

Workplace Safety and Security

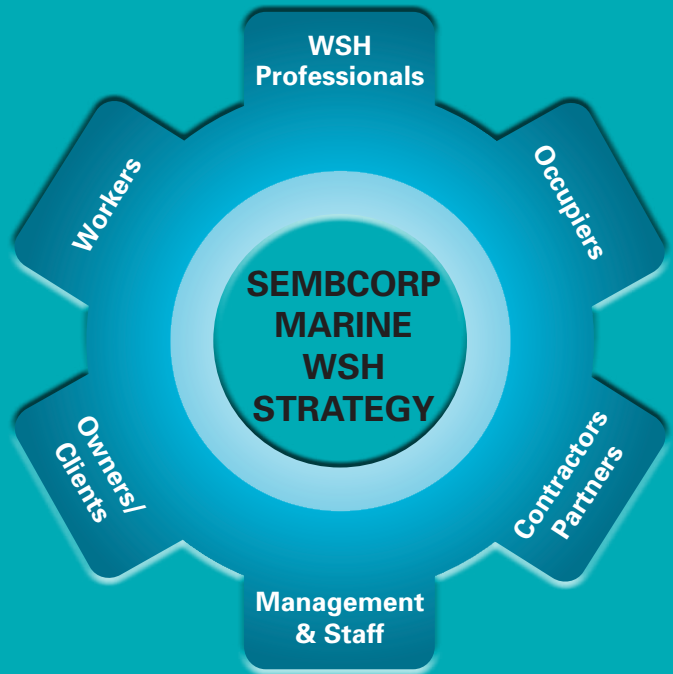
To achieve operational excellence, Sembcorp Marine places the highest priority on its workplace safety, health and security systems. In addition to identifying, managing and reducing risks, the Group enhances these systems constantly to comply with international and national standards, such as the OHSAS 18001 Occupational Health and Safety Management System and the Singapore Workplace Safety and Health Council's WSH 2018 plan.

Workplace Safety and Health (WSH) Strategy

Upholding safety and health at the workplace is the responsibility of all levels of management and staff, extending from the Board's Risk and Enterprise Risk Management Committees to the Group, yard department and sub-trade functions. Top management, Group-level strategy formulators and yard-level specialists jointly develop robust and structured WSH systems to safeguard the safety and well-being of the Group's 10,608 staff as well as its contractors, clients, shipyard occupiers and other stakeholders.

Four safety strategic thrusts guide Sembcorp Marine's activities towards its vision of zero incidents. The risk management performance each year is monitored and evaluated against the four severity parameters of 1) people, 2) assets and consequential loss, 3) environment, and 4) reputation. This assessment then identifies the five key risk areas to focus on for the following year. In 2013, the five key risk areas identified were 'fire and explosion', 'falling from height', 'equipment or material failure and damage', 'dropped objects', and 'structure failure'.

To address these identified risk areas, the Group adapts the programmes in its strategic thrusts for deployment at various levels. Bi-monthly monthly and quarterly meetings are held by representatives in the Group Health, Safety and Environment Committee to ensure the strategy remains responsive, relevant and effective.



WSH Performance in 2013

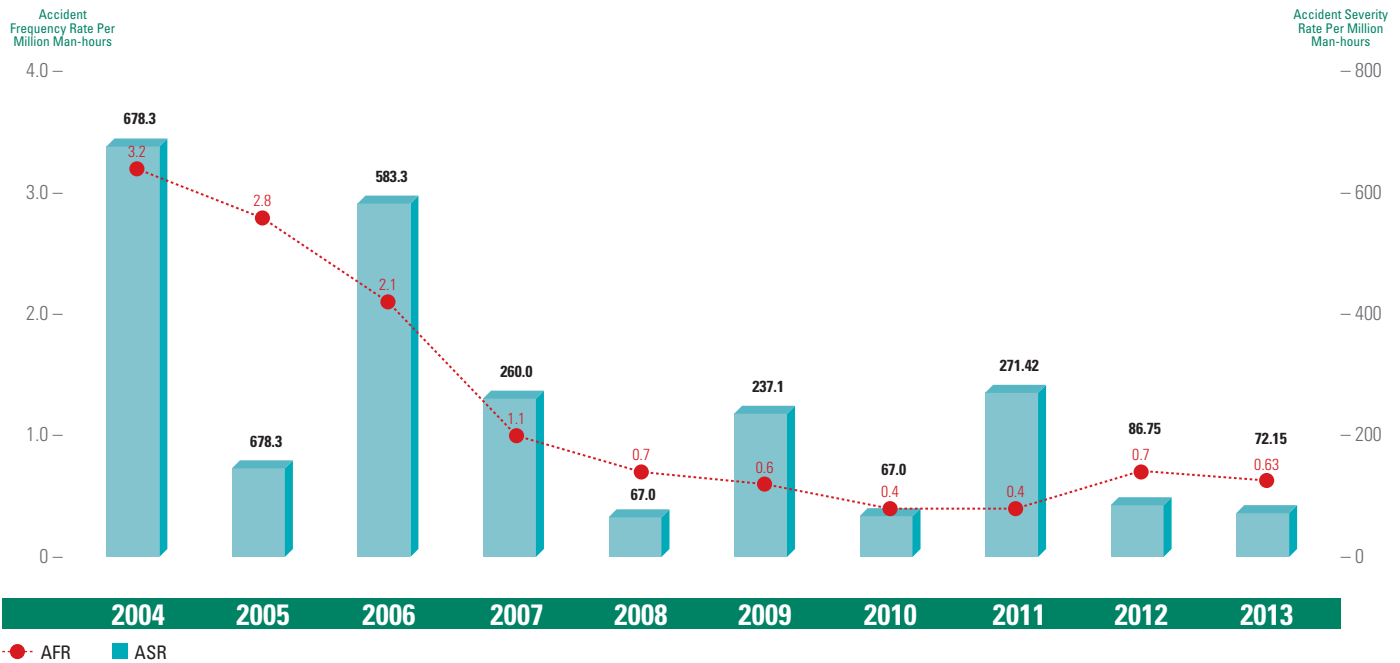
Sembcorp Marine's yards monitor their WSH performance using several indicators, including near misses, hazards reported and occupational disease rate, to assess the safety performance of employees and business partners. Such monitoring efforts enable the yards to customise appropriate WSH strategies and programmes to address specific areas of focus within their operations.

In 2013, the Group achieved a better Accident Frequency Rate (AFR) of 0.63, from 0.70 in 2012. It also improved its Accident Severity Rate (ASR) from 86.75 the year before to 72.15. The AFR measures the frequency of workplace incidents per million man-hours, while the ASR indicates the number of man days lost per million man-hours worked in the workplace.

The Group also improved its workplace injury rate (WIR), a record of workplace injuries that require more than three days of medical leave per million man-hours, from 378.81 in 2012 to 214.81 in 2013. The WIR was introduced in 2011 to improve the Group's assessment and monitoring of safety standards in the workplace.

During the year, there was a fatal traffic incident that involved an employee at Sembawang Shipyard. The Group deeply regrets this loss of life and has revised the control measures for forklift driving across all its yards.

Sembcorp Marine's Safety Performance



Further enhancements were also made to the ongoing hazard-spotting incentive programmes in the Group's yards to encourage more personnel to provide feedback on safety gaps and unsafe work conditions.

Benchmarking to International Standards

All the Group's yards undergo twice yearly surveillance audits and a renewal audit once every four years as required under their OHSAS 18001 certification, to ensure that their occupational safety and health management systems are in compliance with the Singapore legislation and international standards related to the Oil Companies International Marine

Forum. In general, recommendations were made to further enhance stakeholder engagement for hazard identification and refine WSH risk assessment and control measures.

Mandatory WSH Management System audits are conducted annually by Ministry of Manpower approved auditors to ensure the yards' compliance with the Singapore Standard SS506: Part 1: 2009 / ASMI: Code for the Establishment of Shipyard Safety Management Systems, Workplace Safety and Health Act, WSH (Shipbuilding and Ship-repairing) regulations and other subsidiary legislations.

At least once a year, the Singapore Civil Defence Force performs Company Emergency Response Team audits on each yard. This involves using documental checks and practical assessments to validate the yard's emergency response plan, training programmes, equipment readiness and maintenance records as well as response capabilities in incident size-up, fire-fighting and hazardous materials handling.

Sembawang Shipyard, which received the International Sustainability Rating System's (ISRS) Lifetime Achievement Award in 2012, has further incorporated the ISRS system developed by international audit classification society Det Norske Veritas into its operations for over two decades. Using a range of well-established tools to develop, train, implement and audit its operations, the yard ensures that high standards of business excellence, safety and sustainability are upheld for customers, stakeholders and the community.



Employees presenting their innovative projects during a WSH Innovation Teams Convention.

Strategic Thrusts in Health,



Continuous Enhancement in HSE Competencies & Capabilities

To create and foster an internalised safety culture including proactive risk management and shared ownership by all stakeholders.

Activities include:

- Raising of HSE competencies across 13 specialist trades through WSQ Trades and WSH competency training with the WSH Council, higher learning institutes and other Ministry of Manpower-accredited training providers.
- Enhancement of on-the-job training with a specific focus on safety aspects relating to hotwork, working at height, lifting operations, electrical work, structure and stability and confined space work.
- Workshops and talks on topics such as occupational health, chemical-handling safety and noise-induced deafness, often in collaboration with health authorities or clients.
- Annual safety innovation competitions by the yards for employees and contractor partners to develop process and equipment solutions that improve safety and efficiency.
- Rewards and incentives for employees to use hazard observation cards to feedback on safety gaps and potentially unsafe work conditions
- Awards recognition, such as WSH Best Supervisor and Best Worker, to recognise supervisors and employees who are role models in championing workplace safety and health excellence.
- Recognition and incentives, such as HSE Excellence Award and the HSE STAR Award programmes, to motivate contractor partners to achieve zero-incidents.



Commitment & Leadership Building towards a Better WSH Culture

To enhance capability building of all stakeholders and encourage innovation in promoting safety and health. Continuous assessment to ensure the highest standards of WSH.

Activities include:

- Best HSE Practices Manual developed and improved by the Group's yards.
- HSE Officers Inter-yard Exchange Programme which enhances Group-level sharing of good WSH practices for implementation in the respective yards.
- WSH promotional activities to further reinforce a proactive HSE culture, such as innovation and WSH carnivals for HSE improvement, yard and inter-yard quizzes and competitions on WSH-related topics.
- Prominent WSH posters and signs around the yards to engage employees, contractors and stakeholders.
- Daily reminders and work safety highlights during morning toolbox briefings and other WSH meetings.

Safety and Environment (HSE)



Involvement & Support from Stakeholders

To increase the connectivity and communication networks to enhance outreach to all relevant stakeholders through promotion activities and information sharing portals.

Activities include:

- Building up of capabilities and the safety management systems of contractor partners by encouraging them to progress towards third-party certification and independent audits through programmes such as bizSAFE 'STAR'.
- Enhanced audit systems and on-site inspection guidelines for contractor partners.
- Sharing of good WSH practices and lessons learnt through discussion forums for HSE professionals from the business units.
- Regular formal and informal interaction platforms for senior management and operations personnel to interact and stay connected with contractor partners and clients.
- Proactive inclusion of contractors, clients, shipyard occupiers and other relevant stakeholders in WSH enhancement activities such as training programmes and emergency drills.



Improvements in Risk & Safety Management Systems

To develop and enhance the HSE management system through the development of benchmarking and statistical tools, incident reporting and continuous improvement. To develop focused intervention programmes for identified high risks to reduce incidents, including risk assessments, trade specific guides and industry best practices.

Activities include:

- Review, Educate & Validate (REV) programme used by the yards and their contractor partners to address key risk areas such as working at height, lifting operations, confined space, hotwork and structure and stability.
- Annual review of key risks and mitigating measures to proactively manage and bring down risks to target levels
- Safety checklists and permit-to-work systems
- Alignment of the Group's Focused Risk Intervention Programme to the Association of Singapore Marine Industries' 2015 Work Plan initiatives, in collaboration with WSH Council, covering areas such as safety during confined space operations, work-at-height safety operations and lifting processes.
- WSH Council's bizSAFE five-step programme to guide contractor partners towards integrated risk management.



Display of innovation entries at the annual innovation carnival.

WSH at Work

Emergency Preparedness

Sembcorp Marine has established an integrated crisis response framework involving representatives from the key functions of Health, Safety and Environment (HSE), human resource, communications and legal. This framework clearly defines emergency response procedures, roles and responsibilities as well as lines of reporting to ensure business continuity for the Group.

The Group's yards are equipped to provide timely crisis response, with teams of HSE personnel and medical professionals on standby around the clock to render medical help and emergency aid should an incident occur.

To ensure that shipyard operations are well-prepared to respond promptly to emergencies, the Group and its yards conducted 167 drills, involving all five identified groups of stakeholders, in 2013. Held at various locations, including offices, workshops and onboard vessels, these drills kept HSE personnel familiar and ready with crisis response strategies for various emergency scenarios, including fire and explosion, rescue and evacuation, environmental pollution, security threats and business risk drills.

Safety Education

Safety education and training are important aspects of the Group's HSE strategy to ensure safe work operations. In 2013, employees and contractors underwent a total of 279,495 hours in safety training. These included courses on risk management, work-at-height, confined space, fire-fighting and occupational first aid as well as trade-specific safety training for forklift operations, signalling and rigging, scaffolding, self-propelled platform operations, welding, pipefitting, painting and blasting, steel fitting, tank cleaning, electrical installation, mechanical installation and crane operations.

In 2013, the Group introduced a new MoveSMART safety training programme to educate yard personnel on techniques for handling of tools and materials, improving balance and reducing falls, preventing injuries and reducing strain at work.

Safe Working Environments

The yards exercise great care to ensure safe work environments for the well-being of their employees and stakeholders. Regular environmental checks – including air particulate monitoring, noise mapping and boundary noise monitoring – are performed to ensure that air quality and sound levels are within safe levels.

Under the yards' hearing conservation and respiratory protection programmes, employees who are exposed to these occupational health risks are identified and monitored on a periodic basis through annual medical check-ups and annual audiometric tests.

Mosquitoes are of particular concern as they carry diseases such as dengue, chikungunya or malaria. Various control strategies are in place, ranging from fumigation to regular site inspections as well as identifying and eliminating potential mosquito breeding grounds. In the area of mozzies prevention, Jurong SML initiated a Neighbourhood Environmental Safety and Health Committee to engage its industrial neighbours to conduct joint 'search and destroy' walkabouts to spot mosquito breeding grounds in the vicinity.

Shipyard and Community Security

Sembcorp Marine and its shipyards have stringent security management systems to protect critical assets and the well-being of employees and stakeholders. All the Group's yards comply with the International Ship and Port Facility Security Code, a comprehensive and standardised framework to evaluate and mitigate the risks associated with the vulnerability of ships and port facilities



Safety drills and environmental checks are regularly conducted across the Group to ensure emergency preparedness and safe working environment.



Presentation of Sembcorp Marine's emergency preparedness strategies to the WSH Council Marine Industries Committee during their visit to the Sembmarine Integrated Yard @ Tuas.

Several of the Group's yards are involved in community Security & Safety Watch Groups and partner closely with other companies and Home Team agencies, such as the Singapore Police Force and the Singapore Civil Defence Force, to build up security capabilities. Joint emergency response drills and exercises are also held regularly with their neighbouring companies and the Singapore Civil Defence Force to ensure community vigilance and emergency readiness.

Reward and Recognition

The Sembcorp Marine Group received a total of 17 awards in five categories at the Workplace Safety and Health Awards in 2013 (see page 87 for the list of awards). These included two awards won by PPL Shipyard and Jurong SML for their robust risk management systems, 11 awards recognising projects with good safety performance, two innovation-focused awards and two individual safety awards. The awards are presented annually by the WSH Council to honour organisations and individuals from a range of industries who have contributed to achieving WSH excellence.

To spur employees and contractor partners towards WSH excellence, the Group's shipyards have in place structured reward and incentive systems, including merit and demerit point programmes, which serve to encourage good safety performance and sound risk management practices. These initiatives are continuously reviewed to ensure alignment to industry best practices and evolving WSH requirements.

WSH in the Community

The Group regularly supports events and platforms that champion WSH education and promotion, such as the National WSH Campaign organised by the WSH Council. The programme extends beyond the marine and offshore industry to promote workplace safety and health in different work sectors of Singapore.

Sembcorp Marine's yards also cooperate with external agencies such as the Ministry of Manpower, the WSH Council, the Workforce Development Agency and the Association of Singapore Marine Industries in the area of WSH training and education to enhance occupational health and safety standards within the industry.