

عنوان مقاله:

Optimization of Rail Transportation of Cargos Using Decision Support System Design and Mathematical Programming: A Case Study in the Steel Manufacturing Industry

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خلاصه مقاله:

Efficient transportation of products and the utilization of decision support systems (DSS) to improve decision-making and operational management processes hold significant importance. In this study, a decision support system for rail transportation of products in a steel manufacturing company was implemented using mathematical programming methods to enhance transportation processes. The integration of decision support systems and mathematical optimization, alongside addressing the objectives and constraints of the problem, can contribute to improving performance, reducing costs, and increasing customer satisfaction in this industry. The mathematical model developed in this study was able to efficiently plan rail transportation, achieving a reliable ۶۷.۸% compared to actual performance within a significantly short timeframe. Moreover, the model prioritized ۳۷.۶% of delayed orders for transportation, surpassing actual performance and leading to enhancements in daily rail transport operations management.

کلمات کلیدی:

Rail transportation, product selection, decision support system, mathematical programming

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