

Abstract

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Controlling The Atmosphere of Double Hull Spaces on Oil Tankers

ABSTRACT The International Maritime Organization through the Marine Pollution Convention made double hull tankers mandatory by regulation 13 F adopted in 1992. Thus the United States requirement of the Oil Pollution Act 1990 mandating double hull tankers effectively became the world standard. The thesis discusses the structure defects and the limitations of double hull tankers designs which have led to the conclusion that double hulls do not guarantee that no oil will be spilled. The potential for a catastrophic oil spill from a double hull tanker is real and the consequences could be just as damaging as major oil spills from single hull tankers. One of the limitations of the double hull tankers is the uncontrolled atmosphere of the double hull spaces which causes risk of fire explosion when hydro carbon gases oil leaks to those spaces. Data were collected and evaluated regarding the number of double hull tankers involved in accidents and the nature of occurrences and came with the conclusion that double hull spaces atmosphere is to be controlled by introducing inert gas into those spaces and maintaining the atmosphere in the inerted condition.