

Oil Spill Management and the new challenges

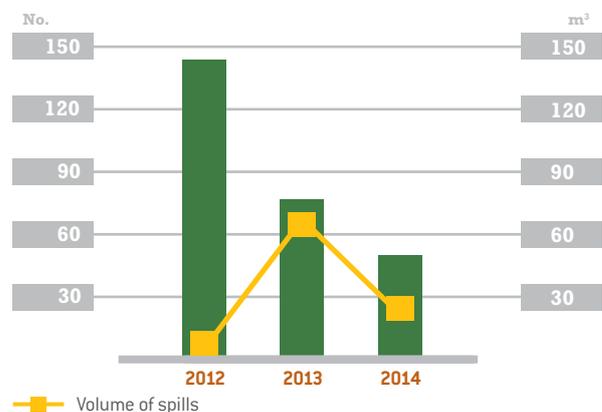
The environmental tragedy that occurred in the Gulf of Mexico (2010) was cause for deep reflection for many of the players operating in the field of exploration and production both in deep waters and otherwise. The Macondo disaster has caused many to ponder once again the issue of Marine Pollution incidents with varying degrees of severity. The oil industry has gradually shifted towards unconventional forms of oil extraction such as tar sands, oil veins and shale gas. The high levels of investment and the resulting technological advances have made deep waters more accessible and has shifted development strategies from the seabed to floating systems such as the Floating Production Storage Offloading (FPSO). The causes of major environmental accidents in recent years, are attributable not only to increasingly challenging and complex new work environments but also to poor management of the emergency services and a lack of preparedness and prevention. Prevention is Saipem's key strategy. To this end, action was taken to improve and harmonise the management documentation system and the operational control of vessels and operating sites that are most at risk of a possible environmental emergency. This approach has made it possible to set the framework and widely disseminate the minimum facilities and applicable best

practices.

In addition to prevention, Saipem has decided to focus a great deal of energy on emergency preparedness by implementing, in recent years, an abundance of specific training packages.

Saipem promotes a great deal of training on environmental

TOTAL SPILLS



In 2014, the overall number of spills decreased (50) compared to 2013 (77) and 2012 (144). The total volume of spills was 21.6 m³ in 2014, 67.2 m³ in 2013 and 5.4 m³ in 2012. In order to ensure better analysis, classification and optimal management of incidents, in 2013 Saipem modified its methodology for monitoring spills. Near misses and spills of under 10 litres are still reported, but are now separated from those of other types.

issues and, as regards the issue of the Oil Spill Response, is accredited by the IMO (International Maritime Organisation) as a company authorised to certify its employees without having to resort to external parties. This was possible thanks to the accreditation of the OSRT (the Oil Spill Response Team, Fano, Italy) with IMO International Certification.

Floaters Business Unit

Due to their adaptability to difficult working conditions, such as extreme weather or remote fields, as well as to their economic effectiveness, Floating Production and/or Storage Units are increasingly chosen as a viable solution for offshore field development. In Saipem, the Floaters Business Unit is likewise growing, currently encompassing two leased FPSOs in operation, two projects for FLNG design and two projects for FPSO/FPU construction and installation and operations.

Spill prevention measures

All personnel involved in spill response are duly trained and SOPEP (Shipboard Oil Pollution Emergency Plan) drills are carried-out regularly as part of the annual drill plan. The scenarios taken into account are of various types in such a way as to cover all possible kinds of spill. In an effort to prevent any substance from being released overboard, spillages of chemicals or oils onboard are managed through a series of technical solutions such as dedicated drains, containment skids or special sewage lines. Furthermore, oil spill kits with sawdust, absorbent blankets, sand, mops and antistatic blades, as well as plastic shovels, plastic buckets and specific PPE used by trained personnel, are available onboard to control the leakage and collect any contaminated material for proper disposal. In the event of a spillage that cannot be controlled onboard, measures are managed together with Client representatives and availing of their equipment. Emergency activities

are then coordinated among all vessels involved in the operations, according to the different Tier responsibilities defined in their Emergency Response Plans. If an emergency arises, Saipem personnel may be directly involved in the response operations and are thus trained according to their role. This includes sessions and practical presentations with the use of stand-by vessels, boom deployment and dispersant spray from special sprinkler systems.

In order to ensure the proper management of any emergency scenario involving chemical spillages, and to guarantee the effectiveness of the coordination of all parties involved, Saipem conducts dedicated drills together with Client representatives and with other vessels at least once a year.

Further details on Emergency Response Plans are available on page 51.

Spill reporting

In 2014, the Floaters BU reported a total of 420 hours of environmental training, of which 14% were on Spill Prevention and Response. Nine SOPEP drills were also carried-out at regular intervals on the two leased FPSOs. A strict reporting standard has been implemented in Saipem, whereby all environmental accidents or near misses must be logged, regardless of their volume. The threshold for reporting a spill in the official records is set to a low value (10 litres) to facilitate accurate recording and analysis. On the four floater design and construction projects, no incidents have been recorded so far. On the two leased FPSOs, the official figures for 2014 show 2 environmental accidents with a total of 45 litres of oil lost at sea and 6 near misses, encompassing 95 litres of oil and 1,425 litres of chemical substances that were completely contained. Compared with the volumes of oil and chemicals circulated by the FPSOs for their daily operations, these amounts are virtually negligible.