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EVALUATION OF GREEN LOGISTICS SYSTEM OF SOLID WASTE AT PORTS BASED ON ANALYTIC HIERARCHY PROCESS

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Abstract

This paper attempts to realize the green logistics of solid waste at ports, enabling the harmless treatment, reduction and recycling of such waste through the entire life cycle. For this purpose, the life cycle assessment and the analytic hierarchy process (AHP) were applied to evaluate the green logistics of solid waste at ports. Firstly, the solid waste logistics system was examined from the perspective of logistics system. Drawing on life cycle evaluation, the author analyzed how the solid waste logistics system affects the society, economy and environment. Meanwhile, an AHP-based evaluation system was established to quantify the overall impacts of solid waste. On this basis, the solid waste logistics system of a port was optimized, and subjected to life cycle assessment. The evaluation results show that the optimized system has much lower social, economic and environmental impacts than the original system. The research findings shed important new light on solid waste logistics at ports.

Key words: Analytic Hierarchy Process (AHP), life cycle, logistics system, solid waste at ports

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