عنوان مقاله:

A Multi-item Capacitated Lot-sizing Problem with backlogging, safety stocks and outsourcing in a closed loop supply chain

محل انتشار:

کنفرانس بین المللی پژوهشهای نوین در مدیریت و مهندسی صنایع (سال: 1394)

تعداد صفحات اصل مقاله: 7

نویسندگان:

Mohsen Karimi - *M.Sc. Student of Industrial Engineering, Faculty of Industrial and Mechanical Engineering, Qazvin Branch, Islamic Azad University, Qazvin, Iran*

Esmaeil MehdizadeH - *Assistant Professor, Faculty of Industrial and Mechanical Engineering, Qazvin Branch, Islamic Azad University, Qazvin, Iran*

خلاصه مقاله:

Capacitated Lot-sizing Problem (CLSP) has received an increased attention from the research community due to its inherent applicability to real-world problems. This paper proposes a new mixed integer programming model for Multi-item Capacitated Lot-sizing Problem (MCLSP) with backlogging, lost sales, safety stocks, demand shortages and outsourcing in a closed loop supply chain. The aim of this paper is to highlight, once more, the powerfulness of how the mathematical formulation of the Capacitated Lot Sizing Problem can be easily adapted to solve further practical closed loop supply chain applications especially related to manufacturing and production environment. Mathematical formulations and computational experiences of solving the proposed model with Lingo solver will be provided to support these statements.

کلمات کلیدی:

Lot sizing, Mathematical modeling, Production planning, Closed-loop supply chain