

SUSTAINABILITY, SAILING INTO A GREEN FUTURE

Daitoh Trading, Serromah Shipping and New Shipping Kaisha group of companies measures to reduce GHG and Carbon emissions.



EFFECTS OF GHG EMISSIONS AND CARBON ON THE ECOSYSTEM

As a group of companies, we recognize that global warming is causing unprecedented environmental change. Therefore, the shipping industry must make its contribution towards reducing GHG and carbon emissions.

GHG AND CARBON EMISSIONS IN SHIPPING

The IMO has set carbon and GHG emissions target as follows as compared to 2008 levels.

GHG emissions to be reduced by at least **50% by 2050**

Reduction in carbon emission by **40% before 2030**

Reduction in carbon emission by **70% before 2050**

MEASURES IN PLACE AND FURTHER ACTION PLANS FOR THE REDUCTION OF EMISSIONS

1) The vessel in the fleet are following procedures of SEEMP and company procedures laid down in "S-0204 Instruction for Energy Conservation." This includes following measures:

a) Voyage Optimization – While maintaining safety during navigation, optimum voyage speed and course is planned to minimize fuel consumption, including cargo heating consumption.

b) Optimized Trim and Minimum Ballast - When vessel is sailing in ballast condition, the amount of ballast and trim is maintained for suitable propulsion efficiency.

c) Tuning of Equipment - At each dry-docking all navigational equipment are serviced to maintain optimized suitable course.

d) Heat waste Control and Recovery – Optimizing the operational parameters and maintenance of heat recovery equipment are done to utilize heat most efficiently.

e) Hull and Propeller Surface smoothness – This is achieved by UWI and/or evaluation of main engine performance. There is further planning to carry out periodic UWI and underwater cleaning of hull and propeller.

f) Electrical Load – Operation of diesel generators are optimized to improve energy efficiency.

g) Thermal Efficiency control – Temperatures of air conditioning plant, fuel oil and lub oil are maintained with due consideration to energy efficiency.

h) Fuel Oil Consumption – Engines and boiler are maintained and operated to minimize fuel consumption.

2) IMO DCSSEEMP II and EU MRV – All fleet vessels are complying the requirement and following the procedures of data collection and reporting of fuel consumption.

3) EEXI regulation – We have contacted engine makers and service providers "ClassNK Consulting Services" and DNV to prepare for EEXI compliance. We expect the plan approval and modifications to be completed within Q2 of 2022.

4) Reducing carbon footprint on spares transport – We have contracted with freight forwarder Kuehne+Nagel to provide warehousing at strategic locations to consolidate the spare parts at these hubs and transport the spare parts with reduced carbon footprint.

5) Modification on existing vessels is undertaken to use energy efficient lights and other electric devices.

6) Friend Fins and Turbo Rings: Some of the fleet vessels are using devices adjacent to propeller to improve efficiency viz – friend fins, turbo rings.

7) Fuel Mass Flow Meters: We are also discussing the installation of mass flow meters to monitor fuel consumption more accurately.

8) New Building – Our new building team is continuously working with building yards and manufacturers for implementing steps to reduce GHG emissions. These are improved efficiency engines and other machineries, alternative fuels, hull coating, variable speed pumps and fans.

FURTHER EMISSION REDUCTION MEASURES BEYOND STATUTORY COMPLIANCE

Navigation measures

1) Subscribe to weather routing services with the aim of reduced voyage consumption

2) We guide the vessels on appropriate auto-pilot settings for Ocean passages to reduce excessive rudder actions and improve fuel efficiency.

3) We may evaluate, using a voyage optimization service from an external provider, using data analytics and computational fluid dynamics together with mass flow meters, hydrostatic data and weather data to advise the vessels daily on how to reduce fuel consumption.

4) We are planning to consult with a naval architect firm to calculate ideal trim conditions at various drafts so the vessel has data to assist in the voyage planning.

5) Our voyage planning and group chartering company has an efficient schedule planning for our vessels to ensure optimization of port calls, including facilitation of just-in-time arrival of ships and economical speed basis berthing information.

6) All our vessels are on VLSMGO and IMO compliant fuel, thereby reducing any effluent from scrubber units

Cargo related optimization

1) The cargo is to be stowed so as to minimize the carriage of redundant ballast.

2) During loading and discharging, optimization of the use of hydraulic power packs

3) Closely monitoring cargo heating so that excessive heating before requirement is avoided.

4) All vessels in commercial management with Serrromah have been supplied with spectrometers to optimize bunker consumption during tank cleaning

Seafarers Travel

To reduce the carbon footprint whilst flying seafarers to and from vessels, we have instructed our Travel Company 'Travel Cue' to take into consideration the following:

1) As far as is practicable, we will book non-stop flights, as we recognize that non-stop flights reduce air miles and bring down the number of takeoffs and landings. Further, planes capable of non-stop, longer distances are most often newer planes with better fuel economies.

2) Advice travellers to travel light because a 10 kg reduction in weight could technically save 50 kg in emissions

3) We are exploring the use of eco-friendly hotel chains; however, we are facing challenges and resistance from port agents. After the restrictions due to Covid-19 we will be able to put this in place.

Training our people

1) Our regular training and awareness program through the training module matrix for both shore and sea staff include modules viz—ship energy efficiency, ISO 14001 Environmental Management, Ship Energy Efficiency Management Plan.

2) Further, we attend industry webinars conducted by Class and other industry bodies on dealing with the issues surrounding our industry and the reduction of GHG emissions from ships. resistance from port agents. After the restrictions due to Covid-19 we will be able to put this in place.