

# **Abstract**

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## **THE IMPACT OF OPTIMIZING TRIM ON REDUCING FUEL CONSUMPTION**

The shipping industry is one of the biggest industries throughout the ages. Maritime transport plays a vital role in world economy whereas competition between maritime companies is fierce [1], at the same time agreements of co-operation has taken different forms including alliances and mergers between companies to increase their market share. But competitions still stand despite all alliances even in same market. This intense competition drives companies to attain high level of competitiveness, by monitoring ship's operating performance and operating cost, emphasis on improve performance and reduce cost. On other hand new environmental regulations come to light, expansion of emission control areas (ECA), Which lead to significant higher fuel cost when using low sulfur fuel. Since the fuel cost is the largest portion of the operating cost of the vessel, a saving in fuel usage can result in considerable saving in operational costs. Furthermore, fuel saving have environmental benefits in the reduction of greenhouse gas emissions. The aim of this paper is to investigate the role of trim optimization which considers one of the easiest and cheapest methods for ship performance optimization and fuel consumption reduction trim optimization