عنوان مقاله:

A Hierarchical Hybrid Approach for Capacitated VRP with Time Windows

محل انتشار:

اولین کنفرانس بین المللی بهینه سازی سیستم ها و مدیریت کسب و کار (سال: 1396)

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خلاصه مقاله:

This paper considers the multi-depot vehicle routing problem for simultaneously determining the routes for several vehicles from multiple depots to a set of customers and then return to the same depot. This paper extends such idea to multi-depot vehicle routing problem (VRP) so that we can give a more general framework available for various real world applications including those in green or low carbon logistics. A mathematical formulation is given in the practical studies on multi-depot VRP that includes time windows. Then, we develop an efficient implementation of a hierarchical procedure, which utilizes two procedures, one a modified Savings-insertion technique for generating the initial solution and the other one a modified Reactive tabu with a variable threshold algorithm. Finally, comparison of the experimental results with state-of-the-art techniques shows that the performance of the modified saving method and the effectiveness of the modified Reactive tabu in a hybrid approach

کلمات کلیدی:

Multi-Depot Vehicle Routing Problem; Distribution network; Reactive tabu; Hybrid approach