The Study of Theory of Constraints on Coal Ship Unloading Efficiency Improvement

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ABSTRACT

Marine and air transportation are two common shipping ways provided by international physical distribution industry. Due to larger transportation capacity, lower fuel consumption rate, and cheaper shipping cost, marine transportation has been viewed as the major shipping way. In recent years, the harbor management departments have increasingly regarded it essential to enhance the operating performance of the port, and the operating efficiency and service quality an important role in the advancement of the operating performance. To promote the operating performance of the port, the harbor management departments have conducted research on the topics with regards to the operating efficiency and service quality. However, little research has been done on the improvement of the ship unloading process. The purpose of the current research is to apply Theory of Constraints to harbor and port businesses. The research will review various performance indicators associated with harbor and port businesses to determine activities of the ship-unloading process appropriate for bulk cargo ships. In this research, case study will be employed as the research method to critically examine the whole ship unloading process and its related activities. It will also conduct statistical analysis on the primary data regarding operating performances to find out the bottlenecks of the ship-unloading process, the ways to improve them, and the bottleneck wandering phenomenon it may thus cause.

Keywords: theory of constraints, ship-unloading, performance indicators, bottleneck

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二、英文部分