

OPERATIONAL EXCELLENCE AT AET

“ At AET, operational excellence is about creating value for our customers in a safe, secure and sustainable manner. Our success is rooted in upholding the highest industry standards while remaining committed to service quality – both on shore and at sea. ”

The principles of Health, Safety, Security and Environment (HSSE) are the bedrock to our business operations. Beyond aligning our risk management and operating procedures to regulatory requirements, we strive to achieve HSSE excellence by engaging with customers, regulators, employees and other stakeholders to proactively identify and mitigate workplace risks and hazards. We also invest in regular trainings to strengthen AET's workplace safety and health culture, while implementing digital innovation to drive continuous improvements.

As a leading provider of maritime transport solutions for the world's energy needs, our vessel fleet has maintained a clean record in both oil spills and detentions by Port State Controls (PSC). We continue to be recognised by the industry for our commitment to safety and welfare, not only for staff and operational crews, but also for those in distress at sea.

AET also provides complete in-house commercial management services from chartering, vessel operations to post-fixture activities through our offices in Singapore, London, Houston and Rio de Janeiro. To support business expansion in growing markets like Brazil and Norway, we have restructured our business operations by asset classes, namely Mid-Size Tankers (MST), Very Large Crude Carriers (VLCC) and Dynamic Positioning Shuttle Tankers (DPST). Aimed at improving commercial excellence, the realignment has enabled us to better serve our customers.

Our ship managers, Eaglestar, OSM and V.Ships have been supporting our endeavours by providing the technical expertise to ensure the proper management and upkeep of our vessel fleet. This provides our customers with added assurance and our vessel crews with round-the-clock support across different geographies and time zones. In 2020 and 2021, during the pandemic, we maintained an availability rate of over 99% for our vessel fleet.

PUTTING SAFETY FIRST

A strong safety culture is indispensable to our business functions. In shaping the right safety habits and behaviours, AET has adopted the HSE Culture Ladder

— an approach to increasing safety awareness via five stages of development. As a progressive organisation, AET is steadfast in its drive towards a “Generative” HSSE culture where safety thinking is fully ingrained into everyday operations.



For details on the HSE Culture Ladder, refer to page 93.

ENSURING CRISIS READINESS

Our crisis response strategy and approaches are regularly reviewed to incorporate emerging business and operational risks globally. To enable our teams to handle crisis incidents more effectively, all AET offices are equipped with Crisis Management Centres. The Centres in Singapore and London were outfitted with advanced communications facilities in 2021. Similar upgrades in the Houston and Rio offices are in progress.

We conduct regular drills and simulate realistic crisis scenarios to stress-test our emergency responses and procedures and ensure the effectiveness and adequacy of our crisis plans and resources. These activities enable our teams to be better prepared for crisis-level incidents involving different situations, locations and stakeholders.

During the year, AET conducted and participated in two major crisis management drills. The first was a tabletop exercise conducted in Singapore in June 2021 which saw our Crisis Management Team partnering with MISC Group's Chief Information Security Officer and Control Risks, a risk and crisis management consultant specialising in cyberthreat scenarios. The exercise provided a valuable platform for understanding the impacts of cybersecurity risks, assessing AET's responsiveness to cyberattacks and identifying areas for improvement.

We also participated for the first time in the Seventh Maritime Information Sharing Exercise (MARISX) in July 2021. Conducted by the Information Fusion Centre (IFC) Singapore, this important tabletop exercise involved navies, maritime agencies, IFCs and shipping companies from 37 countries, as well as maritime security experts who provided insights on crisis situations.



Putting personnel and resources to the test through a cyberattack simulation exercise held in “Responsibility”, AET's newly upgraded Crisis Management Centre in Singapore.

Over the three-day exercise, participants were put through 22 Maritime Security scenarios with 63 injects. The experience demonstrated the importance of multilateral cooperation and inter-agency partnership in order to effectively deal with maritime security threats and incidents. It also provided AET with the chance to network and exchange global best practices and insights with international shipping communities and enforcement agencies.



AET personnel manning the Crisis Management Centre in Singapore throughout MARISX.

DELIVERING QUALITY ASSURANCE

AET's Quality Management System (QMS) ensures that all business activities are conducted in accordance with key international benchmarks, outlined in the table below. Our QMS coverage extends from service delivery to energy, environment, as well as occupational health and safety practices. Our commitment to these standards set the pace for long-term performance improvements in AET's financial and operational sustainability. Our QMS is validated annually by independent certification bodies and our offices in Singapore, Kuala Lumpur, London, Houston and Rio continue to be certified to ISO 9001 QMS standards.

Upholding International Quality Standards

- ISO 9001 Quality Management
- ISO 14001 Environmental Management (at Eaglestar)
- ISO 50001 Energy Management (at Eaglestar)
- ISO 45001 Occupational Health and Safety (at Eaglestar)

Our Integrated Assurance Programme (IAP) comprises “Three Lines of Assurances” based on the “Three Lines of Defenses” established by the Committee of Sponsoring Organizations of the Treadway Commission. The first line of assurance is focused on managing risks through self-assessment. The second line of assurance is aimed at formulating the right policies and frameworks to support the assurance process, while the third line of assurance refers to compliance with the Group's internal audit charter.

STRENGTHENING SECURITY MEASURES

AET has adopted MISC Group's framework on Security Management System (SeMS), which defines the policies, standards, guidelines and tools for security risk management. The key objectives of SeMS are to protect people, property and information and ensure that our risk mitigation strategies commensurate with the risk exposures and security threats at different operating locations.

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In line with SeMS, which requires our offices and vessels to comply to the Mandatory Minimum-Security Standards, we installed Video Surveillance Systems to enhance the security of vessels trading in high maritime security risk areas. We are also in the process of developing Security Contingency Plans (SCP) at our various offices. The SCP provides comprehensive guidelines for managing potential crisis situations stemming from man-made, natural or security threats.

TRANSFORMING THROUGH DIGITALISATION

Riding on opportunities afforded through digitalisation, AET is committed to increasing operational efficiency, safety and environmental compliance through higher automation. As part of our transformation journey, we have adopted e-navigation systems to enhance navigational accuracy and safety, Internet-of-Things (IoT) technologies for improved communications and real-time monitoring, and predictive analytics for optimised vessel management and operations, among others.

During the year, multiple digital solutions by Magellan X were piloted onboard 40 AET's MSTs and five VLCCs. These solutions enable us to monitor maritime safety, inventory levels and analyse decarbonisation metrics like fuel consumption, emissions and machine parameters, in real time. A key example is SAFEVUE.ai, a behavioural-based safety system that combines industry knowledge, industrial IoT capabilities and predictive analytics to improve workflows, crew wellbeing and safety. Technologies like radio frequency identification (RFID), artificial intelligence (AI) and machine learning are actively embedded into the system to improve the accuracy of captured data, lower resource consumption and drive procurement optimisation.

These cloud-based digital solutions have enabled stored data to be easily shared between crew and shore staff, allowing actionable insights and issues onboard to be rectified early. This has led to reduced operating expenditure, enhanced operational reliability and higher future-proofing of the current vessel fleet.

Digital solutions were piloted onboard 45 vessels

★ 40 MSTs

★ 5 VLCCs

MEETING IMO ENVIRONMENTAL REGULATIONS

In June 2021, the IMO announced new CO₂ regulations requiring all vessels to adopt the Energy Efficiency Existing Ship Index (EEXI) as a measure to reduce greenhouse gas emissions, and the Carbon Intensity Indicator (CII) to track operational efficiency. Vessels are also required to adopt the enhanced Ship Energy Efficiency Management Plan (SEEMP) as a mechanism to heighten energy efficiency. These measures are part of the IMO's goal to lower carbon intensity in the shipping industry by 40% by 2030.

To comply with EEXI, CII and IMO 2030 targets, AET conducted a detailed technical evaluation, including measuring and verifying the operational data of each vessel. Factors affecting the EEXI included basic ship designs, type of power plants and propulsion systems, while the type of fuel and the nature of trade supported by each vessel could have an impact on the CII. A multi-prong approach had to be taken to ensure EEXI and CII compliance while meeting AET's own net-zero targets, balancing between costs, proven solutions and service providers with the technical experience.

OPERATIONAL HIGHLIGHTS IN 2021

Completed our first ever LNG bunkering in the US



In October 2021, we completed our first ever LNG bunkering in the US, working in coordination with Shell to refuel the LNG dual-fuel Aframax tanker Pacific Ruby outside Port Canaveral in Florida. Six hundred metric tonnes of marine LNG was transferred onto the tanker from the Q-LNG 4000 bunker barge. The entire bunkering operations coordinated by AET and Shell and was safely and successfully completed in nine hours while Pacific Ruby was on its way from Houston bound for Rotterdam.

Eagle Balder completed her maiden LNG bunkering operations in Sweden



Eagle Balder completed her first two bunkering operations at the Port of Gothenburg, Sweden in early 2021. This LNG dual-fuel DPST is among the cleanest DPSTs ever built. The ship-to-ship bunkering operations were completed safely and simultaneously without interruption to the cargo operations. Prior to the operations, the crew and offshore personnel conducted careful and thorough risk assessment to ensure full compliance with the industry's best practices.

Eagle Pilar completed her first STS transfer operation in Brazil



Eagle Pilar, our eco-efficient Suezmax second generation DPST purpose-built for long-term charter to Shell, safely completed her first STS operation in the Brazilian Basin in April 2021. The operation was supported by our global lightering team who provided the required STS support services including specialised personnel and equipment.

AWARDS & ACCOLADES

International Recognition for Operational Excellence

★ MPA SRS Shipowner of the Year Award

★ CSA Jones F. Devlin Award for Safety – 48 ships

★ CSA Annual Environmental Achievement Award – 50 ships

★ AOS-USA Maritime Samaritan Award

★ RICS Gold SKA Rating

Attesting to AET's operational excellence during the year were numerous accolades and awards. AET was recognised with the "Singapore Registry of Ships" (SRS) Ship Owner of the Year Award at the Singapore International Maritime Awards (IMA) ceremony held in April 2021 as part of the Singapore Maritime Week. The SRS Award recognises an outstanding owner of quality Singapore registered ships and takes account of fleet size, growth, operational excellence, sustainable contribution to human capital development both ashore and at sea.

The Jones F. Devlin Award for Safety presented by the Chamber of Shipping of America (CSA) to AET affirmed our excellent health and safety record for 48 of AET's vessels. In addition, the CSA's Environmental Achievement Award

was presented to 50 of our vessels to acknowledge our stringent HSSE standards and measures.

The Maritime Samaritan Award was presented by the Apostleship of the Sea of the United States (AOS-USA) to acknowledge our crew repatriation initiatives in the Western Gulf of Mexico during the pandemic.

AET's London office was awarded a Gold SKA Rating by the Royal Institute of Chartered Surveyors (RICS) for adopting good environmental practices (such as the use of sustainable and recycled building materials) during its fitting-out. The accreditation was determined through an environmental assessment, benchmark and standard.