



# **S.E.E.M.P.**

**(Ship Energy Efficiency Management Plan)**

**A Priority Challenge for Ship Operators**

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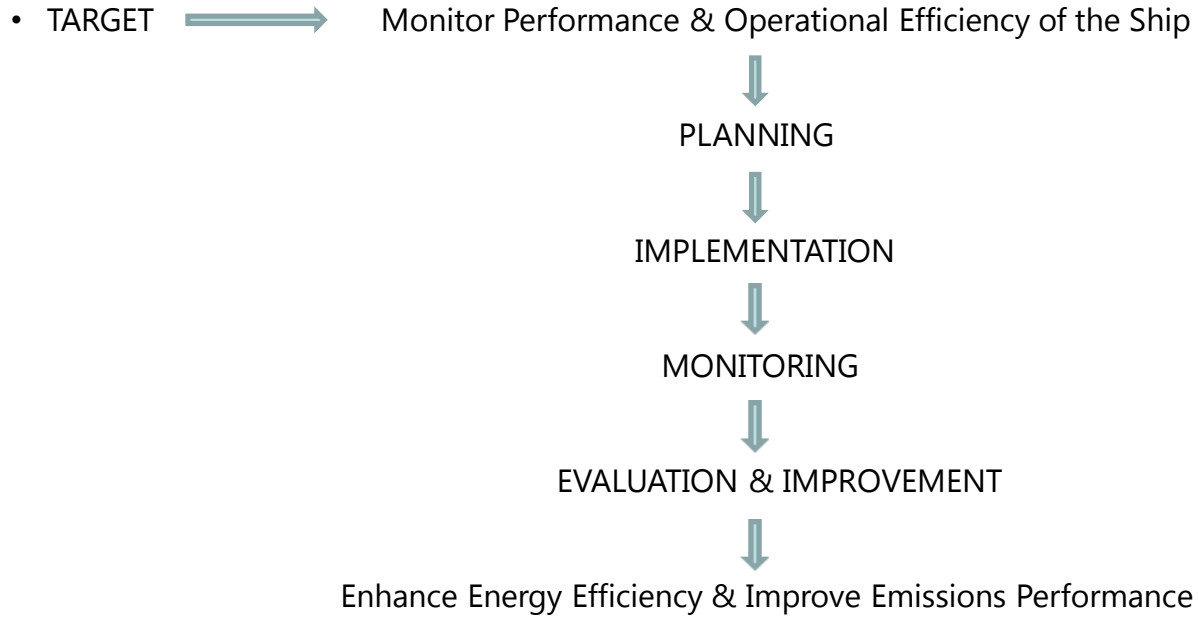
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## INTRODUCTION

- Regulation 22 of New Chapter 4 of MARPOL Annex VI – adopted by Resolution MEPC.203(62) requires that all ships of 400 GT and above are to have a Ship Energy Efficiency Management Plan on board which addresses ship Specific Energy Efficiency Measures and which should meet guidelines developed by the IMO.
- A ship specific manual must be already in place as SEEMP has become effective since 1<sup>st</sup> of January 2013.
- Without measuring the emissions performance of the vessel it is impossible to manage the energy efficiency effectively.
- SEEMP establishes a mechanism for the ship operator to improve energy efficiency and serves as a management tool to measure environmental performance.

# SEEMP – A Priority Challenge for Ship Operators



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- Although SEEMP is developed according to IMO guidelines and it is mandatory to have a copy onboard the ship, a very big part of the plan is voluntary:
  - Measures Selection
  - Number of Measures to be implemented
  - Monitoring methods
  - Results and Reporting
- The shipping industry presently lacks the standardized monitoring tool that can provide a transparent picture of emissions performance



1. MRV (Monitoring, Reporting & Verification) system to be introduced by the EU and become mandatory in 2014.
  - Transparency in the shipping industry will be guaranteed by the use of the MRVs
2. MBMs (Market Based Measures) will be the next to be announced right after the MRV introduction
  - There are many MBMs Proposals in IMO level with the main ones distinguished as follows:
    - Funds for GHG emissions from ships
    - Emission Trading Schemes
    - Penalties in the form of a levy every time the ship is bunkered basis the BDN quantity or basis the fuel consumption quantity for the fuel consumed on the voyage to the port of call

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- With the introduction of MRVs and MBMs a ship will only have to emit as much carbon as it has allowances for.
- Case 1
  - The Companies, that will be able to cut their pollution and end up with extra allowances.
- Case 2
  - The Companies that will have trouble reducing their emissions and will seek to buy extra allowances from other companies.

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Non-proactive companies:

1. Forced to buy allowances from other companies
2. Underperforming vessels with high fuel costs
3. Not preferred by the Charterers
4. Urge in taking decisions to meet new requirements
  - Without the proper diligence
  - Lacking the clear picture of environmental performance
  - Without scrutinizing thoroughly the technological options

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Proactive Companies:

1. Better position to face the strong competition that will be emerged
2. An improved Environmental Performance is high on Charterer's Priorities
3. In the correct direction for increased profitability
4. Through the applicable MBM  Pollution cuts will be turned into Revenue



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- The Ship Operators will have to continuously challenge SEEMP and prove high competitiveness
- Measures/Energy Saving Potentials will have to be implemented. A small sample of those measures is presented below:
  - Minimization of Voltage Unbalance of Motors
  - E/R Fan efficient operation Management
  - Accommodation's lighting loads optimization
  - Installation of High Efficiency Motors
  - Condition Based Monitoring of Main Air Compressors through FAD measurement
  - Propeller & Hull Condition Monitoring and Cleaning
  - Potential minimization of Incinerator use
  - Trim optimization by the use of a software tool
  - Efficient hull coatings applications
  - Weather routing systems for better route planning
  - De-rating of Main Engine
  - Installation of Energy Saving Devices (ESD)



- The three following criteria will have to be contemplated in the process of choosing a measure for introduction in the SEEMP:
  1. Cost
  2. Benefit (Environmental & Financial)
  3. Financial Feasibility
- Significant Parameters will have to be assessed as well in choosing the most appropriate measures for the energy efficiency operation of a ship in specific, as follows:
  - Technical Parameters of the vessel operated
  - Technological Innovations that can be adapted
  - Operational limitations and Flexibility
  - Environmental & Economical Sensible Approaches

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- With the economic incentive slowly/steadily increasing, the cost benefits that can be generated and the commercial advantage that can be secured, the ship operators should place very high the Ship Energy Efficiency Management Plan on the Agenda of Priorities.



**THANK YOU!**