Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Engineering, Material Supply, Construction, Commissioning and Start-up and Overall Management



Expansion of SUMED Storage Capacity (6 Tanks)

2011 - 2013

Client: Arab Petroleum Pipelines Co. (SUMED)

Project Description

In order to increase the storage capacity at Ain Sukhna Terminal, SUMED intends to build six new floating roof tanks, each of approximately 1.1 million barrel (175,000 m³) of net working capacity, 110 m diameter which shall be located adjacent to the existing tank farm and connected to it.

Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Detailed engineering, material supply, construction, commissioning & start-up



ERC Refinery Project (E&I Construction Works)**2015 /2017****Client:** Egyptian Refining Comany (ERC)**Project Description**

The Project aims to produce 4 million tons of different refined products per year including 2.3 million tons of diesel fuel to secure as 60% of domestic consumption in accordance with current rates.

Project in Figures:**For Electrical:**

- Total cable lengths: 670000 meters.
- Total cable trays: 40000 meters.
- Total conduits and tubing: 62500 meters.
- Number of lighting poles and fixtures: 3260.
- Indoor lighting fixtures: 1950.
- 66 KV GIS system: 9 BAYS.
- 33 KV switch gear: 43 cubicle.
- 6.6 KV switch gear: 104 cubicle.
- 0.4 KV switch gear: 108 cubicle.
- 220/33 KV GIS transformer: 2.
- 6.6/0.42KV transformer 1.6 MVA: 3 .
- 33/11.5KV transformer 12.5 MVA: 3.
- 33/11.5KV transformer 10 MVA: 1.
- 33/6.9KV transformer 25MVA: 2.
- 6.6/0.42KV transformer 2.5 MVA: 12.
- 6.6/0.42KV transformer 1.25 MVA: 3.
- 33/11.5KV transformer 15 MVA: 3.
- 33/6.9KV transformer 17 MVA: 2.
- 6.6/0.42KV transformer 2 MVA: 1.
- Indoor LV panel board: 40.
- AC UPS: 6.
- Total number of anodes: 97.
- Neutral earth resistor (NER): 11.

For Instrumentation, Fire & Telecom:

- Number of instrument: 6000.
- Total conduits and tubing: 22500 meters.
- Total cable lengths: 830,500 meters.
- Steam tracing / Air piping 10000 Dinch.
- Total number of control loops: 8,800.

Contract Type

Unit Rate

Scope of Services

Enppi E&I installation are performing the installation of electrical, instrumentation & control systems, fire alarm & firefighting, Cathodic Protection, all electrical substations and control rooms in addition to pre-commissioning, commissioning and start-up assistance.

E&I Scope

▪ **Electrical works**

Installation of GIS system, GIS transformers, medium voltage switchgear, low voltage switchgear/MCC, UPS, DC Supply, power transformers, power distribution panels, lighting & small power system, earthing system, cable trays, conduits, laying cables, termination, installation of heat tracing system, cathodic protection system, testing & pre-commissioning, Assistance during commissioning & start-up.

▪ **Instrument works**

Installation of control panels, DCS, ESD, System / Marshaling panels, field instruments, tubing, calibration, air network, laying cables, cable trays, conduits, termination, installation of fire & gas system, Telecommunication system, loop checks, testing & pre commissioning, Assistance during commissioning & start-up.

VIII. Utilities Experience



Water Disposal System Refurbishment at Safaniyah**2019 - 2021****Client:** Saudi Aramco**Project Description**

The Project aims to resolve performance issue related to gravity flow between existing CPI & DGF by increasing the performance through Pressurizing the CPIs and DGFs using motive fuel gas.

Contract Type

EPC LSTK - Main Contractor

Scope of Work

Engineering, Procurement, Construction, Pre-commissioning, Commissioning & Start-up assistance.

Steam Turbine Generator at Shedgum Gas Plant**2018 - 2021****Client:** Saudi Aramco**Project Description**

Install a complete Steam Turbine Generator Package with all required auxiliaries to utilize the excess HP and LP steam to generate approximately 84 MW of power from the excess steam. The project will also install an Air Compressor Package to supply the additional air requirements for the STG package.

Contract Type

EPC LSTK - Main Contractor

Scope of Work

FEED Verification, Detailed Engineering, Procurement, Construction, and Pre-commissioning, in addition to preparation of As-built drawings as well as providing commissioning and start-up assistance activities.

South Area Safety Facilities**2018 - 2022****Client:** Al Khafji Joint Operations (KJO)**Project Description****Package 1: Replacement of Old Fire Fighting Systems at South Area (RFFSSA)**

Complete Replacement of the old Fire Fighting Systems at South Area Facilities (Onshore production facilities) of Khafji with a New Systems to achieve and satisfy the Fire Fighting requirements of its current and future operations

Package 2: South Area Fire Station (SAFS)

New Fire Station building with relevant support facilities, new safety management system and Upgrade of existing Seven (7) Control Rooms to interface with the new safety management system at the new South Area Fire Station.

Package 3: Upgrade of HVAC and Installation of Safety System for Sour Gas Dispersion (UHS)

Upgrade the HVAC Systems, safety alarming & gas detection systems.

Contract Type

EPC LSTK- Main Contractor

Scope of Work

Engineering, procurement, fabrication, transportation and customs clearance, construction, pre-commissioning, mechanical completion, start-up / commissioning, performance testing / acceptance

Yanbu South Terminal Project - Rehabilitation of Onshore Facilities Project**2016 - 2020****Client:** Saudi Aramco**Project Description**

The project aims to develop and rehabilitate onshore facilities and the maritime berth for Yanbu South Terminal (YST), formerly known as (Al-Mu'ajiz Terminal) to facilitate receiving & Storage of Arabian light & heavy crude oil by the local refineries and export it to international markets (phase I). An additional Scope of work was awarded for a new waste water treatment & disposal system as an amendment to the existing contract which includes the design, supply, and installation of a new waste water treatment system for de-watering of the existing crude tanks (phase I) where the treated water will be disposed through a 17 Km buried RTR pipeline to two new evaporation ponds (phase II).

Contract Type

EPC LSTK Main Contractor

Scope of Work

Detailed Engineering, Material Supply, Construction, Pre-commissioning and Commissioning & Startup

Sulfate Removal Facilities at Aindar and Fazran**2018 – 2021****Client:** Saudi Aramco**Project Description**

The Project aims to process and deliver 435 MBD of low sulfate water to injection headers in ANDR and FZRN reservoirs, using 580 MBD (maximum) sea water through 36 inch intake pipeline approx. 700 meter, 145 MBD of reject water will be returned to QUAD1 Pipeline thru 16 inch intake pipeline approx. 700 meter. Low sulfate water will be required to maintain reservoir pressure.

Contract Type

EPC LSTK- Main Contractor

Scope of Work

Engineering, Procurement, Construction, Pre-commissioning and Commissioning & Startup Assistance

Upgrade Desalinated Water Treatment at Safaniyah Plant**2018 - 2021****Client:** Saudi Aramco**Project Description**

The Project aims to "Meet high demand of desalinated water in Safaniyah plant of 1,610 GPM by installing a new Reverse Osmosis plant (RO) including three Packages units, to replace the existing plant to minimize SONPD's dependence on Tanajib Reverse Osmosis plant.; the project includes upgrading of the existing Tanajib -Safaniyah pipeline to be Bi-directional.

Contract Type

EPC LSTK- Main Contractor

Scope of Work

FEED Verification, Detailed Engineering, Procurement, construction and Pre-commissioning and start-up assistance activities

**Upgrading Existing Industrial Waste Water Treatment System
2018 - 2020****Client:** Nasr Petroleum Company- (NPC)**Project Description**

The project aims to upgrade the industrial waste water treatment system in order to have the treated water complying with the Egyptian Environmental Laws and regulations for disposal of the industrial to sea water.

Contract Type

Lumpsum price for Professional Services and cost plus for material supply

Scope of Work

Engineering & Procurement Services.

Yanbu Marine Terminal Revamp Project (YMT)**Client:** Yanbu Aramco Sinopec Refining (YASREF)**Project Description**

The project aims to rehabilitate the Metering stations and the fire detection and firefighting networks for the Products export facilities of Yanbu Marine Terminal owned by Saudi Aramco.

Contract Type

EPC LSTK

Scope of Services

- Engineering, Procurement and Construction required for the replacement of the Motor Operated Valves and The Low Voltage Panel Boards.
- Engineering and Procurement for the material required to rehabilitate the fire detection and firefighting Networks in addition to the fire water pumps and chlorination units.

**YMT – Yanbu Marine Terminal Revamp Emergency Works****2016 - 2018****Client:** Yanbu Aramco Sinopec Refining (YASREF)**Project Description**

The project aims to perform the required Engineering & Procurement works to replace the Existing Firefighting & Fire Detection system as well as Engineering ,Procurement and Construction Works of Panels Boards & MOV's.

Contract Type

EPC LSTK- Main Contractor

Scope of Work

EPC for MOV's replacement, Electrical panels & EP for firefighting & detection Systems



**Utilities and Offsites for ASORC Naphtha Complex “OSBL”
2017 - 2021****Client:** Assiut Oil Refining Company (ASORC)**Project Description**

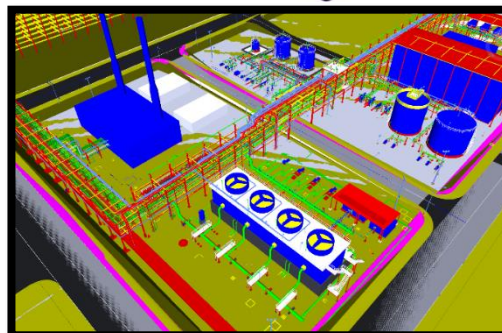
The Project aims to establish utilities and offsite facilities required for the new Naphtha Complex. The Utilities and Off-sites project includes: Cooling Tower Package, Instrument and utility air compressor package, Nitrogen generation and Compression package, Steam Generation Package, Water Softening package, oily water treatment package and Chemical injection package

Contract Type

EPC Main Contractor Lump sum

Scope of Work

Basic & detailed engineering, procurement, construction, pre-commissioning, commissioning and start up assistance.

**Meliha Power Generation Upgrade****2017 - 2019****Client:** Agiba Petroleum Company**Project Description**

The project aims to upgrade the existing power generation plant at Meliha field by adding 2 new gas turbine generators and a new reciprocating gas compressor with the provision of future tie-in for 2 additional compressors with all required E&I modifications and additional ancillaries, in addition to step-down power transformer and electrical power module complete with switch gear.

Contract Type

Lumpsum for Engineering, cost plus for Procurement services

Scope of Work

Detailed Engineering and Procurement services



MTBE Storage and Blending Facilities Project**Client:** Yanbu Aramco Sinopec Refining (YASREF)**Project Description**

The Project includes two internal floating roof tanks with storage capacity of 300,000 barrels each, with diameter 68 m and height 16 m, 3 shipping pumps, metering and prover skid, in addition to piping works at the refinery facilities and offshore export berth, all the required modifications and tie-ins in the control system, electrical system, blending unit, telecommunication and loss prevention at the refinery to support the new facilities.

**Contract Type**

EPC LSTK

Scope of Work

FEED & detailed engineering, procurement, construction, and pre-commissioning up to mechanical completion, commissioning and start up assistance

**Diesel and Gasoline Storage Facilities Project
2017 - 2018****Client:** Yanbu Aramco Sinopec Refining (YASREF)**Project Description**

The project aims to increase the storage facilities for diesel and gasoline at YASREF refinery with an additional 1,320,000 barrels. The Project consists of 2 storage tanks with diameters of 106 meters and 87 meters, circulation pump, in addition to piping works at the refinery facilities, also all the required modifications and tie in's in the control system, electrical system, telecommunication and loss prevention at the refinery to support the new facilities.

**Contract Type**

EPC LSTK- Main Contractor

Scope of Work

Basic and Detailed Engineering Design, Procurement, Construction, Pre-commissioning and Commissioning & Start-up assistance

**YASREF Warehouse Facilities Construction Phase 1
2015 - 2017****Client:** Yanbu Aramco Sinopec Refining (YASREF)**Project Description**

The warehouse facility is designed to construct 8000 m² storage area in two different buildings for YASREF material storage purpose. The overall facility plot size is 20,000 m².

Contract Type

EPC LSTK

Scope of Work

Engineering, material supply, construction and overall management

**Ain Sukhna Product Hub Marine Terminal Facilities Project****Client:** Arab Petroleum Pipelines Co. (SUMED)**Project Description**

The project comprises of a complete Marine Terminal with 2.2 km long access trestle, which shall accommodate one FSRU/LNG berth with natural gas import via 170,000 m³ FSRU vessel and with export capacity of 500 MMSCFD. It further comprises one combined product berth to accommodate LPG carriers in the range 5000 m³ to 82,000 m³ and oil tankers in the range 15,000 DWT to 160,000 DWT Perform Engineering review for project Design and Construction Supervision

**Contract Type**

Lump-sum for engineering review and reimbursed Man-hours for construction supervision

Scope of Work

Review for the engineering documents issued by the EPC contractor in addition to the construction supervision

**EPC for The Tank Farm and Topside Facilities Works (LOT II) –
Ain Sukhna Product Hub (ASPH)
2017 - 2019**



Client: Arab Petroleum Pipelines Company (SUMED)

Project Description

The project aims to establish and operate a fully equipped strategic hub for the trading of petroleum products and to increase the operation efficiency of Sumed Petroleum Zone in Ain Sukhna by adding the top side facilities of the first berth for petroleum products trading and the second Berth, storage warehouses PIT-1 with a storage capacity of 130,000 m³, storage warehouse PIT -2 with a storage capacity of 165,000 m³, facilities required for fuel oil storage and upper facilities for the marine operation on the marine terminal including pipe racks, pipes, loading arms and utilities.



Contract Type

EPC LSTK - Consortium with petrojet

Scope of Work

Detailed Engineering design, procurement, construction, pre commissioning, commissioning and start up assistance

Permanent Power Plant (PPP)

2014 - 2019



Client: The Egyptian Ethylene and Derivatives Company (Ethydco)

Project Description

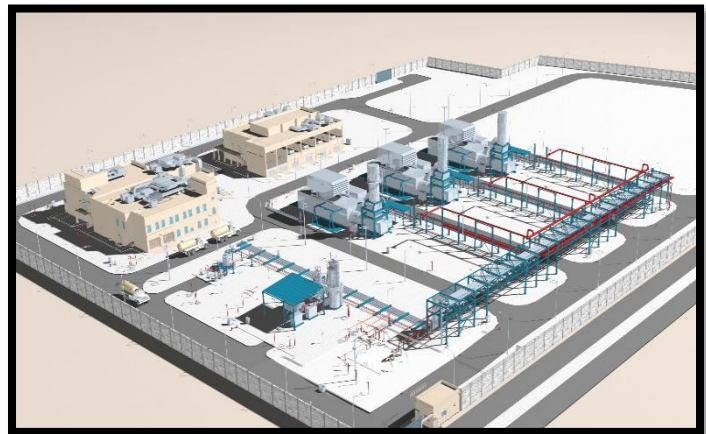
The project aims to generate electric power with a capacity of 70 MW per hour using Gas Turbines convertible to combined Cycle and connecting it to the Electrical National Grid to export the additional production and to export the excess electricity. (Phase 2)

Contract Type

EP Contractor Lumpsum for professional services and disburseable for Material supply

Scope of Work

Basic & Detailed Engineering and Procurement services



**Utilities Project for New Ethylene & Derivatives Complex in Alexandria
2011 – 2015**

Client: The Egyptian Ethylene and Derivatives Company (ETHYDCO)

Project Description

The project aims to install a new utilities and power generation plant required for the New Ethylene & Derivatives Complex in Alexandria.

The New Utilities & Power Generation Plant shall be built to serve the following plants :

- Ethylene Plant 460,000 Ton/Y
- Polyethylene Plant 300,000 Ton/Y
- Butadiene Plant 20,000 Ton/Y
- Polybutadiene plant 20,000 Ton/Y

**Contract Type**

EPC main contractor, lump sum professional services, material supply & construction disburseable

Scope of Work

Detailed engineering, procurement services, construction supervision, pre-commissioning and commissioning supervision, & overall Management for the "PROJECT", up to commissioning, start-up and performance tests

**Complex Offsite OSBL Project
2013 - 2016**

Client: The Egyptian Ethylene and Derivatives Company (ETHYDCO)

Project Description

The project aims to build the offsite facilities in one project for Ethylene & Derivatives complex.

Contract Type

professional services

Scope of Work

Detailed engineering, procurement services for the material supply up to job site, construction supervision & management activities overall project management commissioning and start-up supervision

Expansion of SUMED Storage Capacity (6 Tanks) 2011 - 2013



Client: Arab Petroleum Pipelines Co. (SUMED)

Project Description

In order to increase the storage capacity at Ain Sukhna Terminal, SUMED intends to build six new floating roof tanks, each of approximately 1.1 million barrel (175,000 m³) of net working capacity, 110 m diameter which shall be located adjacent to the existing tank farm and connected to it.



Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Detailed engineering, material supply, construction, commissioning & start-up

Expansion of Hout Crude Onshore Production Facility 2006 - 2009



Client: Al-Khafji Joint Operations (KJO)

Project Description

Expand storage capacity at Hout onshore production facility by installation of additional 4 storage tanks (500 to 80,000 m³ capacity floating and fixed roof), in addition to booster pumps, instrumentation, piping, fire fighting and a new electrical substation.



Contract Type

EPC LSTK Consortium with Petrojet – (Enppi Leader)

Scope of Work

Engineering, Material Supply, Construction, Project Management, Commissioning and Start-Up Assistance.

**Yanbu Export Refinery Project
Tank Farm Package – SP1
2010 - 2014**



Client: Yanbu Aramco Sinopec Refining (**YASREF**)

Project Description

The Project aims to install a new refinery with capacity of 400,000 Barrel/Day. The Tank farm package of Yanbu export refinery includes 33 storage tanks with different diameters (12.5 to 120 mt), sizing up to 1.2 Million Barrels and 13 spherical tanks 60,000 barrels each:

Contract Type

EPC LSTK (Enppi Main Contractor)

Scope of Work

Enppi: Engineering, material supply, construction (subcontracted to several Saudi and Egyptian companies), commissioning & start-up and overall project management

Yanbu Site Completion Package (MC4)

Client: Yanbu Aramco Sinopec Refining (**YASREF**)

Project Description

The project aims to the execution of the Site Completion package MC-4 for Yanbu Export Refinery Project (YERP). The Project includes the plant roads construction work up to the road marking and traffic signage with a total surface area of roads equals 190,000 sq. meters, construction and concrete lining for Storm water ditches and trenches. Also, the package includes the plant security related items including the inner and outer patrol roads with a total length of 18 km, perimeter Fences and a K-12 Grad Anti-Ram crash barrier. Also, a Coastal road of an approximate length of 4 km.

Contract Type

Engineering Services L/S, Material Supply Cost Plus, Construction Works Unit Rate

Scope of Work

EPC Main Contractor for basic & detailed engineering, construction and pre-commissioning



Ethylene and Polyethylene plants Utilities and Offsite Complex Project 1997 - 2000

Client: Sidi Kerir Petrochemicals Company (SIDPEC)

Project Description

The utilities and offsite plant provides SIDPEC's two new plants (Ethylene and Polyethylene) with fire fighting & cooling water, compressed air and de-mineralized water. Moreover, the complex provides process water treatment.

Contract Type

EPC - Lump-sum Turnkey

Scope of Work

Engineering, material supply, construction, commissioning & start-up, overall project management



Damietta Export Facilities 2001 - 2004

Client: United Gas Derivatives Company (UGDC)

Project Description

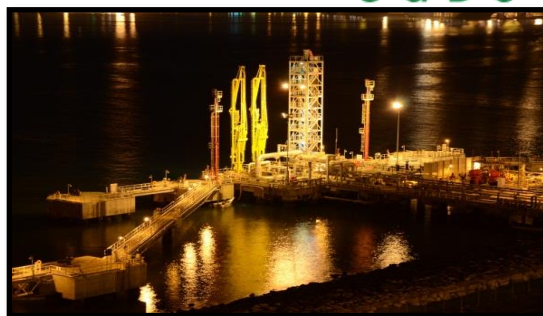
Installation of Marine export facilities – cryogenic tank capacity (30,000m³) for propane storage produced from Port Said NGL process facilities

Contract Type

EPC turnkey – consortium (Enppi / Tractebel) – lump-sum for professional services, cost plus fees for material supply and construction work

Scope of Work

FEED & detailed engineering, procurement, construction, commissioning & start-up assistance



Sky Medical Center 2009 - 2013

Client: Housing & Social Services Fund For The Petroleum Sector's Employees

Project Description

The project aims to construct a hospital according to the highest international specifications to serve the petroleum sector employees.

Contract Type

Cost Plus

Scope of Work

Design review, procurement services, construction supervision, overall management, commissioning and final hand-over

Petrosport – Katameya Sporting Club

Client: Petrosport

Project Description

The project is comprised of soccer fields, social building, a mosque, a stadium, a squash field, a swimming pool, communal gardens and parking areas.

Scope of Work

Design Development & Construction Supervision



IX. Water Treatment



**Sulfate Removal Facilities at Aindar and Fazran
2018 – 2021****Client:** Saudi Aramco**Project Description**

The Project aims to process and deliver 435 MBD of low sulfate water to injection headers in ANDR and FZRN reservoirs, using 580 MBD (maximum) sea water through 36 inch intake pipeline approx. 700 meter, 145 MBD of reject water will be returned to QUAD1 Pipeline thru 16 inch intake pipeline approx. 700 meter. Low sulfate water will be required to maintain reservoir pressure. Nf pacakge produces low sulate water with capacity of 435 mbpd, Consisting of 5 trains 4 in operation and 1 common spare. The package design, delivered as modules with following parts:

- Filtration skids. (6 skids)
- Feed pumps skids. (5 skids)
- Inlet control valves skids.(5 skids)
- NF modules. (5 trains each trains has 9 modules complete with the membrane vessels + 2 control valves skids)
- CIP filtration skids.
- CIP pumps.
- SWRO for CIP water (two trains each has one membrane skid with its valves).

Contract Type

EPC LSTK- Main Contractor

Scope of Work

Engineering, Procurement, Construction, Pre-commissioning and Commissioning & Startup Assistance

**Upgrade Desalinated Water Treatment at Safaniyah Plant
2018 - 2021****Client:** Saudi Aramco**Project Description**

The scope in Safaniyah consists of replacing 3 existing drum screens at the sea water intake with 3 new drum screens, providing tie-ins from the new RO plant intake line to existing Sea Water users for operational flexibility, installing a new R.O Plant, Vacuum de aerator package and associated storage tanks. The drum screens scope includes only the replacement of the existing ones with new drums with identical capacities (30000 GPM each); The purpose of the project is to provide an R.O. plant which will produce 1500 GPM of desalinated water (500 ppm TDS specification) which shall be further utilized to produce wash water for crude de-salters , flushing / dilution water and potable water. System main components are:

- Sweet Water Production: 1,500 GPM
- R.O. plant overall Recovery: 39.2%
- Number of R.O. passes: Partial 2-pass system
- Number of RO trains in the first pass: 3X33% (518 GPM each)
- Recovery of the first pass: 40%
- Number of RO trains in the second pass: 1X100% (462 GPM)
- Recovery of the second pass: 90%
- Rejects Flow Destination: Sea
- Water de-aeration system (de-aeration by vacuum)
- Product Water Oxygen content: 10 PPB (after de-aeration)

Contract Type

EPC LSTK- Main Contractor

Scope of Work

FEED Verification, Detailed Engineering, Procurement, construction and Pre-commissioning and start-up assistance activities

Utilities and Offsites for ASORC Naphtha Complex "OSBL" 2017 - 2021

Client: Assiut Oil Refining Company (ASORC)

Project Description

The oily water treatment system will be extended to the existing oily water treatment system by adding additional train. The oily water system will consist of API separator followed by floatation unit with chemical injection and finally biological treatment. With capacity of 100 m³/hr for API& DAF however the biological is design to cover 200 m³/hr. The system design to treat the oily water for agriculture specification.



The recovered oil shall transfer to new recovered oil tank will be integrated with the existing two recovered oil tanks. System main components are:

- API separator includes (sludge pit and treated water compartment as well as recovered oil pit and its related transfer pumps)
- Dissolved Air Flotation (DAF) unit including (Air saturation vessel, circulation pumps, Coagulation Basin with its accessories, Flocculation Basin with its accessories, DAF chemical injection systems, etc..)
- Biological Treatment Unit including (Aeration Tank and air diffusers, Air blowers, Trickling filter, clarifier, pumps, etc..)
- Effluent carbon filter, chemical injection system.
- Drying Beds

Contract Type

EPC Main Contractor Lump sum

Scope of Work

Basic & detailed engineering, procurement, construction, pre-commissioning, commissioning and start up assistance.

Early Works PDH&PP Complex Utilities

2019 - 2020

Client: SIDPEC

Project Description

Perform Early Work of PDH&PP complex utility, which include:

- Water intake system with design capacity of 2000 m³/hr
- Raw water chlorination system
- Raw water clarification system
- Raw water filtration system
- Cooling tower and cooling water systems
- Cooling tower chemical injection system
- Water desalination system
- Water demineralization system

Contract Type

Lumpsum - Basic Engineering Early Works

Scope of Work

Basic Engineering Designs, Material Requisitions, Requesting Firm Quotations for Major Equipment and Requesting Budget Quotation for other pieces of Project Equipment to Determine the Project Cost Estimate and Schedule.



PAGMI Project Phase I & II Gas conditioning for Domestic Market 2007 - 2013 (Different Phases)



Client: Petróleos de Venezuela, S.A. (PDVSA)

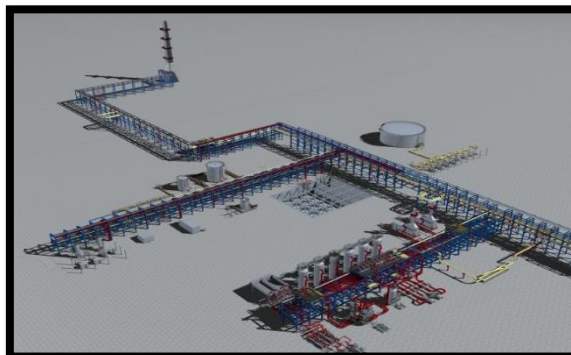
Project Description

The oily water treatment package with capacity of 33 m3/hr includes the following treatment units:

- Corrugated plate separators
- Dissolved gas Floatation unit
- Chemical injection unit
- Nutshell filters

Contract Type

EPCM – Lump-sum for professional services, material supply cost plus and unit rates for construction works



Scope of Work

Basic engineering review, detailed engineering and procurement services for long lead equipment, construction management and overall management for phase I. Conceptual engineering and basic and detailed engineering for phase II

Kharir Development Project 2008 - 2010



Client: Total E&P Yemen

Project Description

The waste water treatment package includes the following treatment units:

- (CPI) Plate packs ready for installation in the concrete sump
- Oil skimmers manually adjustable
- Walnut filter feed pump and spare
- Walnut filter and spare
- Back wash pump
- Air scour blower

Contract Type

EPC LSTK Consortium with Petrojet (Enppi Leader)

Scope of Work

Engineering, material supply, construction supervision, project management, commissioning, start-up assistance & consortium leader

**Water Disposal System Refurbishment at Safaniyah
2019 - 2021****Client:** Saudi Aramco**Project Description**

The proposed design involves pressurizing the CPIs and DGFs to normal operating pressures of 19 psig and 14 psig respectively using motive fuel gas, which is currently used to blanket the CPIs, DGFs and FWTs. The existing DGF vendor has advised the maximum DGF operating pressure is 15 psig and above this pressure oil separation efficiency is reduced. The pressurization of the CPIs and DGFs will overcome the gravity flow limitation in the system, thereby allowing the FWTs to be operated with liquid levels up to the overflow line elevation in the tanks. The existing DGF Recirculation Pumps (G26-G-1421 A/B/C/D/E/F/G) shall be assessed for the new operating scenario

The fuel gas in-breathing and out-breathing requirements shall be based on the design conditions of CPI and DGF. The fuel gas is supplied from sales gas to CPI and DGF and the out-breathing gas shall be routed to flare header.

Contract Type

EPC LSTK - Main Contractor

Scope of Work

Engineering, Procurement, Construction, Pre-commissioning, Commissioning & Start-up assistance.

Assil & Karam Gas Development Project**2011 - 2016****Client:** Badr Petroleum Company (**Bapetco**)**Project Description**

The project consists of the following systems:

Water de-mineralization package, two trains 2.5 m3/hr.

- Feed Pumps
- feed Quartz sand/Pirolusite Filters
- Quat1z sand/Pirolusite filters back wash unit (back wash tank + back wash pumps)
- Microfiltration Cmtridge Filters (5 micron filter)
- First Stage High Pressure Feed Pumps
- Second Stage High Pressure Feed Pumps
- Two stages RO membrane modules
- Second stage RO feed tank
- Electro de-ionization unit
- Post treatment system
- Chemical injection system
- Cleaning system (Cleaning In Place)

Water De-aeration Package :

- De-aerator tower.
- Tower internals.

Contract Type

EPC LSTK for Professional Services & Construction works and Disbursable Material

Scope of Work

Detailed Engineering, Procurement, Construction Works, Electrical and Instrumentation Installation Works, Pre-commissioning, Commissioning and Start-up Assistance including Pipelines and tie-in to the wells CO2 Removal Plant BED 3 tie-ins works and modifications

**Utilities Project for New Ethylene & Derivatives Complex in Alexandria
2011 – 2015****Client:** The Egyptian Ethylene and Derivatives Company (ETHYDCO)**Project Description**

The new Utility Plant shall include the following:

- Water Treatment System applying Zero Liquid Discharge (ZLD) concept with design capacity of 1100 m3/hr includes (Ultra filtration, HERO, FEDI, crystallizer, evaporator, belt press, etc..)
- Cooling water system
- Chemical bulk storage and supply system (HCl & NaOH)
- Potable /Utility water systems
- Collection and discharge system for Treated waste water from different plants

**Contract Type**

EPC main contractor, lump sum professional services, material supply & construction disburseable

Scope of Work

Detailed engineering, procurement services, construction supervision, pre-commissioning and commissioning supervision, & overall Management for the "PROJECT", up to commissioning, start-up and performance tests

Damietta Export Facilities**2001 - 2004****Client:** United Gas Derivatives Company (UGDC)**Project Description**

The following sanitary treatment unit

- Grease Trap
- Submersible Lifting Pumps
- Bar Screen, Aeration Tank
- Clarification Tank
- Chlorination/Oxygenation Tank
- Thickening Tank, Filter feed pumps
- Sand/Carbon Filters
- Sludge Transfer Pumps
- Sodium Hypochlorite Dosing System
- Air Blowers & Diffusers

**Contract Type**

EPC turnkey – consortium (Enppi / Tractebel) – lump-sum for professional services, cost plus fees for material supply and construction work

Scope of Work

FEED & detailed engineering, procurement, construction, commissioning, & start-up assistance

Safaniya Water Disposal System Upgrade**2006 - 2009****Client:** Saudi Aramco**Project Description**

The oily water treatment package with capacity of 1100 m³/hr includes the following treatment units:

- Settling tanks complete with oil skimmers
- Corrugated plate separators
- Induced gas Flootation units
- Filtration units
- Chemical injection system

Contract Type

EPC LSTK (Main Contractor)

Scope of Work

Engineering, material supply, construction, commissioning & start-up and overall management

**Crude Treatment Plant (RAS BAKR)****1999 – 2001****Client:** General Petroleum Company (GPC)**Project Description**

Treatment for oil with a capacity of 50,000 B/D, including water separation and desalination units. The oily water treatment package capacity is 260 m³/hr. Treated water produced is disposed into sea having maximum oil content of 15 ppm. It includes the following treatment units:

- Corrugated plate separators
- Induced Air Flootation unit
- Chemical injection unit

Contract Type

Lump-sum professional services, disbursable for material supply and construction

Scope of Work

Basic / detailed engineering, construction, procurement, material supply, commissioning & start-up and Overall Management



X. Subsea Experience



**Zohr Field Development PMT Project for Subsea Works
2016 - 2020****Client:** Belayim Petroleum Company (Petrobel)**Project Description**

Zohr Gas Field is located in the Shorouk Offshore Block, which is located in East Mediterranean Basin (East Nile Delta) in water depth varies from 1400m to 1600m with gas reserve around 850 BCM (30 TCF).

Zohr Development concept envisages subsea deep water architecture with production directly routed to shore by means of dedicated pipelines. The wells will be controlled via main long distance umbilicals from a new shallow water control platform, the infield umbilicals will be used to divert the control to each well.

The field is developed through 3 phases; the current two phases are including 20 wells connected via rigid infield flowlines to 7 off manifolds which in turn export the production through 3 main trunk lines (1 off 26" and 2 off 30"). Field is served with 2 off 14" service lines in addition to 2 off 8" MEG injection lines composing a closed loop for effective continuous MEG injections into XT's.

Contract Type

Lumpsum PMC

Scope of Work

Consultancy Services; including review of Engineering, Procurement and Construction & Installation Supervision

**WDDM IXB Development Project- Engineering Consultancy Services****2017 - 2020****Client:** Burullus gas company**Project Description**

The project has successfully started production of 120 MMSCFD from 2 wells in the fourth quarter of 2018 and aim to produce 370 MMSCFD in the fourth quarter of 2019 from another 6 wells through providing subsea engineering services to Burullus Gas company in the field of gas field development in the West Delta deep marine area

Contract Type

Reimbursable Man hours through a consortium between Enppi and Wood

Scope of Work

Provide technical support and detailed engineering design review



Sea Fastening Design Of Subsea Meg Distribution Manifolds – Taurus-Libra, West Nile Delta

2017

Client

Bp – (Subsea-7 Main contractor)

Project Description

Detailed Engineering for the MEG Distribution Manifolds sea fastening.

Scope of Services

Subcontract for Engineering Services



subsea 7

DEKA (Denis – Kawaran) Subsea Field Development

2012 - 2014



Client: Belayim Petroleum Company (Petrobel)

Project Description

Subsea tie-back of five new subsea wells (DS6, DN, DNW1, DNNW1, KA) in about 115 m water depth via a new 16"/10" sealines network to the existing D4 PLEM and the existing Temsah 32" Sealine (for KA well), and to the existing 24" sealine (for DNNW1 well). Field layout includes PLEMs, HIPPS modules, subsea spools between all production facilities, control Umbilicals/SUTU's & flying leads, subsea Hot-Tapping Skids (at tie-in with the existing Temsah 32" and 24" sealines) in addition to subsea foundation and fishing protection structures for all field facilities.

Contract Type

Lump-sum for professional services

Scope of Work

PMT for Subsea Works including Project Management, Consultancy Services; including review of Engineering, Procurement and Construction Supervision. Detailed Engineering of Sealines/Spools & Subsea Hot-Tapping skid and fishing protection structures.



XI. Power Plants Experience

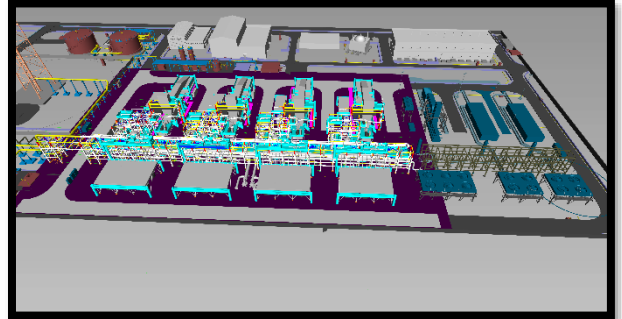


**Dahshour Compression Station Units 5 & 6 Project
2018 – 2022**

Client: Egyptian Natural Gas Company (**GASCO**)

Project Description

The project aims to add new two gas compressor trains one turbine driven & two motor driven ($\approx 9\text{MW}$ each through MV VSD) and five heat recovery units on exhaust stakes of the five turbines in order to generate electricity through ORC (Organic Rankine Cycle) generator ($\approx 24\text{MW}$) at 11KV in order to supply all plant loads & be independent from Utility.

**Contract Type**

EPC Main Contractor

Scope of Work

Basic & detailed engineering, procurement services, construction supervision activities and pre-commissioning assistance

**Steam Turbine Generator at Shedgum Gas Plant
2018 - 2021**

Client: Saudi Aramco

Project Description

The project aims to extend the existing 230kV Bus1 and install one new disconnecting switches, an SF6 breaker, with CCVT Voltage transformers and Pot Head termination for the 230kV Underground Cable. Supply and install new generator step-up transformer 13.8/230kV and a new 13.8kV ISO-Phase bus.

Contract Type

EPC LSTK - Main Contractor

Scope of Work

FEED Verification, Detailed Engineering, Procurement, Construction, and Pre-commissioning, in addition to preparation of As-built drawings as well as providing commissioning and start-up assistance activities.

Permanent Power Plant (PPP)**2014 - 2019****Client:** The Egyptian Ethylene and Derivatives Company (**Ethydco**)**Project Description**

The project aims to design, supply and install a new Permanent Power Plant (PPP) to feed Ethydco complex in Ameriya with a capacity of 70 MW, generated through a simple gas turbines cycle.

Phase-I of the project has been successfully accomplished and the plant is currently running with Two Gas Turbines each rated 50.5MW (ISO conditions) in addition to One Gas Turbines each rated 50.5MW (Standby).

Phase-II Covering the tie-in of Ethydco Permanent Power plant with the Egyptian National grid.

Contract Type

EP Contractor Lumpsum for professional services and disburseable for Material supply

Scope of Work

Basic & Detailed Engineering and Procurement services

**ASORC - 220/11 kV - 3x75 MVA Transformers Substation****2014 - 2019****Client:** Assiut Oil Refining Company (ASORC)**Project Description**

The project aims to design, supply and install a major transformer station in Upper Egypt at Assiut Oil Refineries complex with a design capacity of 3x75MVA and contractual power 125MVA, and it is scheduled to link the new station to another station as another source of energy in order to ensure the reliability of the source and the achievement of a system (Ring System).

Zohr Development Project – Phase I**2015 – 2019****Client:** Belayim Petroleum Company (**Petrobel**)**Project Description**

The project aims to design, supply and install a power plant of N. 4 Gas Turbine Generators (N+1 Configuration) operating in island mode. The emergency power will be guaranteed by N. 6 Diesel Generation system (EDG) located adjacent to each Substations and have a sufficient fuel storage capacity for at least 8 hours full load operation without intervention.

An electrical link between Zohr Electrical system and El-Gamil Electrical System will be performed and shall serve as a bidirectional link upon failure of main and emergency power generation units in one of the two plants with no parallel operation between the generation systems of the two plants, since this link shall operates only during emergency operation.

Contract Type

Lumpsum for professional services and procurement services in addition to engineering site support

Scope of Work

Detailed engineering and procurement services in addition to material management and engineering site support during the construction Phase

XII. Renewable Energy Experience



Photovoltaic power generation system for Enppi main building**Client:** Engineering for the Petroleum & Process Industries (Enppi)**Project Description**

The project aims to perform complete engineering activities of photovoltaic power generation system at Enppi main building.

**Photovoltaic power generation system for GUPCO and EGPC administrative building****Client:** GUPCO**Project Description**

The project aims to perform complete engineering activities of photovoltaic power generation system at EGPC administrative building.

**Photovoltaic power generation system for GANOBE building****Client:** GANOPE**Project Description**

The project aims to perform complete engineering activities of photovoltaic power generation system at GANOBE building.

**Assil & Karam Gas Development Project****2011 - 2016****Client:** Badr Petroleum Company (**Bapetco**)**Project Description**

Development of new KARAM gas wells (Qty.6 wells) & rehabilitation of ASSIL gas wells (Qty. 6 wells) complete with new WHCP's & Solar power system at each well. The produced gas delivered to the CO2 removal plant with new GTG rated 3.5 MW, 6.6KV connected in parallel with five existing GTG's. New Substation is erected with two distribution transformers 2MVA, 6.6KV SWG, 400V PMCC, EDG, MV/LV VSD's & AC/DC UPS.

Contract Type

EPC LSTK for Professional Services & Construction works and Disbursable Material

Scope of Work

Detailed Engineering, Procurement, Construction Works, Electrical and Instrumentation Installation Works, Pre-commissioning, Commissioning and Start-up Assistance including Pipelines and tie-in to the wells CO2 Removal Plant BED 3 tie-ins works and modifications



TUNA Field Development

2008 – 2010

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

PETROBEL intends to develop Tuna field at the Mediterranean Sea by installing a new platform (4-legged platform approx. 82 m of water) and connecting pipelines (24" subsea pipeline approx. 15 km from Tuna platform to new PLEM and eventually to the existing Denise-A SSIV and 32" P/L to onshore plant near T-NW2 existing platform) to support the production of 4.5 MMSCFD.

Contract Type

EPC LSTK– Consortium of Enppi, Technomare and Petrojet (Enppi Leader)

Scope of Work

Detailed engineering, procurement services for subsea pipeline and material supply of topside facilities



DEKA (Denis – Kawaran) Subsea Field Development

2012 - 2014

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to develop Denis and Karawan areas by drilling 5 new wells and collecting the produced gas be PLEMs, and protecting the pipelines using HIPPS, and controlling the wells throw umbilicals, utilizing Subsea X-mas tree technology

Contract Type

Lump-sum for professional services

Scope of Work

Technical Support and issuance of technical evaluation report for project equipment suppliers



SETH Offshore Development Project

2011 - 2012

Client: Belayim Petroleum Company (**Petrobel**)

Project Description

The project aims to install a new platform in water depth of 83.3m at PTB Seth gas field in the Ras El Barr Concession West Nile Delta area (Mediterranean Sea), total field production flow rate is 4.5 MMSCMD.

Contract Type

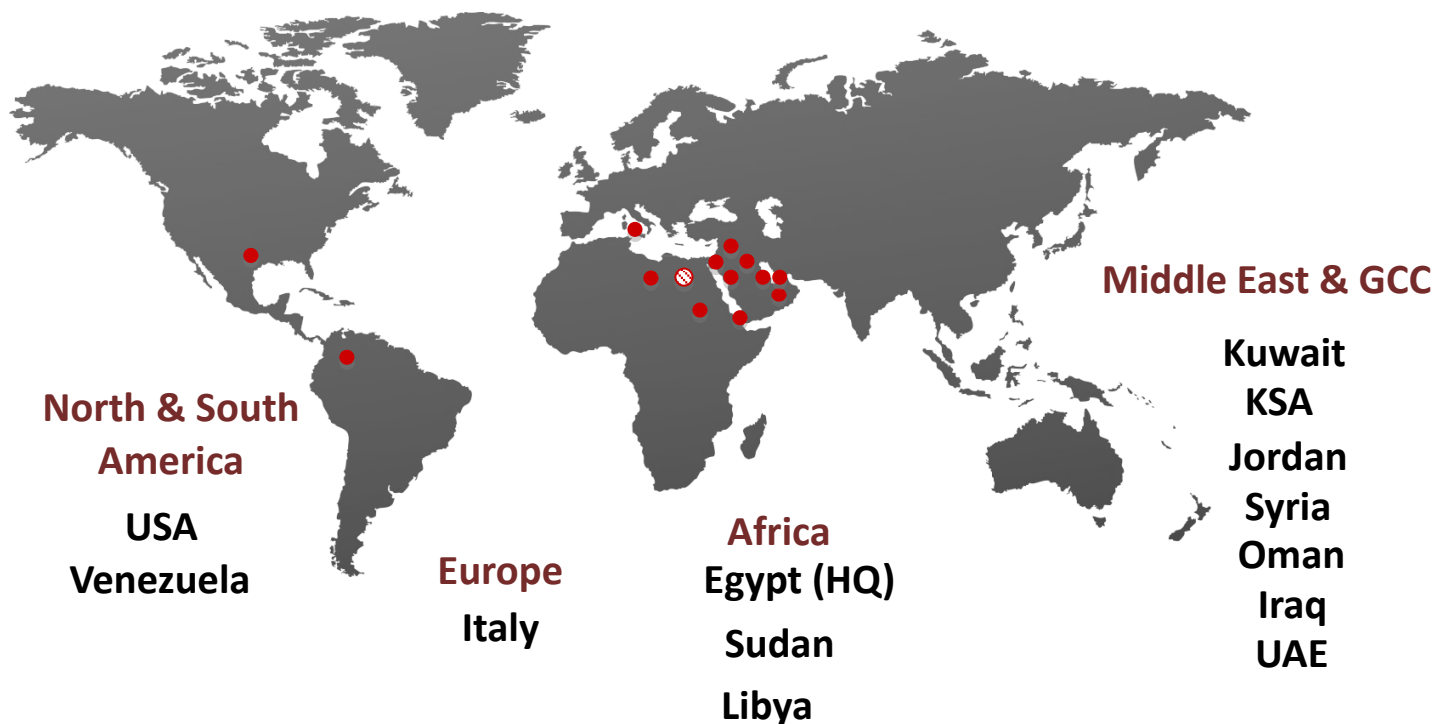
EPC LSTK – Consortium of Enppi / Petrojet / Tecnomare (Enppi Leader)

Scope of Work

Detailed engineering for topside facilities, procurement services and material supply and assistance for commissioning and startup



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