

EXPERTISE IN OIL & GAS ENGINEERING
ON THE CONTINENTAL SCALE



FORGES TARDIEU
ENGINEERING

FORGES TARDIEU LTD, INCORPORATED IN 1932 HAS ITS ORIGIN SOME MORE THAN 165 YEARS AGO FOLLOWING THE MERGER OF *FORGES & FONDERIES DE MAURICE LTEE* (1850) AND *TARDIEU & CIE* (1880). THE FORGES TARDIEU COMPANY HAS EVOLVED OVER TIME FROM A SIMPLE MECHANICAL WORKSHOP AND FOUNDRY INTO A SPECIALIZED ENGINEERING FOCUSED GROUP COMPRISING TODAY OF 13 COMPANIES LOCATED IN MAURITIUS, AFRICA AND ASIA AND ORGANISED INTO **5** CLUSTERS:



FORGES TARDIEU
ENGINEERING



FORGES TARDIEU
AGRICULTURAL



FORGES TARDIEU
SERVICES



FORGES TARDIEU
COMMERCIAL



FORGES TARDIEU
INVESTMENTS



“ WE ARE MORE THAN THE ENGINEERS OF YOUR PLANT. WE ARE YOUR PROJECTS AND PROCESSES CARETAKERS AND INTEGRATORS ”.

The company, through its specialized Oil & Gas Division within its Engineering Services Cluster has been providing, for decades, specialized services to the Petroleum/ Oil & Gas Industry in Mauritius, the Indian Ocean islands and in Continental Africa.

Driven both by our know-how and our proven international experience, we are seen as a reliable and recognized partner of the Oil & Gas sector at the African Continental level.

Our professional teams consist of mechanical engineers, CAD designers, draughts men, project and site managers, HSE and Quality Control officers, supervisors, technicians, coded welders and skilled workers.

We are familiar with the Oil Industry Standards (API & CODRES) as well as with NFPA codes and the Safety Culture prevailing in that specific industry.

Our competencies range from the rehabilitation of existing storage facilities at oil and gas terminals (tanks, pipelines, pump stations, heating systems, thermal insulation, instrumentation and control, loading and offloading of products, fire protection systems, etc.) to the supply of equipment and accessories; the design, supply and construction of greenfield new oil storage terminals, as well as hydrant systems for JET fuel at airport locations.

Our major fields of expertise in the Oil & Gas sector are the following:

- CONSULTANCY & FEASIBILITY STUDIES
- ENGINEERING AND DESIGN OF TANKS, PIPELINES, LOADING/UNLOADING GANTRIES
- PROJECT MANAGEMENT
- PROCUREMENT OF EQUIPMENT AND RAW MATERIAL
- ERECTION OF STEEL TANKS (JACK UP METHODOLOGY)
- AUTOMATION AND INSTRUMENTATION
- TESTING AND COMMISSIONING OF FACILITIES
- TERMINAL MANAGEMENT SERVICES

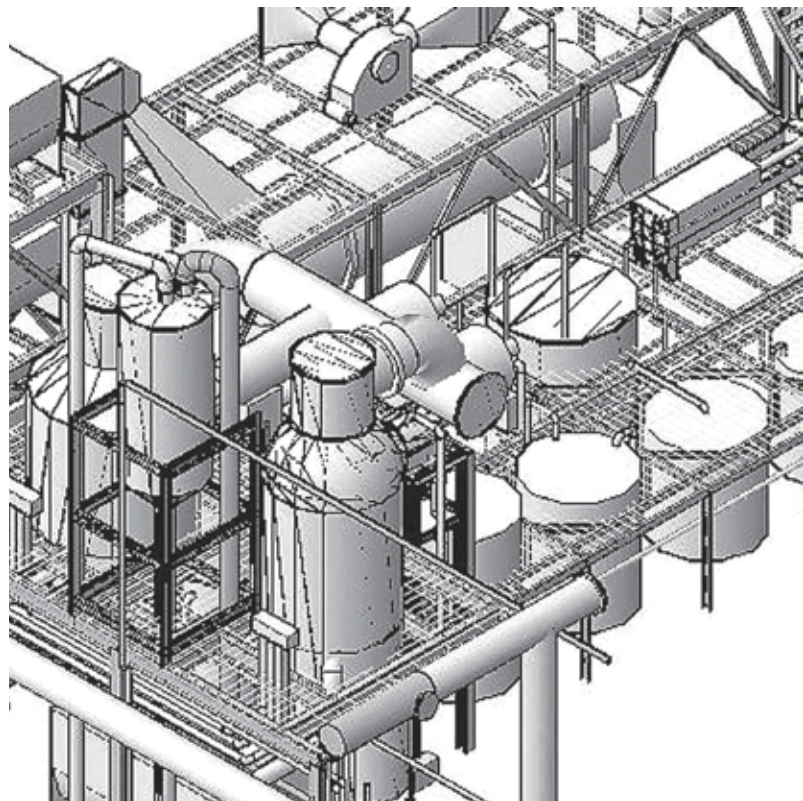
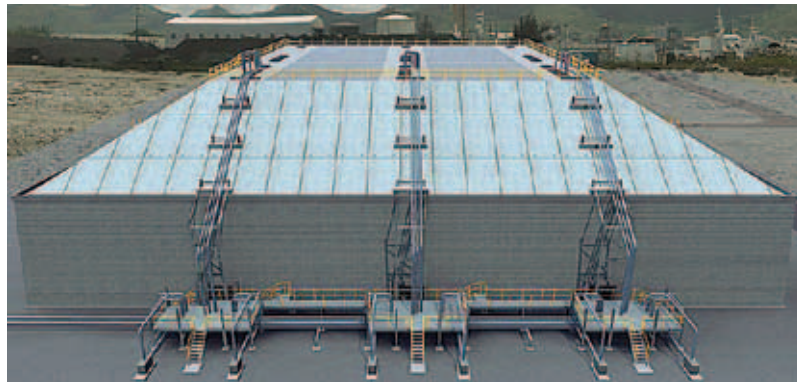
We can manage turn key projects on an EPC / EPCC basis (*Engineering / Procurement / Construction / Commissioning*).

We own and operate a multi skilled production facility of **17,768** square meters, the largest in the region, located in Port Louis, Mauritius, with easy access to the Port Area and we also own mobile cranes with lifting capacity ranging from 25 to 70 metric tons, which can be shipped to work sites as and when necessary.

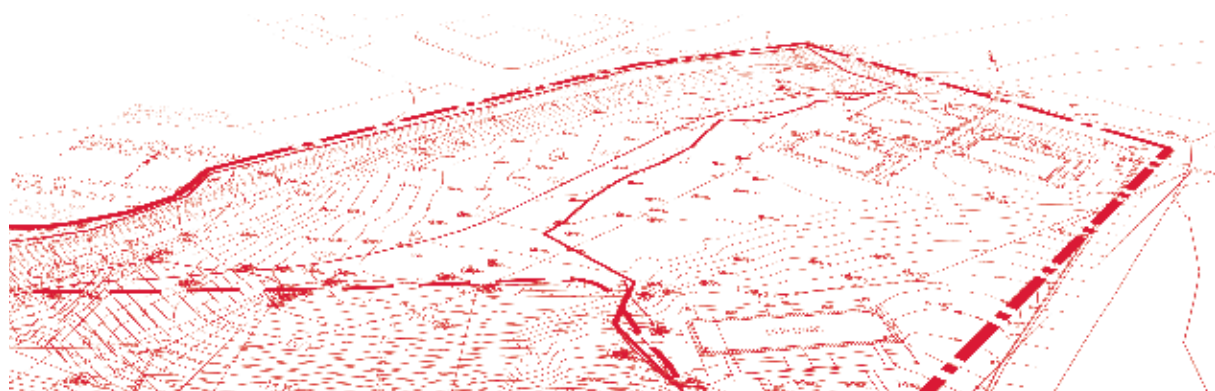
CONSULTANCY / FEASIBILITY STUDIES AND DESIGN SERVICES

We have a long proven track record in the design, manufacture and erection of storage tanks for the on-shore oil and gas industry. Our design team has hence developed extensive knowledge in the conception of oil and gas tanks, pipelines, process pipes and equipment, pressure vessels, heat exchangers, welding technology, etc.

We make use of the latest design technologies, namely the laser technology, which facilitates the conception of up-to-scale 3D designs.



“We make use of the latest design technologies, namely the laser technology, which facilitates the conception of up-to-scale 3D designs.”



PROJECT MANAGEMENT



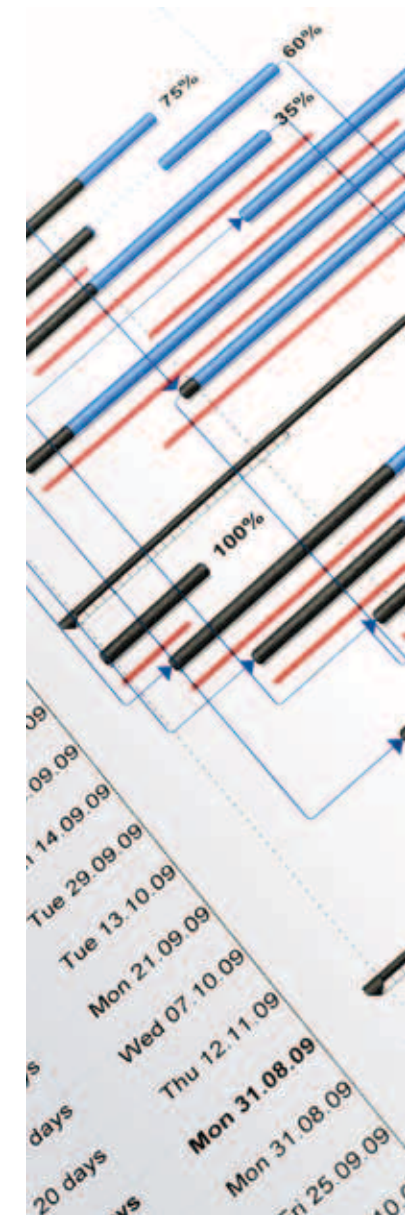
The Project Management division has proven expertise in developing, planning, executing and controlling a wide range of petroleum projects.

We pride ourselves in our ability to provide accurate, high-quality services tailored to individual project requirements. We can customize project management best practices to suit our clients' requirements and needs, while placing primary emphasis on all project milestones, including scope and definition planning, budget development, detail engineering, procurement, inspection and testing, construction, commissioning and start-up.

The purpose of Project Management is to direct the project towards the objective of four main goals:

- TO DELIVER ON SCHEDULE
- TO REMAIN WITHIN BUDGET
- TO ENSURE HIGH QUALITY STANDARDS AND
- TO SATISFY THE NEEDS FOR WHICH IT WAS UNDERTAKEN

The on-site project manager handles all the reporting and communication aspects of the project, and submits a "Construction Manual" with as-built drawings after the commissioning.



PETROLEUM STORAGE FACILITIES

Horizontal Storage Tanks

“Steel tanks used for bulk storage of petroleum products are designed by our engineers as per the latest editions of CODRES or API standards”.

We supply, erect, install and commission complete vertical and horizontal oil and gas storage tanks duly fitted with all key accessories and firefighting systems. Vertical tanks are designed and manufactured by our engineers, in strict conformity with CODRES or API Standards.



Vertical steel tanks used for bulk storage of petroleum products are designed by our engineers as per the latest editions of CODRES or API standards and fitted with fixed cone roofs including internal floating covers for highly volatile products.

We undertake the prefabrication of tanks (which consists in the cutting-to-size and rolling of the metal sheets), the fabrication of heating coils, nozzles, manholes, roof structures, ladders, walkways and handrails as well as shot blasting and prime painting in our workshops.

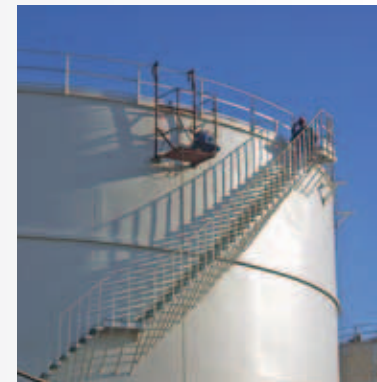
Prefabricated parts are packed in containers in kits form and shipped to the various projects locations for erection on site. All accessories and equipment, including valves, level gauges with HL and HHL alarms, fire-fighting pipes and nozzles, are supplied and assembled on-site.

Our experienced teams of supervisors, coded welders, boiler makers and riggers, with the support of local workers, use hydraulic jacks for erection purposes. The intermediate and final paints are applied during erection as per work progress. Compulsory tests performed on such tanks are vacuum box tests conducted on the bottom of tanks, NDT on welds, dye penetrant tests, compression/decompression hydraulic tests, settling and verticality recording.



Vertical Storage Tanks

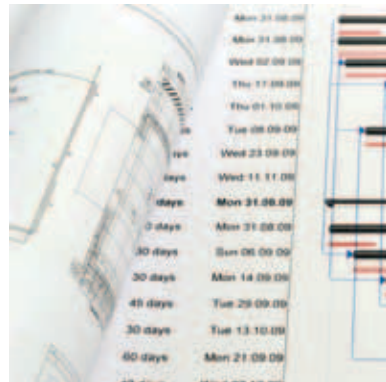
We supply and install underground and aboveground fuel storage systems, LPG tanks, tank equipment, and portable petrol stations for the local and international markets. Steel tanks are available in single wall and double walls, with dished, conical or flat ends.



TANKS AND PIPES-HEATING SYSTEMS

We have a long experience in the design, supply, commissioning and servicing of heating systems for tanks and pipelines for heavy fuel oil and asphalt/bitumen terminals.

We supply boilers fuelled by light fuel oil or diesel. Thermal oil is generally used to heat the product inside the tank and pipelines. Electric heater is an alternative option. Thermal insulation is achieved by the lagging and cladding of the tanks and pipes. Rock wool with a minimum thickness of 50mm is used for the lagging while the cladding is made with aluminum sheets. Several heating system options are available and the design depends on the client's requirement.



OIL AND GAS PIPES AND PIPELINES

From design to build and commissioning, our teams are geared to elaborate oil, gas pipelines as well as hydrant pipelines. We have successfully installed above-ground and underground pipes and pipelines at petroleum terminals, located at both airport and sea port sites. The pipes and fittings supplied are prepared in our workshop or on site, according to the project specifications, requirements and standards.

The on-site installation, welding and connection of pipes is carried out by coded welders, skilled fitters and riggers. Pipes and fittings can either be shot-blasted and painted in our workshop or on site. Final painting and pressure tests are done on site. Pipes for airport JET Fuel hydrant lines are supplied with appropriate coatings.

Our experienced team of engineers, supervisors, HSE officers and quality inspectors ensure that all works are carried out as per project specifications, applicable international norms and standards, and that it furthermore strictly abides by International HSE Standards and by any local regulation enforced in the country. The on-site project manager handles all the reporting and communication aspects of the project, and submits a "Construction Manual" with as-built drawings after the commissioning.



"We have successfully installed above-ground and underground pipes and pipelines at petroleum terminals, located at both airport and sea port sites".



CONTINENTAL PRESENCE & DEPLOYMENT CAPABILITIES OF FORGES TARDIEU

The **FORGES TARDIEU** - Oil & Gas Cluster is active in:

- DJIBOUTI
- TANZANIA
- MOZAMBIQUE
- MADAGASCAR
- COMORO ISLANDS
- MAURITIUS
- RODRIGUES
- RWANDA
- LA RÉUNION
- SEYCHELLES

In addition to the above, the **FORGESTARDIEU** Group is actively involved in other Engineering activities in the below countries:-

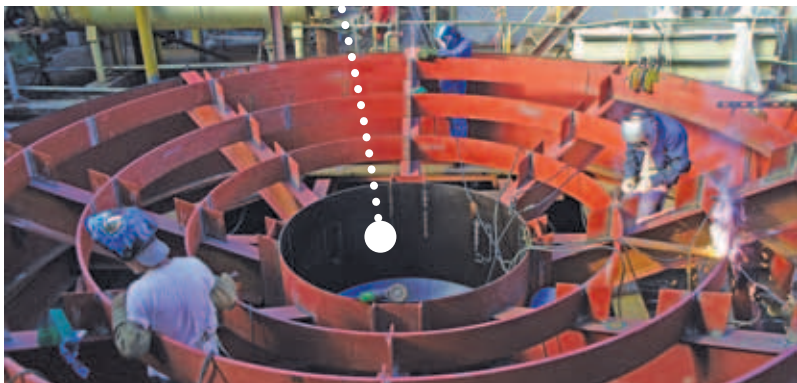
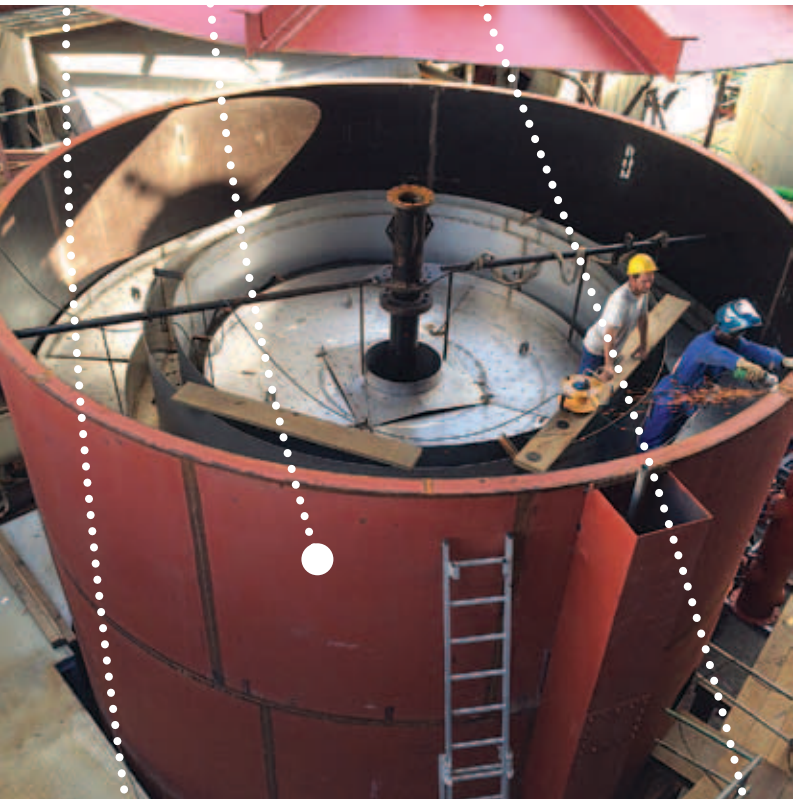
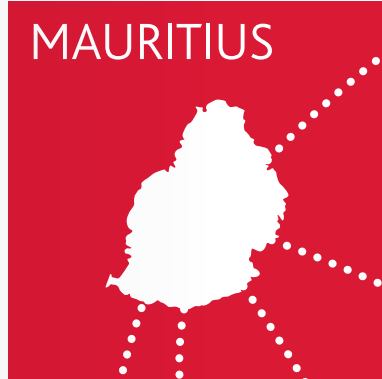
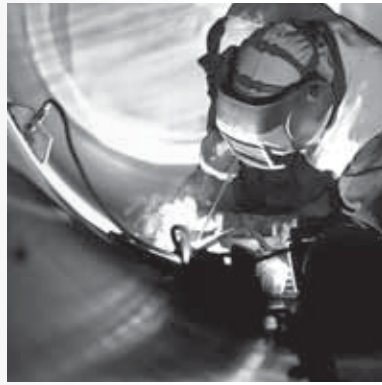
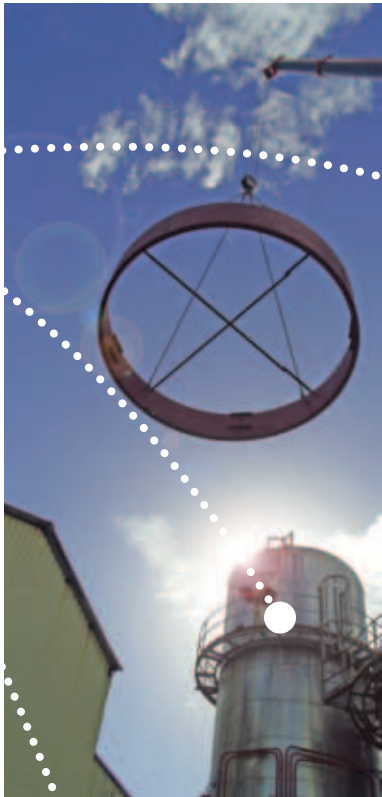
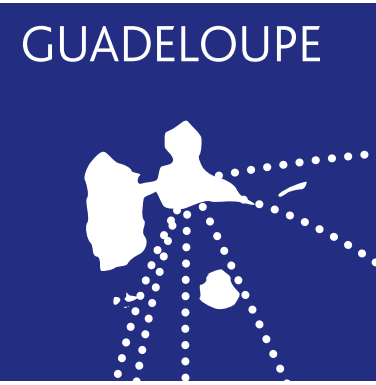
- BURKINA FASO
- BURUNDI
- REPUBLIC OF CONGO
- DEMOCRATIC REPUBLIC OF CONGO
- CAMEROUN
- CHAD
- ETHIOPIA
- ERITREA

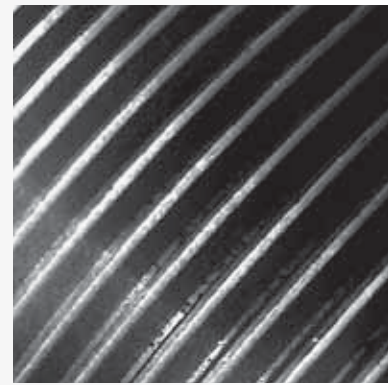
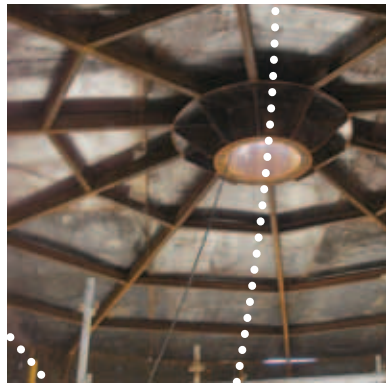
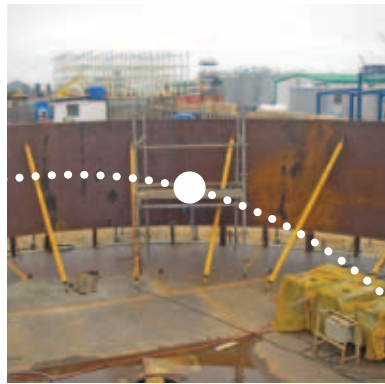
- GABON
- IVORY COAST
- KENYA
- MALAWI
- NIGERIA
- ZAMBIA
- PHILIPPINES
- NEW CALEDONIA
- OMAN
- SAUDI ARABIA
- SENEGAL
- SIERRA LEONE

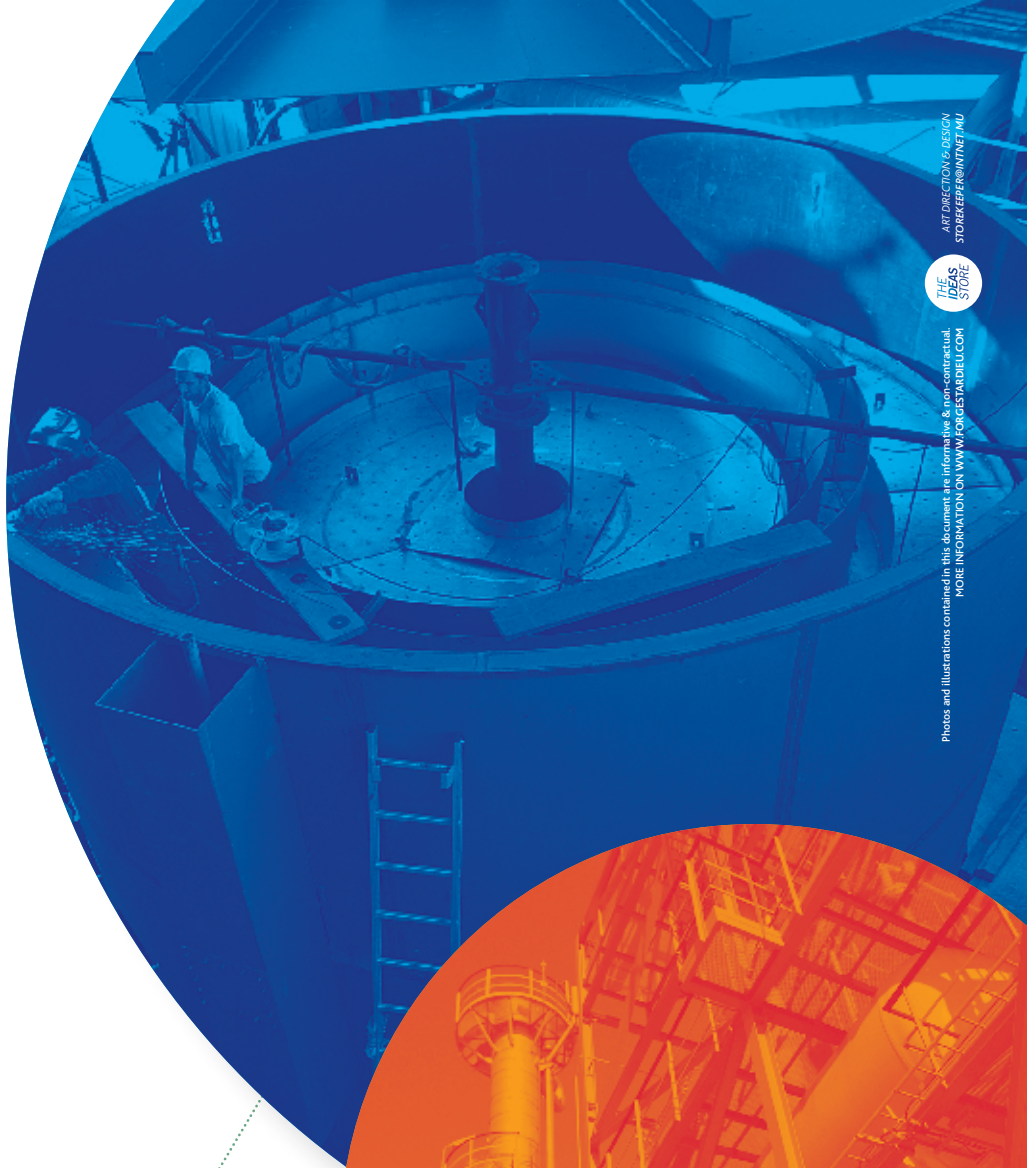
- SOUDAN
- SOUTH SOUDAN
- SWAZILAND
- UGANDA

The Oil & Gas Division of the **FORGES TARDIEU** Engineering Cluster has the possibility to operate in these same above listed countries, as well as in any other ones based on our customers' needs.



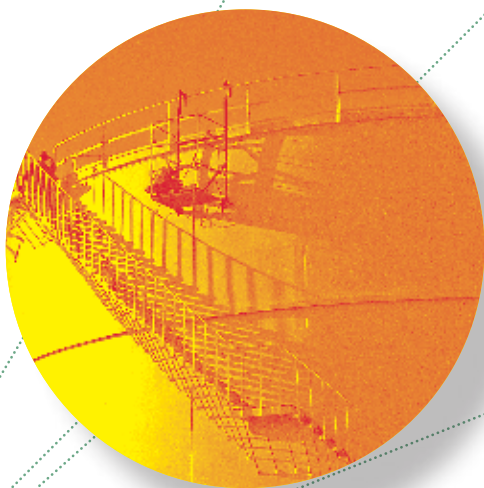






ART DIRECTION & DESIGN
STUDIO BEER & PARTNERS

Photos and illustrations contained in this document are informative & non-constructive.
MORE INFORMATION ON WWW.FORGESTARDIEU.COM



FORGES TARDIEU *GEARED TO DELIVER*
INNOVATIVE ENGINEERING

FORGESTARDIEU Ltd
PO Box 20, 31 Nicolay Road,
Port Louis,
Republic of Mauritius

Tel +230 206 52 00
Fax +230 240 71 59
Email oilandgas@forgestardieu.com
Web www.forgestardieu.com