عنوان مقاله:

A MATHEMATICAL MODEL IN DYNAMIC SYSTEM RECONFIGURATION CMS WITH PRODUCTION PLANNING

محل انتشار:

دومین کنفرانس بین المللی تحقیق در عملیات ایران (سال: 1388)

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خلاصه مقاله:

The design of cellular manufacturing systems (CMS) involves many structural and operational issues. One of the important design steps is the formation of part families and machine cells. In this paper, the most comprehensive one to date with a more integrated approach to CMS design is proposed, where production planning and system reconfiguration decisions are incorporated. Such a CMS model has not been proposed before and it features the presence of alternate process routings, operation sequence, duplicate machines, machine capacity and lot splitting. The developed model is a mixed integer non-linear program. Within this research, we have developed a model in such a way that the system decides on the best routes instead of the user specifying pre-determined routes. The presence of alternative routings is typical in many discrete, production environments. Routing flexibility increases the number of ways to form manufacturing Cells.

کلمات کلیدی:

Production planning, dynamic cell configuration, Alternate routings, Lot splitting, inter-cell and intra-cell movement

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