



SAIPEM FLOATERS



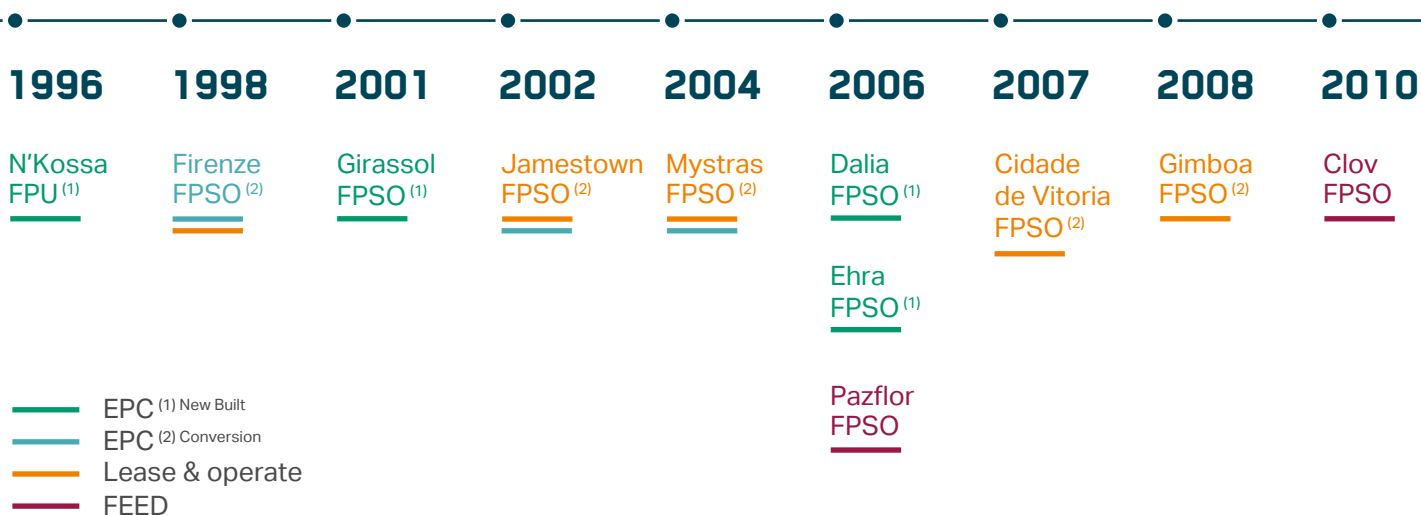
SAIPEM

MORE THAN 20 YEARS ACHIEVEMENTS

As a global leader in the engineering and construction of major projects for the Energy and Infrastructure sector, Saipem has naturally supported the journey of oil&gas companies towards the use of floating facilities in order to exploit new deepwater fields. Floating production development started in the early 90s and since then, Saipem has successfully delivered or studied for its clients more than 25 projects for all kinds of units. Saipem has also operated, maintained and upgraded several of these units, granting Saipem a unique wealth of experiences.



FLOATERS MILESTONES



SAIPEM FLOATERS TODAY

Thanks to the development of competitive technical solutions, its engineering workforce, its relationships with shipyards, its own fabrication infrastructures and its presence in strategic markets, in addition to its unique EPIC experience and track record, today Saipem is an extremely reliable general contractor, providing floating solutions worldwide.

PRODUCT LINES - FLOATING PRODUCTION SYSTEMS (FPS)

FPSO/FPU



FLNG



FSRU



GBS/OTHER FPS



2011

Petrobras
FLNG

Shtokman /
Arctic Gas
FPU

2012

Firenze II
FPSO

2013

FSRU
Toscana⁽²⁾

Block 15
FPSO

2014

Scarborough Coral
FLNG

Abadi
FLNG

2015

Coral
FLNG

2016

Jangkrik
FPU⁽¹⁾

2018

Kaombo
2 FPSOs⁽²⁾

2019

Firenze III
FPSO

Leviathan
FLNG

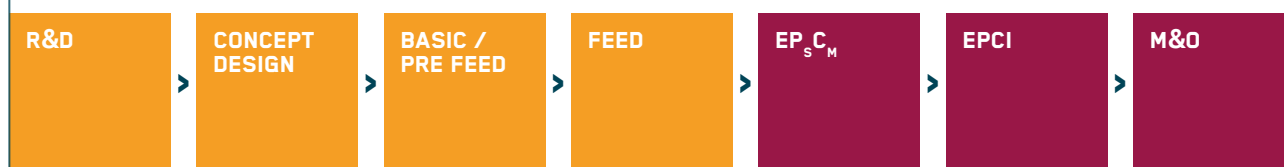
TODAY

p-79
FPSO⁽¹⁾

Baleine
FPSO

ZLNG
FLNG

RANGE OF SERVICES



Saipem offers a wide range of services with the aim of supporting its clients across the whole value chain:

- Saipem is developing R&D program in order to make innovative technology available for floaters development, namely in field product offloading, process efficiency, mooring and operations in harsh conditions
- With its extensive knowledge of the global oil&gas industry, Saipem is often consulted by clients for conceptual development and overall field architecture
- Thanks to its engineering know-how, Saipem is able to support the technical aspects of their projects through Basic and Pre-FEED studies
- Saipem is well-versed in the development of FEED studies, taking into consideration its vast experience in construction, installation, constraints and cost optimization, thus supporting its clients towards FID and preparation of the construction phase
- As a reliable EPC contractor for the oil&gas industry, Saipem is ready to undertake floaters projects, on a design and built contract basis, delivering its clients' floating units on time and on budget
- Saipem operates and maintains its own FPSOs and can also provide the same services to its clients

SKILLS

HULL TECHNOLOGIES AND MARINE DESIGN	PROCESS, SAFETY AND TOPSIDES DESIGN	UNDERSTANDING INTERFACES CONSTRUCTABILITY AND INTEGRATION ISSUES	MANAGEMENT OF COMMISSIONING, START-UP & OPERATIONS
<p>Saipem is the owner of several marine technologies. It has maintained in-house marine design and naval architecture know-how.</p> <p>These competences are used:</p> <ul style="list-style-type: none"> • at FEED stage by our clients to functionally define their hull needs • during the EPC phase to supervise the operations undertaken by shipyards. 	<p>With Engineering hubs in Milan and Paris plus an international engineering network, Saipem is able to design efficient processes which suit operators' needs.</p> <p>With its long-standing offshore experience, Saipem is able to understand the peculiarities of process design fitted on floating production units, such as modularization and the importance of safety aspects.</p>	<p>Saipem is able to manage fabrication and integration in its own yards, such as Karimun Indonesia, or carry out these works in third-party yards. Its offshore and construction experience grants Saipem a valuable understanding of construction aspects and constraints.</p>	<p>Saipem has operated its own FPSO fleet. This business has provided us with a unique wealth of experiences which is also put to good use when designing floating facilities for our clients and for the commissioning and start-up of these units.</p> <p>Furthermore, Saipem offers Operation & Maintenance services for units owned by its clients.</p>



FLAGSHIP AND ONGOING PROJECTS

ERHA PROJECT

Exxon Mobil Nigeria awarded Saipem a very large FPSO for its deep offshore Ehra field in 1,200m of water. The unit is able to produce 210,000 bpd of oil and 540,000 mscfd of gas together with significant water and gas re-injection capacities. The unit is able to store 2,200,000 barrels of oil.

The fabrication of the 18 modules for a total topside weight of 31,000 tons was designed by Saipem and fabricated in the Singapore area.

Integration and onshore commissioning was undertaken in Singapore and Saipem managed the project until the offshore commissioning phase.



JANGKRIK PROJECT

Jangkrik is a Gas FPU able to process 450mmscfd of raw gas with the function of separating condensate and dewpointing prior to gas compression and export. The 16,000-ton topsides were fabricated, integrated and commissioned in Saipem Karimun yard in Indonesia.

Saipem applied an innovative construction method consisting in an integrated topside module (ITM) which was slid on the hull in one single piece.

This method helped save time by reducing integration & commissioning activities and was the key differentiator in securing this project after the design competition on behalf of ENI Indonesia.



FLNG DEVELOPMENT

Saipem is pursuing FLNG development and has performed several comprehensive FEEDs for major oil&gas companies, from medium-sized to very large FLNG projects, typically ranging from 2.5 to 6+ MTPA. Saipem acquired experience in FLNG design and its in-depth knowledge of construction and commissioning was used to develop a Generic FLNG design with the objective of reducing CAPEX while ensuring safety and meeting clients' requirements. Saipem is active in this market regarding the development of new solutions, namely for the valorization of small stranded gas fields and associated gas for remote fields.



KAOMBO PROJECT (NORTE AND SUL)

Total Angola E&P awarded Saipem the EPCIC contract for two replica FPSOs converted from VLCC sister ships. The topsides, totaling 36,000 tons, were mainly fabricated at Saipem Karimun yard in Indonesia, with some components also manufactured in Angola. Following fabrication, the topsides modules were shipped to Singapore for integration onto the converted hulls. Saipem successfully completed the mooring and hook-up and started up the FPSOs in water depths ranging from 1,400 to 1,900 m above the Kaombo fields. Saipem is carrying out the O&M of these two FPSOs for an initial period of 7 years, at Total E&P Angola Block 32, with two extensions of 5 years and 3 years, respectively.



BALEINE PHASE 1 PROJECT

Eni Ivory Coast has awarded Saipem the EPCIC works for the refurbishment and the redeployment in Ivory Coast of the existing Firenze FPSO. The FPSO Firenze was deployed in Aquila in the Adriatic Sea, offshore southern Italy since late 2011. Eni decided to take the opportunity to relocate the Firenze FPSO, after proper modifications and refurbishment works, in the offshore of Ivory Coast. Baleine Phase 1 FPSO will be able to process 12 kbpd, treat&reinject 17.5 mmscf/d of gas. Saipem has been awarded also to be the operation and maintenance Contractor of the FPSO at site for 10 years.



P79 PROJECT

Petrobras awarded Saipem the EPCIC works for a large new built vessel for its Buzios Oil Field Development in 2,100 mt of water dept. This new FPSO will be able to process 180,000 bpd of oil and 254 mmscf/d of produced gas. The fabrication of the majority of 21 modules, for a total of 50,000 tons topside, are mainly fabricated in China. The fabricated modules are then shipped and integrated in Korea into the same shipyard for the hull. The scope of work, under execution, encompass EPCI, commissioning and start up of the FPSO, with first oil foreseen in March 2025.



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LET'S KEEP IN TOUCH

