



Comprehensive Portfolio of Services

Profile

- ▶ Turnkey Plant Construction
- ▶ Electrical, Instrumentation, Automation & Control Solutions
- ▶ Plant Operation Support, Maintenance & Upgrade Services



II INTRODUCTION

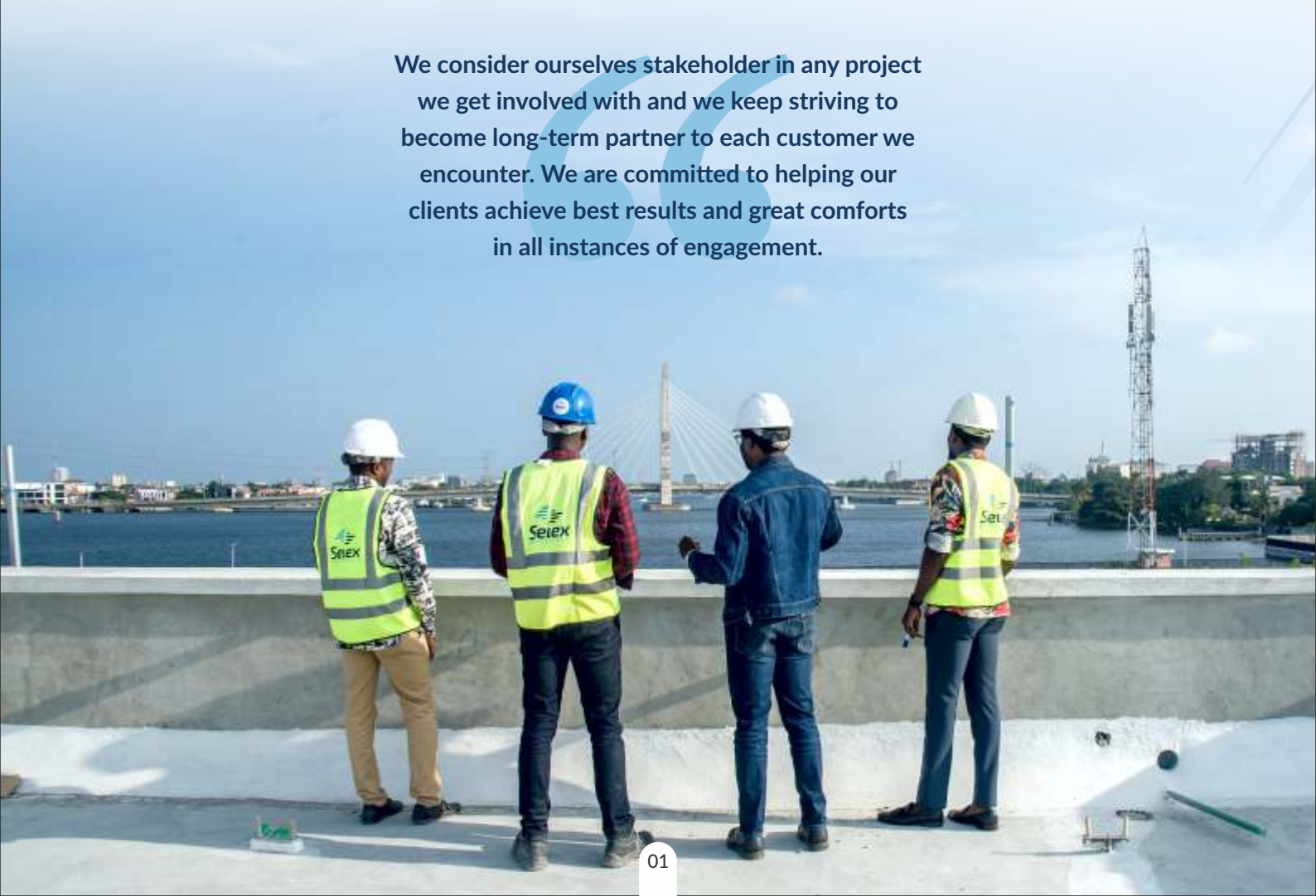
Selex Engineering & Construction Company Limited is a company established to provide best value in engineering and construction to the African market place starting with Nigeria. The major value proposition is the diversity of markets served by the company as our engineering, procurement, fabrication, construction, installation, commissioning, operations and maintenance (EPCIC-OM) services are provided across oil & gas and to be extended to power, manufacturing, telecoms and infrastructure industries.

The possession of requisite knowledge and skills required for this diversity can be easily traced to our directors' backgrounds, their experiences cuts across diverse industries with major focuses in plant construction and electrical, instrumentation, controls & automation. Our workforce also comprise

of carefully selected personnel, bearing in mind core goals of achieving excellence in project delivery and standby availability of knowledge and skills required in every market we cover and in the services we offer. As a growing company, we are poised to continually strive for excellence. We progress daily to successfully claim our market share through offering of best-value-for-money services that will give our clients optimal satisfaction.

We stand in the position to educate our clients on best practices in engineering/design and construction, safety in design, project efficiency, environmental compliance (Green/Sustainable Projects), advanced operations & maintenance plans, cutting edge technologies & solutions, project cost saving, local regulations, optimizing value-influencing elements on projects, etc.

We consider ourselves stakeholder in any project we get involved with and we keep striving to become long-term partner to each customer we encounter. We are committed to helping our clients achieve best results and great comforts in all instances of engagement.



II ABOUT US



Vision

To become the African market leader in construction of sustainable plants & infrastructures as we also lead renewable energy applications come 2030.



Mission

To relentlessly continue to deploy solutions that meet & exceed client expectations, to be ahead of the market in technological trends, innovation and cost saving techniques as we keep prioritizing green projects. We will continually deploy all-round programmes for the development of our people as they become the best they can be at work and beyond.



Mantra

The best is the beginning!



The "Dream"

Africa to the world. We pledge to make a global difference someday, exporting innovative solutions in engineering & construction to the cities of the world!



Slogan

You will love to work with us again and again



Core Values

- ⚡ Pursuit of Excellence
- ⚡ Absolute Safety
- ⚡ Compliance
- ⚡ Commitment & Dedication
- ⚡ Quality Assurance
- ⚡ Absolute Human Freedom
- ⚡ Promotion of Merit
- ⚡ Fairness
- ⚡ Society Development
- ⚡ Meticulousness
- ⚡ Transparency

We are resolute about our core values and prioritize them above any individual stakeholder or group of stakeholders' interests.

We have already joined as members and will join more knowledge bodies in the areas of HSE, Electrical, Instrumentation, Welding, Fabrication, Industrial IT, Oil & Gas Training and Quality both locally and internationally.

We run ISO 9001 quality systems while we are already in line for certification.

We are registered with Duns & Bradstreet. We are member of the Nigerian-Canadian Business Association which enhances our knowledge-transfer benefits and ease of equipment and material sourcing.

OUR SERVICES

Selex E&C is a multifaceted organization with a major focus of being strategically positioned to function as a turnkey construction main contractor, turnkey construction sub-contractor for specialized scope or an operations & maintenance service contractor.

Thus, we grouped our services into the following three major categories:

- **Turnkey Plant Construction**
- **Electrical, Instrumentation, Automation & Control Solutions**
- **Plant Operation Support, Maintenance & Upgrade Services**

PLANT CONSTRUCTION

Selex plant construction offering covers full spectrum solutions across the entire oil & gas streams, from production down to retail. We have adequate resources to deliver FEED, detailed engineering, procurement, construction, installation/erection and commissioning of diverse onshore process facilities. Our offshore operations are currently limited to electrical, instrumentation, automation, control, and operations support and maintenance services.

One of the companies precluding Selex E&C's establishment happens to provide lots of ancillary & auxiliary solutions to major EPC companies in Nigeria and beyond, this boosts the compounded experience of Selex E&C to date even 10 additional years. Our directors first gained experience in process instrumentation & control prior to knowledge of process flow, fabrication, erection and commissioning which forms a significant factor in the quality of Selex E&C's project management.

“
A comprehensive view and an absolute knowledge of the impacts of improperly managed interfaces between disciplines on projects sets us at higher advantage level compared to our cotemporaries.”



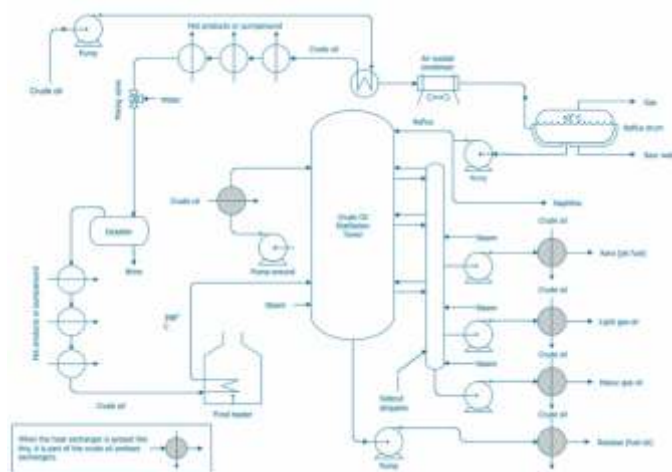
| PLANT CONSTRUCTION SERVICES



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- We have extensive experience preparing lump sum bid packages, as well as reference packages to facilitate completion of work within an expeditious timeframe.

We will list some of our standard project engineering deliverables excluding those for electrical, instrumentation, automation and control engineering that will be discussed under our EIAC Services.



PIPELINE & LAYOUT

- * Piping general arrangement
- * Isometric drawing for N-50 and greater
- * Isometric for pipework underground
- * Detailed fabrication drawing for N-50 and larger
- * Piping material specification
- * Standard piping details
- * Pipework support calculations
- * Pipework fabrication and installation specifications
- * Pressure test procedure
- * Special piping requirements
- * Special piping support details
- * Stress critical line list
- * Stress analysis specification
- * Hydrostatic test procedure
- * Details of special requirements

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| PLANT CONSTRUCTION SERVICES

PLANT DESIGN

- * Hazardous area classification drawing
- * Plant block flow diagram
- * Process flow diagram
- * Process P&ID
- * Equipment specification
- * Pipeline sizing
- * Piping support & stress analysis
- * Site plan (equipment & utilities layout)
- * Design pressure/temperature limits
- * Startup & 2 year operational spares list
- * Feed material flow control block diagram
- * Material handling block diagram
- * Area classification documents

FIRE CONTROL AND PREVENTION

- * Firefighting system design philosophy
- * Firefighting equipment layout list & requisitions
- * Fire and gas detection & alarm equipment schedule
- * Fixed extinguisher systems design
- * Mobile firefighting equipment schedule
- * Safety equipment schedule

CIVIL & STRUCTURAL DESIGN

- * Civil layout site plan drawings
- * Civil design criteria
- * Road layout and details
- * Foundation & concrete structure details
- * Underground services specification
- * Underground services layout

- * Earthworks, excavation procedures, filling & compaction requirements
- * Earthwork grading drawings
- * Piling specification
- * Piling layout, support capacities, locations, cut-offs & elevations
- * Reinforced concrete specification
- * Structural design criteria
- * Structural steelwork design & specification
- * Structural steelwork requisitions
- * Fireproofing schedule
- * Indexed design calculations

ARCHITECTURAL DESIGN

- * Building specification
- * Building layout drawing
- * Building detail drawing
- * Schedule of finishes
- * Schedule of doors and window

PROCUREMENT

- * Long lead items list
- * Approved vendor list
- * Material requisitions
- * Request for quotation (RFQ) template

COST ESTIMATE

- * Estimate report
- * Proposal template for procurement
- * Proposal template for installation
- * Reference drawing list
- * Cost estimate and project cash flow forecast

We strive so hard to deliver comprehensive and high quality engineering deliverables either we have an integrated EPCIC contract or an isolated engineering & design contract. We take full responsibility for our designs upon client's approval. A successful engineering is the primary guarantor for a successful construction, hence we give our engineering works highest level of attention and pass our deliverable through multi-stage internal review sessions.



| PLANT CONSTRUCTION SERVICES

PROCUREMENT

We offer procurement services either as part of an EPCIC contract or as an isolated service for other main plant construction contractors or plant operators. We have developed a lot of capacity in the area of procurement, having some members of our team certified for buying and expediting. Since procurement is a major cost coefficient on any project, it is imperative for us to manage procurements excellently to optimize project cost and schedule.

several OEMs and OEM representatives. We also have relationship with process licensors like Honeywell UoP.

Our procurement objectives are realized through the below:

- * Strategic Sourcing
- * Material Management
- * Contract Management
- * Logistics Management
- * Export Compliance
- * Global Market Knowledge



Selex procurement solutions provides clients with global resources, processes, systems, market knowledge and volume-leveraged pricing to maximize return on investment. We maintain and continually update our master supplier/manufacture list with comments and ranking.

We have tested & trusted channels for sourcing major and secondary equipment and materials, we have stringent process flow for procurement and we also have established logistics channels. We save cost for our customer in excess of 14% less than estimated/budgeted figure and one of our major advantages remain our strategic relationship with



| PLANT CONSTRUCTION SERVICES

CONSTRUCTION & INSTALLATION

Our construction which basically comprise of fabrication, erection, equipment installation and tie-in is an area of critical interest to both our own selves, client and all other stakeholder.

Interestingly, we have the requisite knowledge, skills and experience in shop fabrication, on-site fabrication, equipment/spools/members erection, equipment installation and tie-in. Our construction managers, engineers, technicians, equipment operators, welders and fitters are duly certified for the tasks they carry out. In civil construction of plinths, supports, housing, channels, tunnels and construction of site offices, accommodation quarters and warehouses, the processed of formworks, reinforcement, casting, blockworks, MEP and finishes are carried out by our dedicated experienced team.

Selex run a medium size fabrication facility and have unlimited to two ASME stamped massive fabrication facilities in Lagos and Portharcourt. We have a long list of self-owned construction equipment and tools while we maintain a log of equipment leasers' inventories that keep us

abreast on who to turn to for equipment we need.

We focus on the following for best delivery especially I cases where Selex is not responsible for the project engineering. Thus, we successfully achieve optimization of construction activities and offering cost saving suggestions during all project phases:

- * Construction Management (According to Approved In-house Plan)
- * HSE (Safety Performance & Excellence)
- * Quality Control
- * Constructability (Modelling & Analyses)
- * Sustainability in Construction
- * Craft Certification
- * Industrial relations
- * Modularization
- * Rigging Monitoring
- * Welding Excellence

Our lists of equipment and facilities information are available upon request from verified prospective clients (end-users only).



PLANT CONSTRUCTION SERVICES

COMMISSIONING

A seamless capital project commissioning is simply a confirmation of properly managed construction interfaces. A well designed project can pass on to construction and end up a problem to commission the project without endless modifications that makes up major causes of schedule and cost projection failure on projects.

Selex understands the criticality of setting up a capable and coherent team for project commissioning, we therefore take time to develop detailed project-specific commissioning manuals for the exercise even ahead of commencement of commissioning exercises.

The manual integrates OEM approach with client and Selex approach and methodology. In support of start-up planning, each process unit is divided into systems and sub-systems to facilitate their completion, pre-commissioning and commissioning. This approach requires close coordination among the client, engineering, process licensors (if applicable), suppliers, construction and the start-up team

for an orderly turnover, commissioning and start-up while minimizing the impact to ongoing operations (In the case of brownfield projects).

Our commissioning checklist ensures:

- * Client endorsement of procedure
- * Inspection of Construction & Installation Done
- * Mechanical Completion Done
- * Availability of construction/installation team on site
- * Availability of major/critical equipment manufacturer representative
- * Availability of client representative
- * Availability of calibration and test tools
- * Availability of a director-level Selex personnel at site
- * Availability of firefighting and emergency management team
- * Reviewed & jointly approved JHA & JSA and adequate PPE
- * Availability of regulatory organizations where necessary
- * Availability of commissioning record sheet



OIL & GAS PROCESS CONSTRUCTION SOLUTIONS

The entire value chain of the Oil & Gas industry is our primary market. The industry requires specialized EPCI services, reliable power solutions and precision instrumentation, and there's little or no tolerance for downtime leading to inevitable adherence to numerous standards and codes in the implementation of projects. We believe such an industry perfectly match our offerings.

UPSTREAM EXPLORATION FACILITIES

RIG ASSEMBLE & ERECTION

The rig up and rig down operations of Selex E&C is currently limited to onshore as we intend to grow capacity into the swamp and offshore terrains. Selex can take up rig erection services for the start-up of drilling operations. The services we provide include the logistics planning for all structural members, modules, skids including dozing/chemical injection units, portakabins, equipment, pipes and the bits & drilling pipes. At the drilling site, we assemble where necessary, erect, install and integrate the rig elements which in most cases comprise the pipe catwalks, mud pumps, pipe rack, matting, mud tanks, derrick, doghouse, substructure, BOP components (hydraulic control, electrical, instrumentation, controls & automation and other mechanical balance of plant units like the water filtration, power generation, compressed air system, oil treatment/gas compression and others) and push shack among others.

We are equally equipped to rig down all aforementioned rig members, safely transport them back to rig owners' base or Selex storage area if contracted for storage/stacking.

WELL ACCESS ROAD

In most cases, new drilling sites are not readily accessible through vehicular means, during prospecting prior to drilling, established road access could be such suitable for 4X4 trucks working out their best potentials just to gain access to the prospective well location but once FID is reached and drilling has been awarded, the need for an expanded road becomes important for the conveyance of rig.

Selex E&C employs the services of the Selex Infrastructure Business Unit to construct well access roads either permanent or temporary, completed or partially completed roads to convey cranes, trailers, semitrailers, low beds, flat beds and crew cabs all of which are used to move equipment, tools and personnel to site. Kindly refer to our Building & Infrastructure Construction pages for more information on road construction.

WELL ABANDONMENT

We carry out well abandonment works for wells that have either reached end-of-life, become unprofitable, dry wells and water wells. Selex supports abandonment processes by decommissioning of wellhead structures, transportation of equipment for sales, refurbishment or storage as the case may be. We also carry out well back-filling and restoration of site to natural state. All relevant guidelines per location/client will be followed in the decommissioning, back-filling and restoration processes, adequate signs will also be emplaced for an abandoned site.



UPSTREAM PRODUCTION FACILITIES

Selex has the knowledge and resources to carry out certain levels of design and construction of production related units and systems. We consider entire Oil & Gas industry value chain and that is why we are able to offer services at all layers starting from the artificial lifting solutions needed in many wells up to enhanced recovery solutions needed for optimization in most assets, to the deployment of early production facilities.

ALFs

After drilling has been completed, the need for artificial lifting can be pre-determined after the well nominal pressure has been established. In cases where well cannot self-lift due to limited natural pressure, Selex can provide different types of artificial lifting solutions including but not limited to gas lifting, plunger lifting, hydraulic lifting, progressing cavity pump and the popular reciprocating rod (beam & horse head) lifting. We subscribe to the solutions of Weatherford to deploy these solutions. Our engineers design to fit and our personnel proceed to procure, fabricate, install and commission the artificial lifting system.

EORs

A lot of wells start out their lives with excellent self-lifting capacity due to presence of high pressure mostly associated with gas presence in the wells but over time, the pressure drops until well can no longer self-lift. In some cases also, some wells are not able to self-lift due to viscosity issues etc., at this point, a lot of hydrocarbon still trapped in the reservoir will need to be recovered however. Selex support production processes by deploying enhanced recovery system support to client's production. The choice of enhanced recovery solution will be based on the well engineers' suggestions based on outcome of reservoir analysis, the recovery method can include one or more of Nitrogen Injection, Soap Injection, Water Injection, Gas Injection and Heating of the reservoir. We basically apply gas or thermal or chemical injection methods.

WELLHEAD SOLUTIONS

Selex have requisite resources to design and construct wellhead structures and associated structures. These include the well flow lines, Christmas tree installation including all pneumatic and electric control and data acquisition systems and well head platforms on land locations. We hope to expand into offshore construction in no time. Selex fabricate piping and spools in the fabrication yard in-country, while specialty process equipment are imported from our equipment manufacturer partners. Complete installation, integration and commissioning are carried out at site.

UPSTREAM PRODUCTION TRANSPORTING LINES

In consideration that most E&P companies often produce from several locations within a field and also considering the economic impact of decentralized production, it is a common production practice to run many wells to a central location, these are often comprised of the flowlines, manifolds and associated systems.

Selex is well positioned to support our E&P client and main EPC contractors with our services in construction of production gathering facilities including pipelines, flow/metering stations and associated structures which include storage tanks where necessary.

The production transportation lines combine the flowlines, cluster manifolds and block station manifold (all comprising in typical cases, the test header, HP header, MP header and LP header). Selex retain internal capabilities and also have access to equipment and tools for the construction of high pressure & low pressure lines, test manifolds, and metering units. We design and construct complete systems with the adequate units of line components such as strainers, drains, check valves, choke valves, pumps, tie-ins/connection points, pig launchers & receivers, bypasses, PCVs, jointing, coating/painting and more. Instrumentation, electrical and control systems including gauges, meters, sensors, transmitters, LDS, cathodic protection systems and RMS (HMI/SCADA).



MIDSTREAM FIELD PROCESSING

As a growing company, Selex limits solutions to the land-based processes only for green field process plant construction, while we only carry out limited modification, upgrades and maintenance works on offshore processing plants. We have the right team, equipment, tools, machines, software applications and access to ASME stamped fabrication facilities for our project management, design, fabrication, erection, installation and commissioning works.

OIL PRODUCTION PROCESSES (EPFS & FLOW STATIONS)

Selex E&C collaborates with customers/clients to obtain required wells, asset information and specific client production & plant preferences, establishes a process concept, designs a simple process flow, provide client a budget range, upon approval of concept and contract award (EPCIC as a single contract or engineering apart as a separate initial contract), we proceed to detailed engineering design and subsequently procurement, construction, installation & commissioning. The detailed engineering provides direction for the main process and instrumentation in form of P&ID drawings, also makes available power, electrical, control, automation, cathodic protection, fire & gas detection & alarm, firefighting, other SIS system components, and all other applicable systems and subsystems. The master dossier of document deliverables maintained by Selex is comprehensive and adequate for absolutely seamless construction, commissioning and future maintenance and upgrade activities. Our construction team is made up of highly experienced project managers, cost controller,

planners, contract managers, engineers and technicians. We maintain a good inventory of construction equipment & tools and have unlimited access to lease the equipment & tools we do not self-own.

Our teams are experienced in welding, fabrication and construction of plant structural elements as well as the plant piping and production gathering lines. We also have great experience in E&I construction.

Our engineers have experience in installation and commission of the following process equipment and systems that make up basic oil processing plants, be it an early production facility (EPF), full production facility or a flow station (In no particular order).

- * Choke Valve
- * Separators
- * Heat Exchanger
- * Coalescer Unit
- * Pump Units
- * Degasser
- * Produced Water Treatment Unit (Hydrocyclone etc.)
- * Scrubbers
- * Compressors (Gas Compressor)
- * Coolers
- * Glycol Dehydration Unit
- * Water Storage Tanks
- * Crude Oil Storage Tanks
- * Metering Unit
- * Firefighting System
- * Flare System (FKOD, meters etc.)
- * Instrument Air Compressor
- * Electrical & Power Systems
- * Instrumentation & Control Systems
- * Civil Works
- * Civil Utility Structures (c/w MEP)



OIL & GAS PROCESS CONSTRUCTION SOLUTIONS

EPFs makes a great start point for the introduction of core EPCI services as it seems to be the least complicated next to pipelines. Our comprehensive engineering and construction starts here.

We obtain flow and product data with which we design suitable process flow mostly based on oil-water separation units and produced water treatment units.

We have all required tools, equipment and

software application for design and simulation. We also have high-end fabrication facilities fitted with all necessary fabrication and lifting equipment and tools for our use.

Selex fabricate piping spools in the fabrication yard in-country, fabricate components and erect tanks on site while specialty process equipment are imported from our equipment manufacturer partners. Complete installation, integration and commissioning are carried out at site.

Gas Compression & Treatment Plants

In assets producing large volumes of gas, the basic separation process is incapable to offer an economically viable and compliant plant since there are strict regulations on gas flaring. It is therefore best thought to process produced gas/associated gas further.

Selex teams are very familiar with construction of gas handling plants at any level aside the gas liquefaction process which is left out of our portfolio until later.

Our project management team, engineers and technicians will as well design and construct suitable plants based on the produced volumes, pressure & other gas source characteristics and properties of the gas itself.

Our teams are experienced in welding, fabrication and construction of plant structural elements as well as the plant piping and production gathering lines. We also have great experience in E&I construction.

Our engineers have experience in installation and commission of the following process equipment and systems that make up basic oil processing plants, be it a compression station or second stage treatment facility. We are very familiar with the sizing, specification, installation and commissioning of the following (In no particular order):

- * Pig Receivers
- * Gas Compressors/Turbines
- * Intercooler
- * Metering Units
- * Scrubbers

- * Slug Catcher/Filtration Unit
- * Condensate Tank
- * Analyser Units
- * Flare System
- * Firefighting System
- * Instrument Air Compressor
- * Electrical & Power Systems
- * Instrumentation & Control Systems
- * Civil Works
- * Civil Utility Structures (c/w MEP)

We understand the importance of schedule compliance on any project and we take this very seriously. Selex maintain an internal record of never underperforming schedules jointly approved with client. We either finish on time or ahead of time provided client does not face challenges that are not in the class that can be resolved by contract.



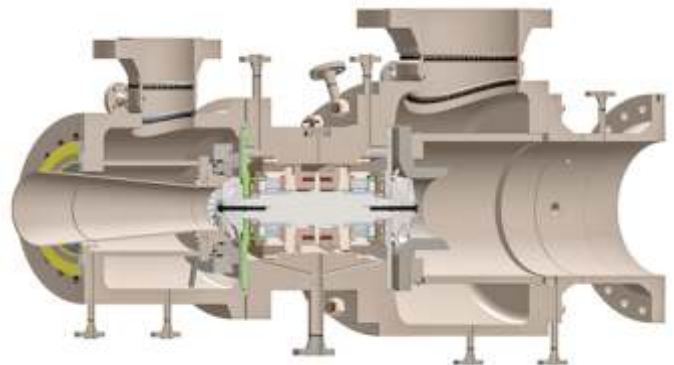
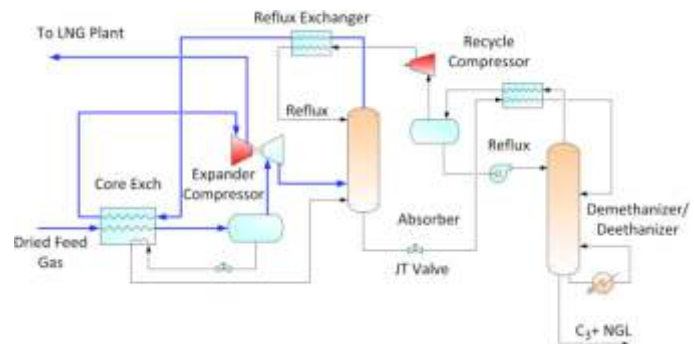
OIL & GAS PROCESS CONSTRUCTION SOLUTIONS

Gas Production (Cryogenic) Plants

In gas processing, the final integrated process of deriving distinctly various popular-use gases like methane, butane, propane and other specific gases from the mixed hydrocarbon gas produced from the wells and treated through early facilities is the cryogenic gas processing. It can be simply described as gas distillation since the knowledge of the boiling points of these is applied in the separation of the types of gases recoverable from the raw gas. A cryogenic gas processing plant can be likened to the petroleum refinery.

Selex have good experience in oil & gas process plant construction and a gas cryogenic plant is not excluded from our capabilities list. Our teams are experienced cryo plant feasibility, conceptualization/FEED, detailed engineering and HAZOP/constructability analyses.

Our experienced technicians are adept in fitting and welding of plant structural elements, piping spools, instrument & equipment mounts and tie-ins. We seamlessly carry out fabricate, install & erect plant structural elements, process equipment, BOP systems as well as the plant piping and production gathering lines as it applies. Our project managers and directors are vast with project managing (contract management, cost management, construction management and resources management) projects of this type. Our engineers have experience in erection/installation and commission of the following process equipment and systems that make up standard cryogenic gas processing plants.





Specialized Gas Processing

(Liquefaction/Gasification/Fractionation) Plants
Selex will continue to build capacity in gas processing beyond the conventional processes. We are working towards gaining more knowledge and experience towards ability to take-on construction of plants based on liquefaction (gas-to-liquid), gasification and fractionation.

Once we are set to offer these services, we will update our corporate profile and website accordingly.



Storage Tanks (Oil/Gas/Water)

In the mid-stream, gathered productions are stored in tanks. Aside the produced crude oil, condensate and storable gases. Tanks are also constructed for produced water which can be later treated and stored as potable water, also, tanks are constructed for major utilities like

firewater. These tanks form part of production facilities that we build, however, we chose to discuss tank construction again in a dedicated section of our services/markets because we understand that in many cases, clients contract storage tanks independent of the overall Plant EPC contract.

Tank construction services description is already covered under our total plant construction, however, in cases where tank construction is treated as a stand-alone contract or subcontract, we are well equipped to implement the tank construction and commissioning and this service is similar to what we offer under terminal/tank farm construction in our downstream oil & gas business market. In the midstream, we offer construction of the following:

- * Crude Storage Tanks
- * Condensate Tanks
- * LPG & Propane Storage (High-Pressure Bullet Tanks are fabricated from our affiliates' ASME stamped fabrication shops)
- * Produced Water Tank
- * Coolant Water Tank
- * Sump/Sludge Tanks
- * Utility Fuel Tank (Diesel Tanks)
- * Firewater Tank
- * Potable Water Tank



MIDSTREAM OIL & GAS TRANSPORTATION

Crude Oil & Gas Pipelines

Selex offer complete EPCI solutions for pipeline construction. The project delivery phases follow suit as we have previously described in our services, the engineering, procurement, construction/installation and commissioning of both gas and crude oil lines. We have capacities for:

- * Land Pipelines
- * Swamp Pipeline
- * Compression/Pump Stations (Along pipeline stretch)

Subsea Pipeline systems are solutions in view for Selex as we continually improve on our capabilities.

Metering, Custody Transfer & Prover Units

We are well experienced in the design and construction of lease automatic custody transfer (LACT) units. We also design and build metering skids for crude oil and gas and

other process medium. We follow Client's, DPR and ISA regulations. Piping of unit is constructed in compliance with ANSI B 31.4 piping code. We select the appropriate meter type per application to ensure accuracy. Details of LACT Unit electrical and instrumentation are discussed under our EICA services.

Dosing & Sampling Units

Selex designs appropriate solutions per application and fabricate in line with our procedures for other fabrication services. We discuss more of the electrical and instrumentation of the dosing units and sampling units under our MEICA services.

Barge/Haul Truck Vessels

We construct tanks for products haulage. We design and construct add-ons (Modification) for open barges to make them suitable for product transportation be it liquid products of gas products. The same applies for building and installing pressure vessels and liquid-carrier tanks on haul tanks.





OIL & GAS PROCESS CONSTRUCTION SOLUTIONS

Petrochemical Plants & Refineries

Our petrochemical plant and refinery construction follow the same sequence as our mid-stream process plant construction, you can refer to our details on process plant construction. The difference between our approaches to onshore process plant and petrochemical/refining plant is that for latter set, Selex tend to carry out concept engineering in collaboration with certain globally high-profiled engineering companies with extensive number of years of experience with more complicated processes like the refinery and petrochemical processes. We also require high inputs from licensors all through design phases.

Upon success of engineering, Selex proceeds to the rest of the EPCIC process independently and successfully as usual, follow our standard strategic planning and procedures.

In cases where investment cost is high, we encourage design and construction of modular plant to our customers to help them get started with production without necessarily investing the cost of envisage plant final capacity upfront, thus, customers can plan to realize the revenue for completion of plant to desired capacity through proceeds from initial plant modules installed and commissioned.

We offer construction for both conventional/non-modular refineries and modular refineries, as well as non-modular and modular petrochem plants. We venture in Olefins, Aromatics and Synthetic Gas categories of petrochemicals.

Refined Product Storage Terminal

At the downstream segment of the oil & gas, construction of terminals for bulk storage sale is a major process on its own. Although, the construction of tanks in the midstream which we earlier described is almost the same with construction of terminals, the only differences are that entire process is about the process of feeding the tanks with content and taking out the contents for sale and that the products involved here are refined (white products) and ready-for-use gases. The products here are basically PMS (Petrol), AGO (Diesel), DPK (Kerosene), Jet-A1 (Aviation Kerosene), Methanol, CNG, LPG, Propane and LNG. We handle construction and installation of all units as listed below:

- * Pig Receiver
- * Filtration Unit
- * Pump Units
- * Plant Piping/Valves
- * Product Tanks (Aboveground & Underground)
- * Utility Tanks (Fuel & Water)
- * Sludge Tanks
- * Analyser Units
- * Metering Units
- * Tang Gauging System (TGS)
- * Terminal Management System (Including level monitoring & alarms)
- * Loading Units
- * Firefighting systems
- * Instrumentation & Control System
- * Power & Electrical System



OIL & GAS PROCESS CONSTRUCTION SOLUTIONS

- * Civil Works
- * Utility Buildings

We have a very fantastic timeline for the design, construction and commissioning of tank farms. We can guarantee you best bargain on project schedule. Construction of high-pressure gas tanks is in collaboration with our technical partners in Mexico.

Refined Product Transportation

Refined products (liquids and gases) are transported through barges and haul trucks, just as defined in our midstream services, we design and construct fit-for-purpose and safety optimized tanks/vessels to be mounted on trucks and retrofit barges for product transportation purposes. Our designs are complete with all process balancing systems and components like electrical (power and especially

earthing), instrumentation (parameter measurement, metering, ESD, etc.), automation and control. ATEX rated pumps help with on-loading and offloading while printers are helpful for the business side of the haulage. In some cases, we pre-install tracking systems on haul trucks and barges.

Retail Stations

Selex design and construct “state-of-the-technology” filling stations that meet customer requirements, DPR requirements and that is appealing to customers.

We build and install underground tanks, distribution pumps, retail pump units, piping, sampling and tank level measurement systems, all electrical/instrumentation/control/firefighting system, civil structures and buildings.



ELECTRICAL, INSTRUMENTATION, CONTROL & AUTOMATION (EICA)

EICA are considered specialized disciplines, while these disciplines form part of the systems/structures/components that make up a plant, it is very essential that they are treated with dedicated attention (...more like an independent project) for best outcome.

This is the reason most main EPC contractors carefully select suitable subcontractors to handle these scopes. Selex is well positioned to function as EICA subcontractor to itself (In cases where Selex is the EPC contractor) or to other EPC contractors (In cases where another entity is the EPC contractor). This form part of the greatest advantages of Selex as a company that evolved from a well-established EICA company (ARIL Technologies Limited) Selex as a subcontractor is able to design, procure, construct/install and commission EICA systems as part of a turnkey plant construction project or as part of an EICA retrofitting, upgrade or modification & enhancement of plant power and control systems. The reality in the industries today is that most green field EICA subcontracts awarded does not require the EICA contractor to take responsibility for engineering since most of the EICA engineering has been covered by the primary project engineering and design contractor, the EICA contractor mostly procure if procurement is not handled by client or main contractor, construct (structural support and minor civil where necessary), install and commission.

Technically, most EICA subcontract on greenfield plant construction project in the Nigerian oil & gas and other industries only leave subcontractor with installation, configuration and commissioning scopes of the EICA works. This trend is the beginning of the failure in project commissioning since the disciplines experts has been left out in critical scopes (...like engineering into procurement and even minor civil for instrument/equipment plinth, channels/trenches, shelter and bases) of the EICA works. So how does Selex solve this problem without necessary influencing a change in the trend? We simply offer an EICA engineering/design validation and confirmation of procurement MTO before accepting a subcontract. In this manner, project commissioning failures resulting from oversights and errors associated with engineering and procurement is fully abolished. We stand out when it comes to supporting our main contractors and end-users achieve seamless and successful projects, and we are one of the best in the market when it comes to construction interface management.

Engineering

We have engineers with experiences in the different areas of EICA including plant power generation, electricity distribution, electrical safety, lighting, electric-based corrosion control, instrumentation, metering, automatic control, fire & gas, analysing, and other areas. We design systems for both turnkey projects and retrofit projects where we take



ELECTRICAL, INSTRUMENTATION, CONTROL & AUTOMATION (EICA)

full responsibility for our designs since we are bound to install and commission same. This places us on a very high advantage level because our engineers don't only sit in the office to design, our engineers liaise with a lot of manufacturers of systems components, supervise field installation and also commission the systems. This means our design is from an angle of authority having being there several times. Our clients are covered all round as we are highly knowledgeable in designing systems that safe and non-prone to downtime. We have required hard ware tools and software applications like Intergraph, ETAP, Autocad. We also maintain a rich library of standards and codes including EN, NFPA, ISA, IEC, IEEE, NEC, NERC and others.

Engineering deliverables as systems integrator include:

ELECTRICAL

* Area plans

- ⌘ Hazardous area classification drawings
- ⌘ Area key plans for Lighting, tray and grounding layouts

* Layout drawings

- ⌘ Grounding layouts
- ⌘ Plant cable tray and cable routing layouts
- ⌘ Plant and buildings lighting layouts
- ⌘ Substation layouts
- ⌘ Switchgear building equipment layout
- ⌘ U/G duct bank layout etc.

* One line diagrams showing interlocks, inter tripping, system capacity, Voltage levels, currents, impedances, generation power levels etc.

- ⌘ Key one line diagram
- ⌘ 138/4.16 kV one line diagram
- ⌘ 4,16 kV (MV) one line diagrams
- ⌘ 480V one line diagrams
- ⌘ 120 VAC UPS one line diagrams
- ⌘ 125 VDC UPS one line diagrams
- ⌘ Emergency power one line diagrams etc.

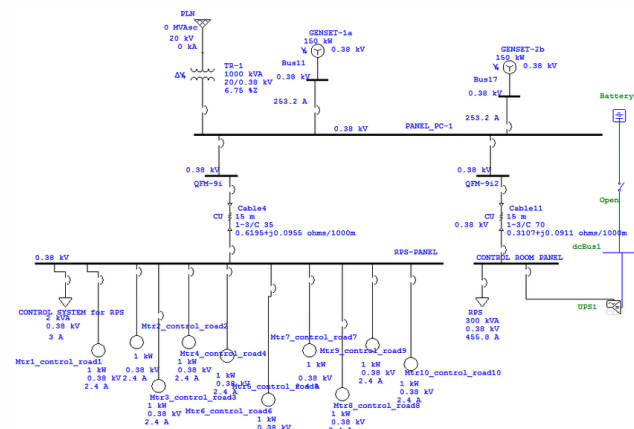
* Schematics

- ⌘ 4 kV motor schematics
- ⌘ 460 V motor schematics

- ⌘ MOV control schematics
- ⌘ Lighting control schematics
- ⌘ Heat tracing isometrics etc.
- ⌘ Equipment drawings including vendor prints
- ⌘ These drawings shall be supplied for all the major tagged equipment such as Transformers, Switchgears, MCCs, UPS, Chargers, Generators, Power supplies, PTs, CTs, Control panels, packaged equipments etc.
- ⌘ Front and interior layout showing all the components
- ⌘ Wiring drawings and terminal connections
- ⌘ Installation details including manuals
- ⌘ Component maintenance and instruction manuals
- ⌘ Electronic equipment manuals and settings
- ⌘ Fuse ratings and characteristic curves
- ⌘ Equipment and component datasheets
- ⌘ Weights and measurements
- ⌘ Schematics
- ⌘ Equipment specifications
- ⌘ Motor datasheets
- ⌘ Circuit breaker settings
- ⌘ 3 Line diagrams
- ⌘ Battery details including amp-hour ratings
- ⌘ Relay settings and relay discrimination curves
- ⌘ Data sheets and environment limitations
- ⌘ HVAC requirements
- ⌘ Manufacturing data books
- ⌘ Spare parts lists etc.

* Inter connection diagrams

- ⌘ Inter connection drawings between panels



ELECTRICAL, INSTRUMENTATION, CONTROL & AUTOMATION (EICA)

Details

- ⌚ Hazardous area classification details
- ⌚ Installation details for Lighting, grounding, heat tracing etc.
- ⌚ Duct bank details

* Lists and Schedules

- ⌚ Cable routing schedules
- ⌚ MCC schedules
- ⌚ Lighting and Distribution panel schedules
- ⌚ Heat tracing panel schedules
- ⌚ Load lists
- ⌚ Electric equipment list
- ⌚ Bulk material lists and catalogue numbers
- ⌚ Cable tray penetration details in to buildings

* Calculations

- ⌚ Tray sizing calculations
- ⌚ Heat tracing calculations
- ⌚ Equipment sizing calculations
- ⌚ Lighting level calculations
- ⌚ Emergency power load requirements

* Studies and reports

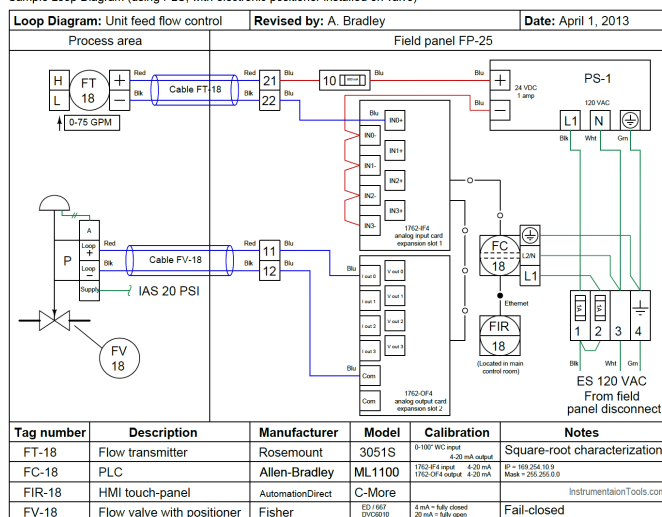
- ⌚ System studies showing fault levels, arch flash effect, short circuit current, Minimum/ Maximum
- ⌚ Load flow analysis, motor starting effects and system stability, voltage levels
- ⌚ Transformer tap settings
- ⌚ Motor protection settings
- ⌚ Relay setting schedules including setting curves

INSTRUMENTATION & CONTROL

- * P&ID Revision
- * Basis of Design
- * Equipment List
- * Instrument Index
- * System Block Diagram
- * Specifications Defining functionality of systems and interfaces between systems
- * Instrument Specification & Datasheet Template
- * P&ID Symbols, Legends, Specimen Diagrams, Tag Details
- * System Graphic Displays
- * Control Logic Diagrams based upon ISA2
- * Instrument Specifications for equipment and materials
- * Instrument Data Sheets based on ISA S20 templates Data Sheets
- * Instrument Index
- * Relief and Safety Device Index
- * Alarm and Trip Schedule

- * Control Room and Control Building Layouts
- * Instrument Location Drawings
- * Instrument Cable Routing
- * Panel and Rack Layouts
- * Instrument and Control System Schematics
- * Instrument Power and Utility Requirements
- * Power Distribution One line
- * Power Distribution Schedule
- * Grounding Diagrams for instruments and control system
- * Instrument Junction Box Schedules
- * Instrument Cable Schedule
- * Termination Schedule/Diagram
- * Instrument Hook-Up Diagrams (Electric, Pneumatic, hydraulic and/or Process)
- * Air Distribution Diagram
- * Instrument Junction Boxes and Panels Block Diagrams
- * Interconnection Diagrams
- * Loop Diagrams
- * Requisitions for equipment and bulk materials
- * Input/Output Schedules
- * Instrument Design Data and Engineering Calculation

Sample Loop Diagram (using PLC, with electronic positioner installed on valve)



CONTROL, AUTOMATION & SCADA

- * Automation & SCADA Philosophy
- * PLC/DCS/SIS Logic Development
- * Integrated Control & SCADA Architecture
- * Design and Configuration of Control System Communication System

ELECTRICAL, INSTRUMENTATION, CONTROL & AUTOMATION (EICA)

- * Design and Configuration of SCADA and Telecommunication System
 - * HMI Philosophy Development
 - * HMI Graphics Development per Philosophy & P&ID
 - * Local Operator Interface (LOI) Development Philosophy
 - * LOI Graphics Development
 - * Configuration Format for Alarms, Event-loggers & Trends
 - * Diagnostics Configuration Guide
 - * Network Architecture
 - * Preparation of Operators Training & Maintenance
 - * Communication Setup Documentation
 - * Data Capture and Display Format
 - * Historian Configuration Guide
- In possible instances, our engineering designs are validated with each manufacturer whose products are featured in the design. We maintain relationships at different levels with major OEMs like Siemens, Schneider, Emerson, Rockwell, Honeywell, yokogawa, ABB, Endress Hauser, GE, Swagelok, General Monitor, MSA,

Detronics/Autronica, and more.

Procurement

The buying process for EICA projects is a highly technical task that requires proper knowledge of each equipment and material function and how it fits to the overall project. Procurement drives cost and schedule so we optimize it as much as possible through maintaining relationships with manufacturers and suppliers. We save time and money for the client and main contractors through discounting on products from OEMs we partner for local sales representation. We also proffer alternatives to our clients when necessary.

Aside our dedicated procurement personnel, all our engineers are also trained in sourcing, buying and expediting. We maintain master lists of suppliers and manufacturers and the list is frequently revised to add or remove suppliers/manufacturers or to increase or decrease suppliers/manufacturers' rating.

Construction & Installation

Selex in-house project implementation teams for EICA are made up of highly experienced project managers (Including accountants & cost managers), HSE officers, QC officers, discipline engineers, multidiscipline engineers, commissioning experts, specialist technicians and multi-skilled technicians. This forms the backbone of our construction and installation successes. Fabrication quality (Weld type and grade aligns with plant structural requirements for secondary structures).

Our operations cover:

- * Civil construction of equipment bases & shelters
- * Construction of cable ducts & trenches
- * Fabrication of equipment supports & cable trays
- * Building of power & control panels (A dedicated business segment)
- * Laying & termination of cables
- * Erection and emplacement of equipment (Generator + components, transformers, RMUs, panels, prefab skids etc.)
- * Installation of instruments & lighter-weight equipment (Meters, JB's, switches, displays,



| ELECTRICAL, INSTRUMENTATION, CONTROL & AUTOMATION (EICA)



sensors, transmitters, gauges etc.)

Configuration & Commissioning

Selex have experienced commissioning engineers who are often led by the company's lead director into any complex commissioning exercise. The directors of Selex takes full responsibility for commissioning exercises. We follow our procedures containing inputs from OEMs, clients and Selex team members.

Configuration and commissioning EICA requires personnel that are highly knowledgeable and meticulous.

Our commissioning checklist ensures:

- * Main contractor endorsement of procedure
- * Inspection of Construction & Installation Done
- * Mechanical Completion & Calibration Done
- * Availability of construction/installation team on site
- * Availability of major/critical equipment manufacturer representative
- * Availability of client representative
- * Availability of commissioning spares
- * Availability of firefighting systems & emergency responders
- * Availability of all configuration, programming, calibration, test and commissioning



ELECTRICAL, INSTRUMENTATION, CONTROL & AUTOMATION (EICA)

POWER & ELECTRICAL

In the oil & gas, aside some mid-stream and down-stream facilities, it is more common that every process facility generate its own power for production and utilities. At Selex, we are well experienced and familiar with the power system needs of different facilities and we are very knowledgeable in design, construction, operations and maintenance of both self-generated power, shore power and hybrid power where there may be need for the combination and/or switching between different sources.

We carefully design power systems to ensure adequacy of supply, stable and steady supply, ease of maintenance, cost saving, equipment protection, personnel safety and environmental protection which all contribute to overall plant efficiency and guaranteed productivity.

We are able to achieve our goals in power systems solution through the application of software tools such ETAP, SKM, MATLAB and more.

In the area of electrical systems, we tackle all HV and MV challenges alongside power systems while LV & ELV are tackled alongside instrumentation & control solutions.

We design and construct generation modules/plants, grid hook-up, transmission systems including step-up/stepdown transforming, switching & protection, MCC, HV & MV cabling, and power metering.

Plant Power Generation & HV/MV Distribution Systems

In every process plant, the heart of the operations is the power supply. Selex will group any plant power generation works below 500KVA under electrical services while above 500KVA is considered as plant construction, this is because for generator engines delivering over 500KVA, a lot of construction works will be involved especially in areas of installation of engine, cooling/radiation system, fueling system, RMUs, primary cable laying, transformers, cut-offs/change over, metering units, exhaust system and other balance of plant (BOP) components.

Selex engineers apply software applications like ETAP for design, modelling and analysis. Our seasoned technicians proceed to installation, while our commissioning engineer commission in the presence of a director. We design HV and LV systems, we design systems for mains only and we design hybrid systems where a plant can use both shore power and self-generated power. We design thermal generation and renewable energy sources and we give preference to green energy where possible, we are member of many energy efficiency and sustainability outfits.

Power Synchronization Systems

The flexibility of power systems become essential in environments where load value doesn't remain permanently consistent, for example, a facility may



ELECTRICAL, INSTRUMENTATION, CONTROL & AUTOMATION (EICA)

require a maximum power of 500KVA during certain operations and may require as much as 1MVA in some operational occasions. Consider an FPSO requiring certain power supply during regular operation but in the period of production export or custody transfer when transfer pumps and other related equipment are powered-on for the transfer purpose, power demand is raised at that particular instance and this is a major reason among others why synchronization of power becomes essential in certain projects.

In the case of such FPSO, the generation unit may comprise of just 2 units of 750KVA generators whereby one unit (either of the two) can function during normal operation and in the period of higher power demand, both generators are put to work and the generated power will be synchronized to achieve the supply needed. Either one of the generators can also fill in service in place of the other, while giving room for the maintenance and repairs without a blackout.

We are vastly experienced in the design and building of power synchronization and generator/equipment monitoring panels fit for load balancing, load shedding, optimization of supply and generation efficiency among other functions. Our sync panels are mostly woodward relay module and PLC based.

Plant LV Electrical Systems (Cabling, Termination, Glanding, Tagging)

Selex takes on green field and brown field projects, we also take on electrical (mostly alongside instrumentation & control) either as turnkey EPCIM or by deploying one or more of the modules encapsulated in EPCIM as may be required by our clients.

We thus retain in-house capacity as well as external resources (needed for mandatory 3rd party services) to carry out several forms of E&I construction and installation works by either implementing our own design or designs provided by client which we often firstly subject to design review and verification to ensure feasibility, error-elimination and excellence. The complimentary engineering review and validation service we offer happen to be one of our value proposition to our numerous clients, especially those who understand

the cost & time implications that design errors can cause to any project.

We have procedures generated in-house in line with industry standards that guide our construction works. We are conversant with most, if not all activities in electrical construction and procedures are available for each of the activities and even tailored to the peculiarity of each project. We are familiar with most IOCs' procedures for construction works, we find it easy to interpret and apply.

We have adequate experience, personnel, equipment and tools for cable testing, cable laying, cable tray and other electrical structure fabrication and installation, minor civil works for electrical, earth pit construction, tagging, landing, termination, lighting installation, transformer/RTU/ACB testing and installation, earthing system testing, lugging, tagging, and more.

Electrical Panel Building

Selex team work tirelessly with client's team to obtain the details of client's needs, in that process, we ensure to perfectly understand the client's processes and in turn jointly determine the most ideal switching philosophy for the client's plant either existing or plant in concept.

Our engineers then proceed to single-line, switching and detailed panel design. Our panel assembly technicians then proceed to build switchgear panels & MCC panels that perfectly suit the customer's purpose following industry standards and best practices. We design most of our panels using MATLAB.



ELECTRICAL, INSTRUMENTATION, CONTROL & AUTOMATION (EICA)

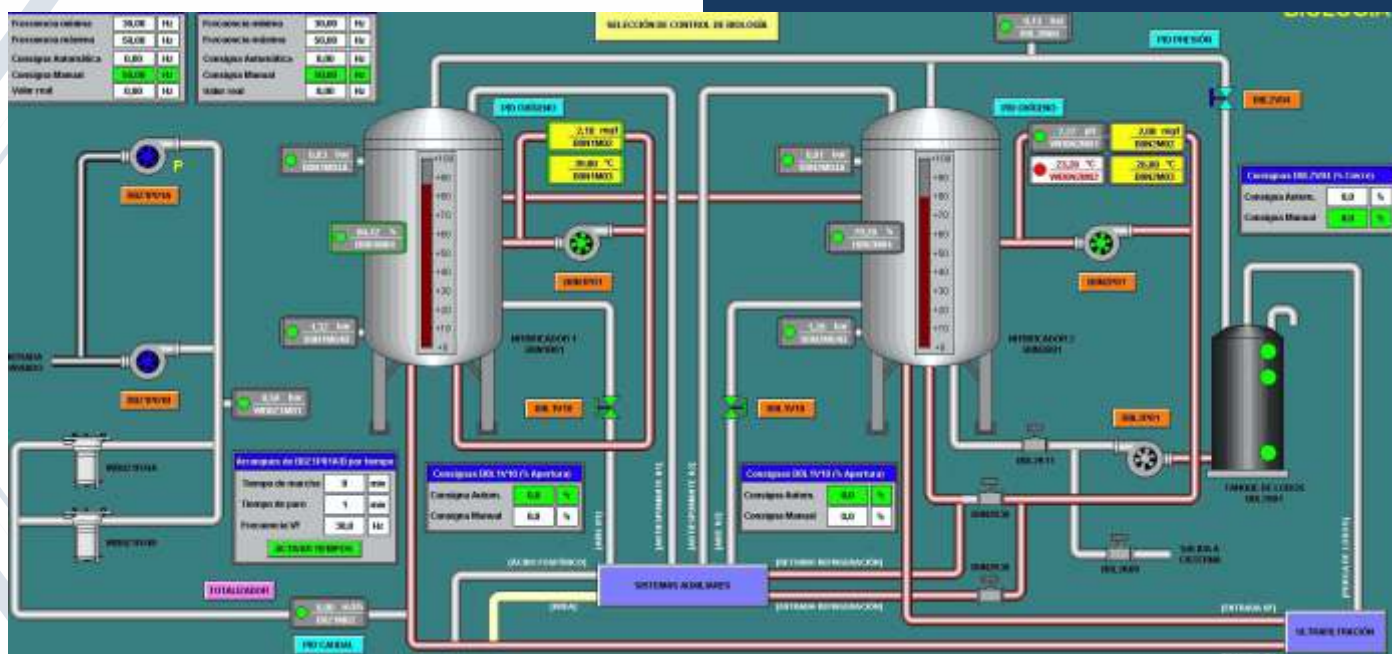
INSTRUMENTATION, CONTROL/AUTOMATION

Instrumentation

In similarity to the electrical system, Selex experienced engineers and technicians install all process instruments following installation drawings provided, OEM guideline and industry best practices. We install, calibrate, configure and commission individual instruments and instrument (Measurement, analyses, dosing, etc.) skids. Instruments such as sensor and transmitters for pressure, temperature, level, differential pressure,

SIS Systems

The safety instrumented system is similar to the PCS system, in this case we have a lot of instrument interlock that commands actions related to process and plant safety like emergency shutdown. Systems are also designed to certain specifications, example is safety integrity level (SIL 1, 2, 3), while equipment used for SIS systems are expected to meet certain certification requirements like UL.



flow, etc., gauges.

The values from these instruments are cascaded to the control system (DCS/PLC/Proprietary Micro-processor controller) through protocols like TCP-IP, HART, Wireless Hart, ISA 100, Profinet, Modbus, 4-20ma, dry contact switching, direct load switching, IIOT network, etc.

PLC & DCS PCS Systems

The programmable logic controller and the distributed control system are the most popular industrial control and automation as well as Supervisory Control and Data Acquisition (SCADA) backbone. We have manpower and resources to deploy robust process control system (PCS), Automation and SCADA systems.

We deploy full range fire and gas detection and alarming solutions. Explosion proof (ATEX) or intrinsically safe equipment are used in protection of hazardous areas. Fire & Gas Alarm Control Panels are SIL rated where necessary. Our safety design engineers follow applicable standards per project peculiarity, they include IEC 61508, NFPA 72, EN54 and other. Designers carry our fire mapping and specify equipment like catalytic bead gas detector, IR gas detector, open path gas detector, flame detector, ultrasonic leak detector, photoelectric smoke detectors, heat detectors (fixed or rate-of-rise), carbon monoxide detector, hydrogen sulfide detectors, sounders/beacons, manual call points, emergency push buttons and others as appropriate.

ELECTRICAL, INSTRUMENTATION, CONTROL & AUTOMATION (EICA)



Instrumented Safety & Security Systems

We deploy security scanners, CCTV (ATEX or non-ATEX), Access Control System, Time & Attendance System, Bollards, Turstiles, Speedstiles, Barriers, Asset Tracking, Burglary Alarm, Visitor Management System, Emergency Lighting and Automatic Full-Body Sanitizers.

We also supply all types of PPE including firefighters' fire retardant gear, body harness, respirators and personal mobile gas detectors.

Pre-Engineered Control Room

Over time of services to clients building new control and retrofitting/expansion of existing control rooms, we have gained knowledge in design and build of pre-engineered control rooms including modular for scalable projects and non-modular for non-scalable projects. The major concept behind the pre-engineered control room is to apply the knowledge of a plant's process and required control functions to determine which of the ICSS system will be required as well as control functions for OEM packages such as compressors, pumps, firefighting, etc. We build control panels and positioned them as appropriate per control

room floor plan. As for OEM pre-packaged control and integration units, we obtain approved designs from OEM via client to make adequate space provisions for the OEM consoles in the control room design.

The control room building are design to either withstand explosions or otherwise depending where the control room will be situated in the plant type of plant in question. At minimum, our fabricated control room building are fire rated, IP67 rated to withstand harsh weather conditions, and reinforced to withstand casual attacks.

We build control panels for PCS/DCS, F&G, ESD, Telecoms (Servers & Routers), surveillance systems, access system, plant lighting, marshalling cabinets & charms cabinets for PCS/DCS, wide-screen HMI/display units, operator & engineering workstations, provide for cable trays & cutouts for cables in the control building, and also provide fire detection & alarm, lighting, power distribution, access control, emergency signs, fire suppression and HVAC.



PLANT OPERATION SUPPORT, MAINTENANCE & UPGRADE

Plant Operation Support

These services are those collection of services that Selex render in support of clients' plant operations ranging from call-out for technical intervention for any part of the main process as well as BOP systems (Mechanical, Electrical, Instrumentation & Control), SLAs for routine maintenance on equipment/system/process, man-power management, and other outsourced services related to day-to-day plant operations. On-demand maintenance, troubleshooting & repairs, routine maintenance activities on callout and turnaround maintenance contracts all fall under this category of services.

Our knowledge of construction and commissioning makes operations and maintenance relatively easy for us.

We develop or modify plant operations manual /procedures to ensure effective and safe operations. As examples, to carry out maintenance activities on a normally pressurized line, a procedure must include step by step guide to carry out depressurization and to ascertain no pressure is trapped in any part of the line. Another example in electrical is the strict adherence to log-out tag-out (LOTO) process for safety during electrical systems maintenance and troubleshooting. We develops these typical procedures and more specific operations procedures especially in cases where plants lack documentation

Manpower Supply

Selex E&C provides Skilled Manpower Labour to the Oil & Gas Industry across the upstream, midstream and downstream sub-sectors for



projects and operations, on a short or long-term basis. Our highly qualified pool of resident and freelance professionals and highly skilled labour can support diverse levels workforce ranging from field operators up to asset management personnel. Selex E&C have a robust framework for identifying the oil industry's manpower requirements per time by observing customers' needs and industry trend. We in turn continually scout for appropriate personnel and by utilizing appropriate screening and matching methods to ensure that only suitably qualified personnel are selected and pre-engaged, we are in the position of best advantage in provision of required manpower within record short time of notice.

Prior to dispatching personnel to our clients, we further conduct general safety & OP (Operating Procedures) training and plant-specific simulation-based training for personnel that will operate plants or run plant maintenance and field based safety-related tasks.



PLANT OPERATION SUPPORT, MAINTENANCE & UPGRADE

The success and continuity of any plant is largely dependent on the availability and suitability of skilled manpower for excellent operations.

Selex E&C is a reliable partner that customers can rely on to respond to their needs by providing personnel suitable to deliver quality services at all times. In some cases, certain plants lack adequate documentations like process drawings (PFDs, P&ID, Loop Drawing, ETC.), operating and safety procedures, equipment manuals, etc., we offer the recreation of the drawings and also create manuals, procedures, and others.

We ensure adequate records of day-to-day activities are maintained, this is essential to seamless plant running and maintenance. Our personnel are also carefully selected by considering factors like professionalism and manners.

Our experienced skilled personnel facilitate robust knowledge transfer to customers' own personnel over the time of operations involving personnel from both sides. We provide personnel for operations of upstream production facilities, mid-

stream processing facilities and downstream processing & terminal facilities including but not limited to flow stations, compression/booster stations, EPFs, gas processing plants, gas LNG plants, drilling rigs, storages, FPSOs, refineries, petrochemical facilities and tank farms. We cover every part of the plant main processes, plant systems (PCS, SIS, Electrical, Power Generation, etc.), plant laboratories and non-process operations like security, catering, transportation and others.

Maintenance & Upgrade

We will emphasize on reliability & integrity solutions, SLAs, preventive maintenance and turnaround maintenance while we just make mention of the others.

Reliability & Integrity Solutions

Reliability and integrity is focused on the special operations and maintenance activities aimed at ensuring that process facilities are functioning at full efficiency and accuracy, whilst protection of the wellbeing of all personnel and equipment involved in facility operations is ascertained. It is also necessary to track degradation of structural parts and piping. Deploying effective cathodic protection system and also carrying out composite or full-scale repairs to reduce rate of asset depreciation. The operations ensure that against all odds, a facility can run its life cycle optimally, and running up to its actual design life time. Preventative maintenance on rotating equipment is also part of our portfolio.

E&I Integrity services (Hazardous Area Integrity/Inspection & Maintenance/Calibration)

- Inspection Services & Solutions
- Asset Security & Monitoring Solutions
- Cathodic Protection Solutions

We deploy impressed current or sacrificial anode type of protection. We carry out comprehensive design and construction of CP systems. We deploy rectifiers from trusted brands.

Integrity Engineering Management

- Non-destructive Testing
- Quality Services (3rd Party Vendor Inspection)
- Complete Caisson Management Solutions
- Performance Maintenance



PLANT OPERATION SUPPORT, MAINTENANCE & UPGRADE

- Asset Performance Improvement
- Strategic Asset Management
- Critical Equipment Spare Availability Management
- Service Level Agreement (SLA) for Contract Management of Critical Operations

Turnaround Maintenance

Selex being an EPCI company and having experience in plant operations, we are very conversant with the degradation curve of most process plants. We therefore know what it takes to restore plants to optimal performance level.

We do not absolutely rely on 3rd party asset integrity audit to carry out TAM, upon provisional contract award or an early but comfortable stage, Selex conducts an independent asset integrity audit to validate any report issued by others and offered for use by client.

We understand that in instance of plant TAM, audit reports play similar role played by front end engineering design on an EPCI project. Once the audit process or reporting lacks integrity, the TAM project is bound to suffer challenges.

Plant Upgrade & Extension

This is similar to our standard green field EPCI services. The only difference is that our basis of design pays significant attention to the details and impact of the existing plant processes.



FACILITIES & EQUIPMENT



Selex own some equipment and also have very wide access to 3rd party equipment and facilities owned by our collaboration partners and sister companies including ARIL Technologies Limited and Loneb Resources Limited. Selex own lots of software & hardware tools applicable for plant construction, E&I and O&M. We also have our own operation offices in Lagos, and liaison offices in Houston and Calgary.

ARIL own an extensive list of equipment and facilities including a state-of-art electrical & control panel building shop, pre-engineered switchgear production facility and electrical components/instrument assembly and calibration facility. Tools also include complete cathodic protection survey and commissioning sets, laser levelers, welding machines, personal safety electronics & gear, self-loader and others. Loneb own a complete portfolio of fabrication and construction equipment and a state-of-art fabrication yard in Lagos, Nigeria.

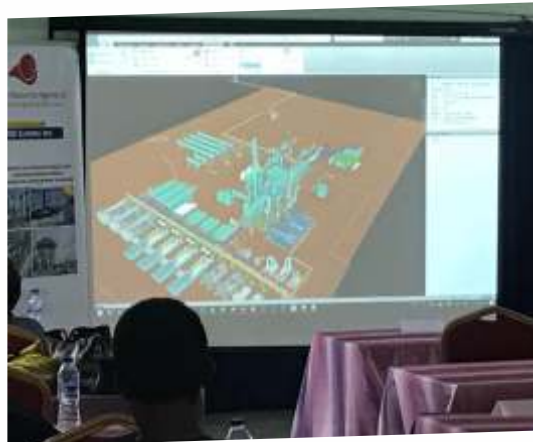
Equipment include swamp buggy, diverse capacities of cranes, forklifts, bulldozers, self-loaders, low beds, diverse types/capacities of welding machines, painting equipment, NDT equipment, piling equipment, personnel carriers, life-camping accommodation, simulation-based process operators' training facility and diverse civil construction equipment.

When Selex combines her self-owned assets with that of our collaboration partners, we are confident that we can comfortably meet the requirements of any project.

All equipment and tools are available for inspection after 24hours notice period.



FACILITIES & EQUIPMENT



Kindly note that some of the equipment pictured above belong to our sister companies and collaboration partners, allow 48hrs for inspection.

REFERENCE PROJECTS | CLIENTS | OEM PARTNERS

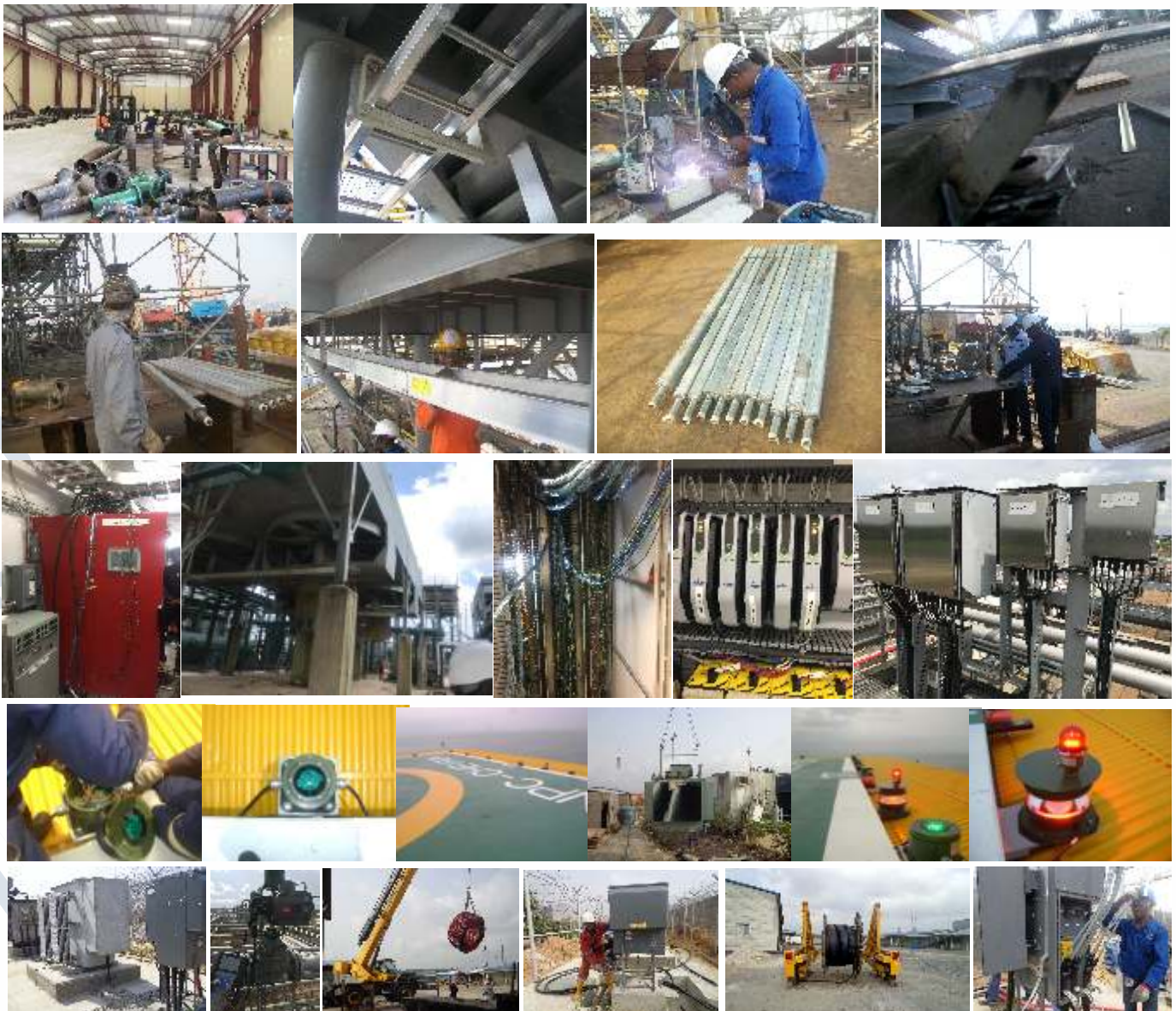
As a company that is young in age but rich by experience, our overall project experience wealth and proof of capabilities are derived by referencing projects awarded to Selex E&C directly and projects implemented or managed by our directors, key managers and engineers while in service to other companies.

A list of reference projects are available on request. We have provided random images from several completed-projects below.

As an EPCI company who also engages in systems integration/EICA, we are open to all good brands, however, we have special agreement with some of these OEM/brands. Further details on our relationships with manufacturers can be provided on request.

We currently serve several clients and we hope to gain more coverage. Basically we are open to a very wide market and all industries.

Our customers are named on our reference project list.





www.selexengineering.com



info@selexengineering.com



+234 812 515 6465; +234 708 638 1177,
+234 802 84 43768; +234 901 757 3310



Nigeria (Main): 10B, Tosin Adelowo Street,
Idado Estate, Lekki, Lagos. 105101.

Nigeria (Liaison): 7th Floor, Mulliner Towers,
39, Alfred Rewane Road, Ikoyi, Lagos. 101233.

US (Liaison): 21407, Slate Crossing Lane,
Katy, Texas. 77449.

[in](#) [t](#) [@](#) @SelexEngineering