

عنوان مقاله:

Modeling the Time Windows Vehicle Routing Problem in Cross-docking Strategy Using Two Meta-heuristic Algorithms

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خلاصه مقاله:

In cross docking strategy, arrived products are immediately classified, sorted and organized with respect to their destination. Among all the problems related to this strategy, the vehicle routing problem (VRP) is very important and of special attention in modern technology. This paper addresses the particular type of VRP, called VRPCDTW, considering a time limitation for each customer/retailer. This problem is known as NP-hard problem. Two meta-heuristic algorithms based on the Tabu search (TS) algorithm and variable neighborhood search (VNS) are proposed for its solution. These algorithms are designed for real-world cases and can be generalized to the more complex models such as those which deliveries can be specified in a split form. The proposed TS algorithm also offers a candidate list strategy which has no limitation for the number of nodes and vehicles. A computational experiment is performed to verify our presented algorithms. Through computational experiments, it is indicated that the proposed TS algorithm performs better than VNS algorithm in both aspects of the total cost and computation time

کلمات کلیدی:

Cross-docking Strategy Vehicle Routing Problem Time Windows Tabu Search Variable Neighborhood Search

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