

Abstract

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AN OVERVIEW: ENVIRONMENTAL and ECONOMIC STRATEGIES FOR IMPROVING QUALITY OF SHIPS EXHAUST GASEOUS

In spite of the fact that most of different transport means have achieved a significant reduction of their emissions quantity during the last few years maritime field still suffers from the steady increase in the quantity of exhaust gases emitted from ships. As a result, the International Maritime Organization was prompted to issue a set of regulations for facing the seriousness of those emissions. The present paper handles the different methods which can be used to reduce the environmental damage caused by ship emissions. Through the study of the advantages and disadvantages of ships, emission reduction strategies use of natural gas, Selective catalytic reduction and sea water scrubbing systems have appeared as the best ways that can be utilized to reduce the environmental harms caused by ship emissions. Applicability of these methods aboard ships could vary from ship to another. Two high-speed passenger ships of different age were studied to evaluate the importance of applying these strategies. The results showed the possibility to attain valuable emission reduction percentage by using of Selective catalytic reduction and sea water scrubbing systems, but they will be of high initial cost and will increase operating cost of both ships. On the other hand using of LNG as alternative fuel will be more convenient from the point of view of environment and economic issues for the newer existing ship.