Abstract

Ibramim S Sedek

VIABILITY OF USING ENGINE ROOM SIMULATORS FOR EVALUATION MACHINERY PERFORMANCE and ENERGY MANAGEMENT ONBOARD SHIPS

The maritime institutions aim at contributing to reducing the adverse effects arising from the ships, machinery operation through the possibilities exit in the engine room simulators. The current paper explains the importance of engine room simulators in maritime education in general and focuses on their use in the field of evaluation and management of machinery within the engine room space. As a case study, an electric powered passenger ship and an oil tanker ship are investigated regarding applying ship energy management onboard. This investigation could be achieved using the possibilities available in TRANSIS ERS 5000. With reference to passenger ships, the results show the possibility of saving energy with a reduction of CO, SOx, CO2 and C emissions by about 7.97, 10.54, 12.36, and 20.11%, respectively. However, regarding tanker ships, the results reveal that a reduction of speed by 10% will achieve fuel saving by about 25%.