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The Analysis of Carbon Reduction Strategies for Container Ship

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Abstract

The International Maritime Organization regulates international shipping's carbon reduction goals in 2030, 2040 and 2050, which require a reduction of 20%, 70% and net-zero emissions respectively compared with 2008. This study analyzes the carbon reduction effects and cost analysis of three types of container ships using alternative fuel (LNG), carbon capture, and purchasing carbon rights, respectively, under different scenario assumptions. Research results show that the use of carbon capture systems, combined with the use of alternative energy, can effectively reduce carbon dioxide emissions from container ships and effectively help container shipping companies achieve IMO carbon reduction goals. Although the use of carbon capture systems will increase costs, this technology can solve the problem at the source of emissions is still feasible and necessary.

Conference Track

Sustainability Issues in Decision Making