

SAIPEM's presence in:

Indonesia



Saipem has been operating in Indonesia since 1995, represented locally by **PT Saipem Indonesia (PTSI)**. It is based in Jakarta with a Branch on Karimun Island, where the fabrication yard was officially opened in 2011. The subsidiary is active in Saipem's Offshore, Floaters, Onshore and Drilling businesses.

Saipem Karimun Fabrication Yard is currently the biggest fabrication installation in Southeast Asia, acting as a key player in the Oil & Gas industry in Indonesia where, jointly with the Jakarta EPCI Centre, Saipem Indonesia is qualified to perform Engineering, Procurement, Construction and Installation for both Offshore and Onshore projects. Furthermore, in recent years PT Saipem Indonesia has operated deepwater drilling vessels such as the Saipem 10000 and currently the Scarabeo 7 for the development of the Eni Muara Bakau field (Jangkrik Complex project).

Saipem's activities

Saipem is a landmark contractor in Indonesia thanks to its offshore track record. Its reputation today is enhanced by the execution of extremely complex projects in the Jakarta Operating Centre, as well as operations on Karimun Island.

- **Jangkrik FPU EPCI:** a barge shaped FPU performing full offshore processes and exporting treated gas onshore near the Sapi plant for tie-in to the 42" pipeline at the Badak Plant, as well as stabilised condensate to the 20" existing pipeline at the Senipah Plant. An additional tie-in to an existing 20" pipeline is envisaged to route part of the produced gas to the domestic market.
- **Jangkrik FPU Drilling:** 11 wells with drilling activities performed by Saipem using Scarabeo 7.
- **Tangguh LNG Onshore FEED:** new offshore facilities, including wellhead platforms and pipelines, and onshore development on the existing Tangguh brownfield site. The new onshore facilities include one additional natural gas liquefaction train of similar design and capacity to the existing trains, an onshore receiving facility (ORF), new LNG and condensate loading berth, additional boil off gas (BOG) recovery, condensate storage tank, utilities, flares and the infrastructure to support logistics and the associated increase in the temporary and permanent workforce. This project was successfully completed in December 2015.

3,584

SAIPEM'S EMPLOYEES

83%

OF WHICH ARE LOCAL

87%

OF GOODS AND SERVICES ORDERED LOCALLY

110,650

TOTAL TRAINING MAN-HOURS DELIVERED TO SAIPEM'S EMPLOYEES

Business outlook

The landscape of the Oil & Gas industry, both in Indonesia and globally, has experienced drastic changes in recent years. The future of Indonesian energy is gas. New pipeline exports are also transforming Indonesia's gas industry and driving up domestic gas demand. 60 sedimentary basins and 39 tertiary and pre-tertiary basins showing promise in hydrocarbons are under-explored. The gas reserve is 153.75 Tcf (Trillion cubic feet), while unconventional Oil & Gas reserves such as Coal Bed Methane are estimated at 453 Tcf and the shale gas reserve at 574 Tcf. According to the Indonesian Oil & Gas outlook, this will lead to 75 proposal developments in the forthcoming years. Within this business outlook, PT Saipem Indonesia is currently exploring all available opportunities for 2016, focusing its main efforts on tenders related to gas field development.

Other opportunities can be found in the area of East Java connected to gas monetisation. In the offshore business, the area of the Abadi Field constitutes an opportunity for the development of FLNG and subsea projects.

On-the-ground presence

The long-term presence of Saipem in Indonesia has always been characterised by a sustainable approach, focused on Local Content promotion, skills development, support for the welfare of employees and a serious engagement process with stakeholders. However, activities and commitments have been tailored to the operating contexts. As can be easily understood, the impacts of Saipem's operation in Jakarta, the largest city in Indonesia, are very different from those on Karimun Island, where Saipem is the main industrial player. Consequently, the approaches adopted vary.

Sustainability approach on Karimun Island

Emergency management capacities of Karimun Hospital



A shared commitment to health care

Saipem has identified the promotion of health and safety as an area of intervention, actively involving several local stakeholders. In 2014, PT Saipem Indonesia signed an MoU (Memorandum of Understanding) with the Regency of Karimun in order to improve the emergency management capacities of the local hospital.

The initiative, completed in February 2015, consisted in refurbishing the hospital's emergency room, providing new equipment and organising a three-day training session on General Emergency Life Support (GELS) for about 40 doctors from Karimun and other islands nearby. The training was officially opened by the Karimun Regent. It was the first time they had attended this kind of training programme delivered by an international company and all feedback was positive. During 2015,

Saipem constantly monitored the effectiveness of the initiatives and shared the results with the Regency.

Health care for local women

In the second half of 2015, after dedicated meetings with local women, Saipem defined a programme to support the new Community Health Post located in West Pangke Village, the community surrounding the Karimun Yard.

The Health Post is targeted at mothers, their children and elderly women, and is visited twice a month by doctors and nurses from the local hospital who provide health assistance or improve awareness on certain topics. The new Health Post was built by drawing on the Development Fund of the Karimun Regency, but Saipem decided to contribute to the project by refurbishing the Post with windows, air conditioning and a playground and by providing medical equipment. Works will be completed in the first few months of 2016.

The Company plans to provide further assistance to the village in 2016, in collaboration with the local hospital. Saipem's doctors will implement training courses and other programmes based on the needs identified.

Sanitation system improvement in schools

Following an analysis of school facilities, and bearing in mind the increased number of students over the last years, Saipem decided to improve the Pangke Village Elementary School sanitation system to better meet pupil needs. Toilets and wash basins were installed and the plumbing system was repaired in the first few months of 2015.

The opening ceremony was held on May 9, 2015 and saw the participation of local authorities such as the representatives of the Health Office, the Education Office, the Head of West Pangke Village and the Head of West Meral Sub-district. On this occasion, Saipem, in cooperation with Women Empowerment and Midwife Association, organised games and dances for children to show them the proper way to wash their hands, as well as general hygiene best practices.

Introducing children to safety and environment protection

On August 2, 2015, in cooperation with its client, Saipem launched a sustainability initiative called Little-LiHSE (Little-Leadership in Health, Safety and Environment). The programme focuses on employee children aged between 7 and 11 years and aims to develop their

Promoting local employment and skills development



Due to the high workload in the Karimun Yard, including activities for topside fabrication on the Kaombo project, an intensive recruitment process was undertaken in 2015. Several additional production positions, such as supervisors, pipe fitters, welders, riggers, painters/blasters and helpers, were needed to manage operations. In order to fulfil project requirements and maximise local employment, the PT Saipem Indonesia Karimun Branch

(SIKB) conducted a recruitment campaign in the Karimun regency and in other Indonesian regions (Cilegon, Cilacap, Surabaya, Medan, Dumai, Palembang, Jakarta and Batam). The campaign will continue in 2016, consistent with project schedules. In accordance with operational needs, SIKB planned and realised several training programmes, mostly technical and HSE, conducted by external providers or in-house at the SIKB training centre.

493

PEOPLE TRAINED

7,484

TRAINING HOURS DELIVERED



awareness of safety and environmental protection. The workshop covered several topics such as Road Safety, Safety at Home, Ergonomics, Healthy Lifestyle and Safeguarding the Environment. Practical sessions, games, quizzes and competitions were organised to involve the children more effectively. This first workshop was a success with 48 children present and the active participation of local management and representatives from local authorities.

A further 4 sessions were organised with the same format during the remaining part of the year involving a total of 231 children. The programme is expected to continue in 2016 with an additional 4 workshop sessions.

231

CHILDREN PARTICIPATED IN THE INITIATIVE

Sustainability approach in Jakarta

A responsible company in an urban environment

In accordance with the Community Initiatives Plan, PT Saipem Indonesia in Jakarta organised 2 initiatives to support the national educational system, the first one focusing on capability building and the second on improving school infrastructures.

Since 2015, Saipem has implemented a programme to develop the skills of local young students in cooperation with 'University of Indonesia' and 'Bandung Institute of Technology', two prestigious Indonesian universities. In both universities the Company organised a dedicated event to introduce itself, with a specific focus on its HSE system and approach.

Tests and interview sessions were carried out during the day. As a result, 2 students were selected to participate in Saipem's internship programme on the HSE Management System. After finishing the internship both students were evaluated and 1 is currently working for Saipem as an HSE System Engineer.

Moreover, Saipem actively supported improvements to part of the infrastructure of SMP Negeri 68, a junior high school in Cipete, South Jakarta. The Company cooperated with a local contractor to refurbish two student toilets which were damaged, unhealthy and unsafe. These were:

- the boys' toilet, consisting of 4 urinals, 2 squat toilets, 1 seat toilet, 2 washbasins, 3 water taps, mirrors, walls and tiled floors;

'This refurbishment has really helped reduce the hygiene problem at our school and we are happy and satisfied with the whole improvement, thanks to PT Saipem Indonesia'.



Feedback from a student

- the girls' toilet, consisting of 2 squat toilets, 1 seat toilet, 2 washbasins, mirrors, walls and tiled floors. In addition, this refurbishment included ceiling and plumbing arrangements. The initiative was highly appreciated, especially by the students.



Scouting young talents

The 'Young Engineer Sustainable Development Programme' (YESDP) started in 2015. Launched in Jakarta, it involved 13 young engineers (YE) who were assisted by 5 seniors, their mentors. YESDP aimed to:

- Develop the soft skills of young resources, such as communication, negotiation, leadership, organisation, problem solving and decision making.
- Foster an understanding of the Oil & Gas business, project management methods, EPCI project flow and technical engineering competencies.

- Promote innovation through sharing of knowledge and ideas between young and experienced staff. The programme consisted in both individual and group sessions based on case study discussion and problem solving. Mentors and YEs provided materials, presented the case study and managed the group sessions. Mentors analysed the potential of YEs, and supported them from beginning to end in approaching the case study and evaluating their improvements through individual assessment.

Human Factor Engineering on Saipem Indonesia projects

Human operating and maintenance errors on projects or Saipem assets can be significantly reduced through the review of human factors (ergonomics, or human engineering) during the facilities design and construction phases. Since Saipem was requested to develop different types of facilities in compliance with HFE requirements from the design phase, and since there was no recognised engineering practice in place, HFE Work Instructions were developed in 2013 as a benchmark for Saipem projects, assets and procedures.

This regulatory step demonstrates Saipem's commitment to creating a comfortable working and living environment, facilitating the development of a healthy workplace culture through good ergonomic layout and design, and protecting

the health and safety of personnel.

The application of HFE Work Instructions by PT Saipem Indonesia started during the project's design phase, when, in cooperation with the project's stakeholders, the applicable legal and regulatory standards and HFE Design requirements were reviewed. Once the definition of requirements had been finalised, a HFE Design analysis was carried out. The analysis focused on various activities such as:

- HFE critical analysis of valves and instrumentation;
- Skid package screening;
- Safety Critical Task analysis;
- Control room design;
- 3D model HFE review.

On complex projects, HFE requirements are implemented starting from the FEED (Front

End Engineering Design) phase.

These include operability, maintainability, entrances/exits, manual material handling, communication, labelling and environmental conditions. In the project transition phase (i.e. from engineering to construction or from construction to commissioning and start-up) there is a higher risk level related to safety issues and to the increased number of personnel involved. In this phase, a rigorous bow-tie analysis is carried out using the outcomes of Hazard Identification (HAZID) and Risk Assessment at a High or Medium Risk ranking.

As a next step, the HFE construction team will conduct a regular HFE workaround by giving HFE Awareness and Auditing courses in order to prevent and mitigate human errors.