



OFFSHORE

ENERGY. COMMITTED.



ANNUAL REPORT 2019

2.7 OPERATIONAL EXCELLENCE

MANAGEMENT APPROACH

Group Operational Excellence functions are organized to support operational and assurance functions, with the goal of achieving the most efficient and effective operation over the full lifecycle, through standardization and digitalization of processes in all areas of the Company's business, as part of its ambition to 'Target Excellence'.

This goal is pursued in one hand via the Fast4Ward® program (see section 2.2) and in the other hand via the maintenance of the Company's Global Enterprise Management System (GEMS) (see section 3.10.1), our Group Technical Standards (GTS) (see section 3.10.2) and Process Safety Management framework. Part of this framework is the continuous improvement cycle, achieved through lessons learned, as well as the adoption of best practices, including the application of the International Sustainability Rating System (ISRS) (see section 2.7.2).

For more information on Operational Governance, please refer to section 3.10.

2019 PERFORMANCE

The Company supported the journey to Target Excellence that is the guiding force to become "the best in everything we do" across our three-pillar strategy of 'Optimize, Transform, Innovate'. Efforts were made to streamline GEMS, learn from events and to progress other continuous improvement initiatives.

Key achievements

- Learning from events at Management level through investigation and follow-up of significant incidents.
- Adoption of a number of lessons learned initiatives with the purpose of analyzing, developing and implementing robust solutions to improve our operations.
- Deployment of our corporate Hazards and Effects Management Process, based on industry best practice for Advanced Barrier Management, as highlighted in section 2.7.1.
- Continued deployment of Process Safety Management and Investigation/Root Cause Analysis training programs.
- Ongoing integration of Operations Management System documentation into GEMS.

FUTURE

The following objectives have been set for 2020:

- Continue to optimize GEMS, including restructuring and simplification where required.
- Process Safety Management strategy and targets as highlighted in section 2.7.1.
- Continuation of the deployment of ISRS and Process Safety Management frameworks, including the

development or improvement of associated tools, where required, and further strengthening hazard management processes.

- Maintain efforts on continuous improvement, including incident investigation and follow-up, and lessons learned initiatives.

2.7.1 PROCESS SAFETY MANAGEMENT

MANAGEMENT APPROACH

A Process Safety Management (PSM) framework and program based on an industry standard^{23,24} is in place which, when applied throughout the product lifecycle, aims to reduce the risk of major accidents. This approach incorporates industry good practice in Inherently Safer Design²⁵ and Advanced Process Safety Barrier Management²⁶ and applies a hierarchy of hazard management that follows:

- Elimination – Avoid the hazard completely
- Substitution – Reduce the severity of the hazard by changing its nature
- Minimization – Reduce the hazard severity by minimizing its scale
- Moderation – Reduce the hazard severity by changing the impact of a potential hazardous event
- Segregation – Limit effects of a hazard by reducing its potential of causing harm
- Simplification – Reduce the likelihood of a hazardous event by inherent features of the design
- Engineering controls – Reduce the likelihood of the hazardous event or impact by adding controls to the design
- Administrative controls – Reduce the likelihood of the hazardous event or impact by adding administrative controls
- Personal Protective Equipment – Reduce the likelihood of impact to people by providing them with Personal Protective Equipment (PPE)

The PSM framework consists of a set of risk-based priority activities and practices that are being embedded in the Company's GEMS and the GTS, which have been aligned with the ISRS improvement activities.

All LOPC events occurring offshore are reported to the relevant parties within the organization and analyzed to identify appropriate treatment measures. SBM Offshore follows IOGP 456 and American Petroleum Institute (API) 754 standards for LOPC classification. The annual statistics

²³ 'Guidelines for Risk Based Process Safety' by the Centre for Chemical Process Safety (CCPS)

²⁴ PSFs are a set of 10 guidelines that reinforce best practices targeting causal factors related to PSE with the objective of reducing LOPC events.

²⁵ 'Guidance on applying inherent safety in design: Reducing process safety hazards whilst optimising CAPEX and OPEX' by the Energy Institute EI.

²⁶ 'Bowties in Risk Management. A Concept Book for Process Safety' by the CCPS and EI