عنوان مقاله:

Cost Function Modelling for Semi-automated SC, RTG and Automated and Semi-automated RMG Container Yard Operating Systems

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خلاصه مقاله:

This study analyses the concept of cost functions for semi-automated Straddle Carrier (SC), Rubber Tyred Gantry (RTG) and automated Rail Mounted Gantry (RMG) container yard operating cranes. It develops a generic cost based model for a pair-wise comparison, analysis and evaluation of economic efficiency and effectiveness of container yard equipment to be used for decision-making by terminal planners and designers. The cost function analysis of this study incorporates major cost attributes used in modern container terminal operations and discussed in the literature. They play a determining role over the total cost of advanced operating systems in a container terminal. The cost model in this study enables the planner and designer of container terminals to make a pair-wise comparison of handling systems to help determine the most appropriate container yard operating system for a port, based on the required technological capabilities and functions. The sensitivity analysis proposed in this study compares and demonstrates the magnitude and intensity of the selected attributes which determine preference of one system over another. The analysis assists a terminal planner in decision-making and selecting a container yard operating system with a minimum operating cost and a maximum annual throughput.

کلمات کلیدی:

Container terminal, Cost Function Modelling, Sensitivity analysis

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