Saipem UK Ltd

for graduate engineer recruitment

Eni GROUP

Saipem

Saipem Group History

Saipem is among the world leaders in the oil & gas services sector, particularly concerning offshore engineering & construction. The Company began operations in the 1950s. During the 50s and 60s it accumulated competencies in onshore pipelaying, plant construction, and drilling, operating either as a division within the Eni group or on a standalone basis; becoming definitively autonomous in 1969. Offshore operations commenced in the Mediterranean Sea in the early 1960s, and expanded into the North Sea in 1972.

In the period 1998-2001 the Company invested more than Euros 1.2 Billion to strengthen its offshore fleet, both in offshore construction - particularly in deepwater pipelaying and field development - and offshore drilling. As a result, Saipem's fleet is one of the most technologically advanced and efficient in the industry. Having adapted its vessels and equipment to the strong 'frontier' market trend, in 2001, the Company started to reinforce its engineering & project management capabilities to cope with the other important market trend towards ever larger EPIC projects, through a number of acquisitions.

The Saipem group today is one of the world's leading contractors providing services to the oil and gas industry - and it is the sole contractor to cover all phases of the upstream operational cycle: drilling, oil and gas production, and transportation to shore.

The new group is organised in 6 worldwide business units. It enjoys a superior competitive position for the provision of EPIC services to the oil industry; with a particular focus on activities in remote areas, deepwater environments and gas-related projects. The new group is a truly global contractor, with a strong local presence in strategic and emerging areas such as West Africa, the former Soviet Union, Central Asia, North Africa, Middle East and South East Asia.

Our clients, and our people - in particular their Health and Safety - are the primary focus of all Saipem activity. Saipem has in place a Health & Safety Executive Management System and its Quality Management System has been granted ISO 9001:2000 certification by Lloyd's Register Certification.

Through its global involvement in record-setting projects offshore and onshore, its subsidiaries and branch offices on the five continents, its operational flexibility, and an international management always endeavouring to integrate local expertise, Saipem is a contractor that can truly claim a worldwide presence.

Saipem UK Regional Business Unit

Background

In 1990, Saipem took over the Offshore Platform Installation Contractor, Micoperi, and formed Saipem UK Limited. The key activities were in transportation and installation of offshore platforms using its fleet of heavy lift vessel and cargo barges.

In 2002, the Saipem group, who already owned 50% of European Marine Contractors Limited, the pipelaying contractor, successfully acquired the other 50% share from Halliburton Brown & Root (formerly know as Brown & Root).

Saipem UK Limited was reformed and the existing platform transportation and installation capability was merged with the pipelaying capability from European Marine Contractors Limited.

In 2003, the UK operation of Saipem Energy International Limited, a Saipem group company with platform, subsea and pipeline design capabilities, merged with Saipem UK Limited. The portfolio of Saipem UK Limited was therefore further enhanced with the new platform, pipelay, and subsea & pipeline design group.

Present Day

Today, the business unit Saipem UK, based in Surrey (just South of London), has approximately 350 employees, of which over 200 form the Engineering Department performing design, analytical support, project management and construction operations. The focus of operations within Saipem UK is in platform installation / decommissioning, offshore pipelaying, and pipeline design / subsea technology.

Many of the projects awarded to Saipem UK require the provision of EPIC services since the group has extensive experience in the total management of Engineering design, Procurement, through to Installation and Commissioning of offshore pipelines and platforms/jackets.

Mission Statement and Core Values

Saipem UK's mission is to pursue the satisfaction of our clients in the energy industry and to tackle each challenge with safe, reliable and innovative solutions. We entrust the competence in our teams to provide sustainable development for our company and for the communities where we operate. We commit to safety, integrity, openness, flexibility, integration commitment, innovation, quality, competitiveness, teamwork, humility and internationalisation.

Saipem UK Platform Installation & Decommissioning

As one of the largest Offshore Constructors in the world, Saipem UK has acquired a strong, competent and talented work force to serve the offshore industry in the installation and decommissioning sectors for more than 13 years. This covers North Sea, West of Shetland, Mediterranean Sea, West Africa, Canada and Gulf of Mexico for a range of water depths from 15m to 1,500m.

The projects are served by our own heavy lift vessels including S7000 (full DP semi-submersible with lifting capability of 14,000Te and J-lay facility), S3000 (self-propelled multi-purpose crane barge), FDS (self-propelled crane barge with J-lay facility), and a fleet of launch /cargo barges.

We currently hold the world record for installing the heaviest deck structure utilising dynamic positioning. The structure was installed by S7000 for the BP Andrew field development in North Sea UK sector.

The platform installation includes the following key operations:

Loadout - Loading the deck module or jacket structure from the building yard on to the cargo barge. The structures are either skidded onto the barge by jacks or transported by trailers and set-down on support grillage on the barge deck.

Transportation - Transporting the structures from the building yard to the offshore field by cargo barge.

Lifting - When the cargo barge with the structure arrives on site, an offshore lift operation will be carried out by our heavy lift vessels. The structure will be lifted-off clear from the cargo barge. The cargo barge will be removed from the site by tugs.

Jacket Installation - After the jacket is lifted, the jacket will be upended by the combination of hook movement and water ballasting action. The jacket will be placed at the target location by docking onto the pre-installed docking piles. Piles will be installed and grouted to fix the jacket onto the seabed.

Deck Module Installation - After the deck structure is lifted, the structure will be set down onto the target position over the jacket or other structures.

These operations will be carefully analysed and planned. The operational limits will be defined. The rigging, installing aids and supporting structures are carefully designed to meet the installation requirement.

Saipem UK Offshore Pipeline Construction

Pipeline installation in the North Sea and North Atlantic is the main focus of Saipem UK pipelaying operations. Having a tremendous North-Sea track-record behind us from the former joint venture company known as EMC during the 1990's, and working with other Saipem Group companies on a global level, Saipem UK maintains its formidable reputation as one of the true innovators in its field.

From early projects such as laying the first very large diameter pipelines along the length of the North-Sea, and trunklines crossing the highly irregular seabed typical of Norwegian fjords with water depths over 500m, Saipem UK continues to respond to the offshore industry's changing demands.

In recent years even more challenging projects have been executed by Saipem including two of the most difficult pipeline projects undertaken in the world todate:

1) Installation of the deepest large diameter pipeline system in 2002; a 700km 24-inch gas trunkline in water depths as great as 2,150m using the newly developed J-lay system onboard S7000 heavy lift vessel.

2) Installation of the deepest large diameter pipeline system using an anchored S-lay barge in 2003; a 500km 32-inch gas trunk line in water depths up to 1,125m using Castoro Sei with upgraded mooring system.

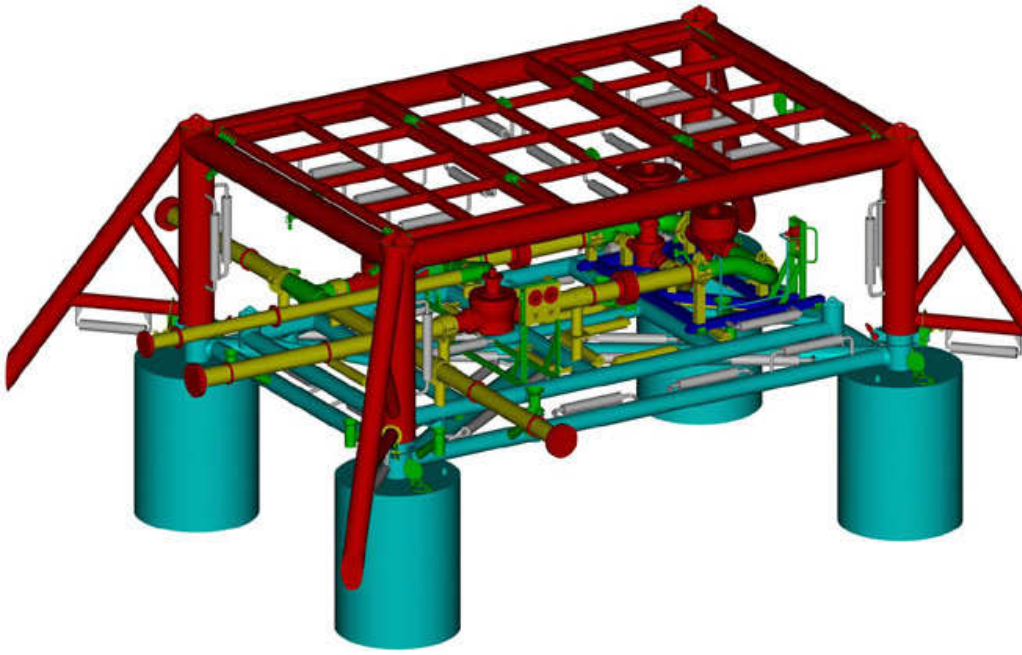
In all, Saipem UK has been involved in constructing over one third of the worlds submarine pipelines, having unrivalled experience of large diameter construction and EPIC projects within the North-Sea, and access to one of the most advanced vessel fleets in operation today for pipeline construction.

The pipeline construction fleet includes semi-submersible pipelay barges Castoro Sei and Semac1, shallow water barges Castoro 2 and Castoro 10, DSV Bar Protector for subsea intervention (e.g. spool installation and pre-commissioning), and a number of specialist trenching tools including the advanced pipeline plough and diverless jet-sled.

Having such a large track-record of successful projects from the early nineties to date, our engineering capability has been developed to cover the wide spectrum of pipeline and related subsea installation operations, with specialist skills of pipelaying in harsh environments combined with deep water, often involving state-of-art diverless subsea structures being installed with the pipeline. These challenging projects often involve complex seabed preparations and in combination with our leading edge trenching tools, our engineering teams provide a complete pipeline construction solution.

Saipem UK Subsea and Pipeline Design

Saipem UK undertakes the full range of design engineering activities associated with subsea pipelines and facilities from feasibility studies through to detailed design, installation and commissioning. The following presents a summary of the work undertaken by the key disciplines performing subsea engineering.



Process Systems Engineering

Steady state and transient hydraulic modelling is performed from the well bottom through to the flowline delivery point for the full range of operating and upset conditions occurring during field life. In particular, subsea process and hydraulic analysis includes the following:

- Optimisation of line diameters taking into account flow regimes and deliverability constraints.
- Confirmation of system operating stability particularly for multiphase transport where special consideration must be given to terrain/riser induced slugs and requirements for slug management.
- Analysis of surge effects in liquid pipelines, to provide input to system design pressures and operating procedures.
- Input to material selection through corrosion/erosion evaluation and determination of minimum temperatures occurring during rapid depressurisation and blowdown.
- Definition of system operating parameters including start-up/shutdown and well testing procedures.
- Identification of hydrate formation or wax deposition conditions and definition of insulation and/or mitigation requirements.

Pipeline Engineering

Engineering is performed for all types of pipeline systems from large diameter, long distance trunk lines to complex production flowline systems and for a full range of materials from standard API linepipe through to use of corrosion resistant alloys and highly insulated pipe-in-pipe systems. Typical pipeline engineering activities include:

- Routing Studies
- Material selection
- Corrosion protection and CP systems design
- Stability, stress analysis and freespan analysis on irregular seabeds
- Expansion and upheaval buckling analysis
- Crossings and tie-ins design
- Riser and J-Tube design
- Pipeline protection system design
- Pipeline Materials and Fabrication Specifications

Export Pipelines - Detailed Design

LOCATION : North Sea (Norwegian)

Awarded : 1998

PROJECT DETAILS :

16" x 42 km Oil Export Pipeline from SSPV to Gravity based Platform

8" x 9km Gas Export Pipeline from SSPV to TLP

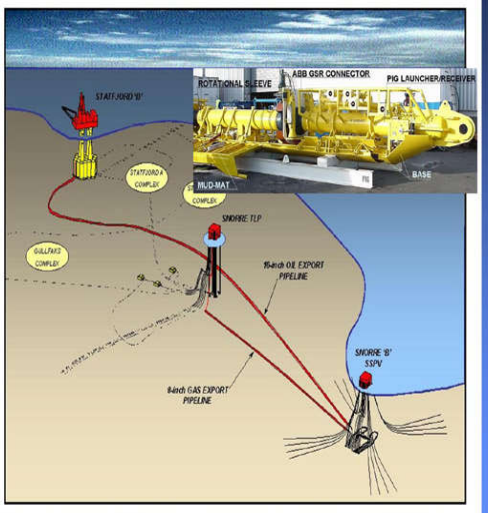
Water Depths : 146m at Gravity based Platform, 350m at SSPV

Tie-ins at SSPV and TLP via diverless connection facilities

Pipelines designed using limit state methodology in accordance with DnV 96

Design Pressures 100 barg / 174 barg for 16"/8" respectively

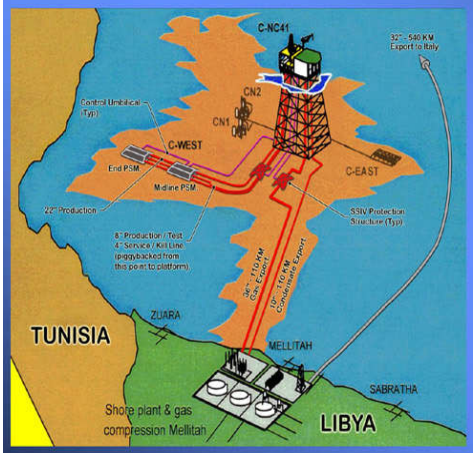
Seabed Conditions : Variable from sand to soft clay with numerous boulders in some areas



Subsea Facilities Engineering

Conceptual and detail design of subsea facilities such as tees and manifolds, includes the layout and specification of equipment, piping and valves, and is generally performed by subsea or mechanical engineers. The piping arrangements are prepared in conjunction with structural engineers to produce an optimum layout which will satisfy design, installation, operation, IMR and protection requirements. Subsea controls engineers will specify umbilical and control system components to facilitate remote operation of equipment from adjacent platform facilities. In deepwater developments the subsea facilities must accommodate diverless technology for remote operated installation and operation.

Flowlines and Export Pipelines - Detailed Design



LOCATION : Mediterranean (Offshore Libya)

Awarded : 2002

SCOPE :

22" x 24km	insulated production line
8"/12" x 24km	pipe-in-pipe production line
4"	4"piggybacked service line
36" x 107km	Gas Export Pipeline
10" x 107km	Condensate Export Pipeline
4No. x SSIV's	with 2 protection structures and control umbilicals for infield and export lines
1No. 22" x 8" Tee	with protection structure

Key Elements:
Water Depth to 200m
Infield lines are CRA clad
HP/HT requires strain based design
Design to DnV 2000

Subsea Structures Engineering

Individual structures are configured and designed to meet the necessary requirements for equipment support, diver/ROV access, protection and installation. Analysis of a structure is carried out using dedicated software (typically SACS and ANSYS) for the construction, lifting, transportation, installation and in place load cases. Other analyses are performed to evaluate impact from dropped objects, side impact loads and snagging loads from trawl boards or anchors. The overall structure weight is closely monitored during design and construction to meet the project installation strategy.

Saipem UK Engineering Department

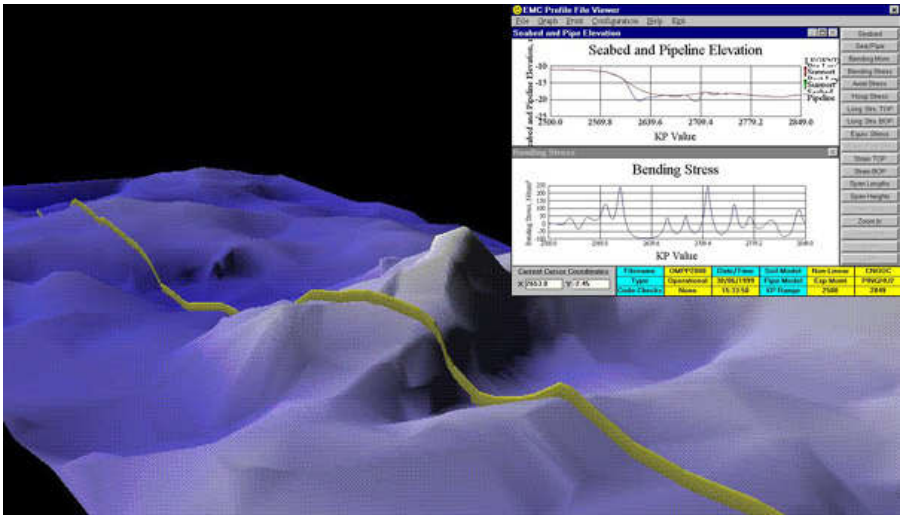
The engineering department at Saipem UK provides the technical support for all the offshore installation projects from the design phase through to the construction and pre-commissioning operations. In addition to our own project work, we support other Saipem Groups on a global basis for specialist support on pipeline detailed design, structural engineering, and installation engineering typically for large and technically challenging projects.

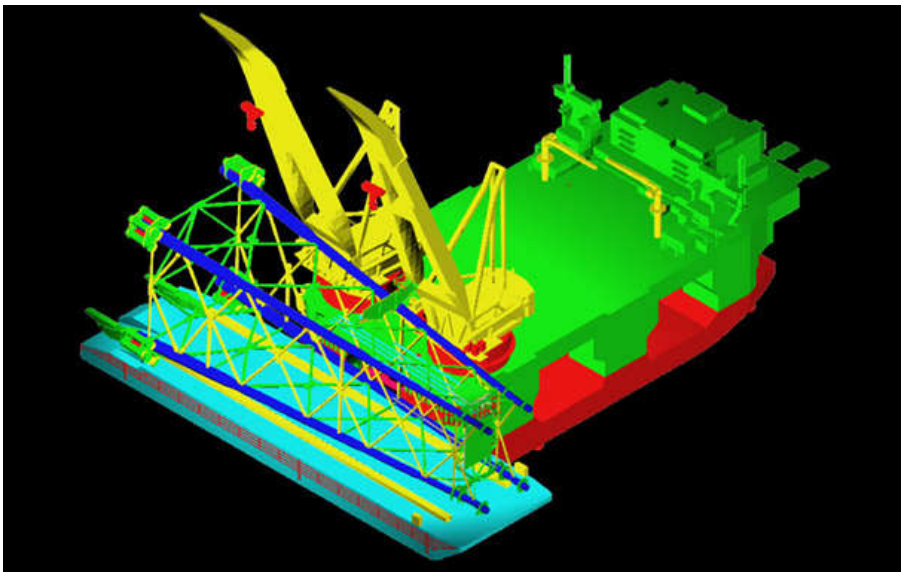
In total we have over 200 engineering resources in our London office to serve the platform installation / decommissioning projects, pipeline construction projects, and pipeline design and subsea technology support work. These resources are split between working in our pipelay engineering, naval analysis, structural & foundations, installation, subsea and pipeline design, CAD and project management groups.

The projects are run by our Operations and Engineering teams in conjunction with support from our QHSE, Procurement, Planning and Project Control, Logistics, and IT / Human Resources Departments. In all we offer a full EPIC project capability managing large complex projects (sometimes combined platform and pipeline construction) from Engineering design phase, Procurement, through to Installation and Commissioning.

The variety of engineering roles and disciplines within the Engineering Department are suited to the diverse and specialist engineering tasks required to support these often large, complex projects. To ensure we are working at the forefront of the industry, we are equipped with the most advanced engineering analytical tools and design software, specifically suited to structural engineering, pipeline design engineering, and simulation of offshore installation operations.

Together with our extensive field experience, we provide robust engineering solutions from design to construction in order to ensure that offshore installation is technically sound and commercially effective. This allows our engineers to develop not only technical expertise, but competence in a commercial / contractual environment with client interface, involving procurement and sub-contractors, and hands-on construction knowledge.





Saipem UK Graduate Training Scheme

As a prominent figure in the offshore industry, Saipem understands that the fundamental requirement of the oil and gas service contractor is to maintain a talented, trained and motivated workforce. Saipem UK is fully committed to this aim and the training of young Graduate Engineers is one of the key long term commitments to continue and further enhance our expertise.

Saipem UK has established a carefully planned training scheme for graduates which has recently been accredited by the Institute of Marine Engineering, Science and Technology (IMarEST).

The formal scheme has been set up mainly for engineering graduates with B.Eng degree or higher with a view to obtaining chartered status within a structured training programme and monitored career development.

The training scheme is for a nominal period of 2 years, and within this period the Graduate will spend time developing a range of skills from the following departments:

- Subsea and Pipeline Design
- Pipelay Engineering
- Naval Analysis
- Structures and Foundation
- Welding
- Project Management
- Quality, Health, Safety and Environment (QHSE)
- Planning and Project Control
- Commercial
- Procurement
- Computer Aided Draughting (CAD)

In addition, Graduate Engineers will attend external organised courses for interpersonal and management skills, offshore survival training, ISO9001:2000 appreciation, and relevant conferences / seminars.

When the structured 2 year training scheme has been completed, the graduate will be able to work competently in his/her main discipline with a wide spectrum of engineering knowledge including interpersonal, management and commercial skills.

The scheme is managed by a group of Principal Supervising Engineers and Mentors, to ensure that sufficient guidance and training is received within each of the disciplines, and the mentors will also provide additional guidance during subsequent years with respect to career development and application to attain chartered status.

Saipem

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