

عنوان مقاله:

Design of a New Mathematical Model for Integrated Dynamic Cellular Manufacturing Systems and Production Planning

محل انتشار:

ماهنامه بین المللی مهندسی، دوره 28، شماره 5 (سال: 1394)

تعداد صفحات اصل مقاله: 9

نویسندگان:

N Aghajani-Delavar - *Department of Industrial Engineering, Faculty of Industrial and Mechanical Engineering, Qazvin Branch, Islamic Azad University, Qazvin, Iran*

E Mehdizadeh - *Department of Industrial Engineering, Faculty of Industrial and Mechanical Engineering, Qazvin Branch, Islamic Azad University, Qazvin, Iran*

S.A Torabi - *School of Industrial Engineering, College of Engineering, University of Tehran, Tehran, Iran*

R Tavakkoli-Moghaddam - *School of Industrial Engineering, College of Engineering, University of Tehran, Tehran, Iran Research Center for Organizational Processes Improvement, Sari, Iran*

خلاصه مقاله:

This paper presents a new mathematical model for integrated dynamic cellular manufacturing systems and production planning that minimizes machine purchasing, intra-cell material handling, cell reconfiguration and setup costs. The proposed model forms the manufacturing cells and determines the quantity of machine and movements during each period of time. This problem is NP-hard, so a metaheuristic algorithm based on genetic algorithm (GA) is developed to solve it. Experimental results confirm the efficiency and the effectiveness of the proposed GA to provide good solutions, especially for medium and large-sized problems

کلمات کلیدی:

Cellular Manufacturing System , Cell Formation , Production Planning , Genetic Algorithm

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/406350>

