

## Sox Scrubber Retrofit

SeaBlue provide the optimized solution for retrofit of exhaust gas Scrubber base on varies type of ship according to the IMO's SOx regulations with minimal interruption to operation, which including:

- Project management
- Cost evaluation/Feasibility study
- Laser scanning
- Equipment selecting
- Basic and Detail Designing of the system
- Installation and commissioning

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# SEABLUE ENGINEERING

**TOTAL SOLUTION FOR SO<sub>x</sub>**



## BACKGROUND

IMO has decided that the global fuel sulphur limit of 0.5% should enter into force in 2020. This requirement is in addition to the 0.1% sulphur limit in the North American, US Caribbean, North Sea and Baltic Emission Control Areas (SECA)

With only a couple of years to the 2020 enforcement for controlled sulfur emissions, ship owners will have to make the decision to either switch to low-sulfur marine fuel oil (LSFO) or install exhaust gas scrubbers (EGCS - Exhaust Gas Cleaning systems)

## LOW SULPHUR FUEL?

- Avoid any high retrofit investment cost
- Asset Play Flexibility to sell the vessel any time without having to payback any new scrubber
- Exploit possibility of low fuel oil price differentials between IFO380 and LSFO
- potential engine/ components failures when burning LSFO of 0.5% S and 0.1% S
- Invest for engine/ components

## INSTALL SCRUBBER?

- Hedge vessel's position against high fuel oil price
- Diversify the Company's Fleet costs that are dependent on fuel oil price differentials
- Option to exploit low IFO380 prices due to lack of demand for high sulphur (3.5% S) fuels
- Potential selling opportunities by adding value to the secondhand price of the vessel
- High initial investment cost with constant annual maintenance & repair costs
- Local restrictions in washwater discharge

## FEASIBILITY STUDY, DESIGN AND INSTALLATION

- Feasibility study for choose a scrubber or use low Sulphur fuel
- Feasibility study for scrubber selection base on various type/size of the vessel
- Assess various scrubber designs and preliminary investigate the extent of retrofit works required
- 3D-laser scanning as required
- Preparation of Class related Drawings in co-operation with scrubber Maker, discussions and follow-up with Class
- Detailed design including piping & structural modification drawings, pipe fabricate drawing
- Project management and on-site supervision
- Installation and commissioning

**We assist you to identify and implement the optimal solution for your vessel without a hidden agenda.**

Please contact us at [Info@seablue.com.sg](mailto:Info@seablue.com.sg) to discuss the possibility that suits you best.

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