عنوان مقاله:

Supplier Selection and Order Allocation by Controlling Carbon-dioxide in Closed-loop Supply Chain Systems Using Genetic Algorithm

محل انتشار:

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خلاصه مقاله:

Supplier selection and in addition, optimal order allocations are the most strategic and tactical decision problems in supply chain management. In a closed-loop supply chain network, there are both forward and reverse supply chains. Closed-loop supply chain systems refer to processes related to the reuse, resale, repair, refurbishing and recycling products. The role of suppliers' performance in closed-loop supply chain systems is crucial to achieve the goals of quality, cost, service and delivery of a supply chain. Therefore, this article presents an optimization model to maximize the total profit, minimize total defective parts, total late delivered parts, economic risk factors of the suppliers and also minimize total Carbon-dioxide released from manufacturing and refurbishing plants to be close to the green supply chain. On the other hand, the best suppliers and optimal number of parts and products will be obtained. This multi-objective optimization model has been solved by Genetic algorithm on MATLAB software.

کلمات کلیدی:

Supplier Selection, Order Allocation, Closed-Loop Supply Chain System, Carbon-Dioxide, Genetic Algorithm