عنوان مقاله:

A LINEAR MATHEMATICAL PROGRAMMING MODEL FOR MACHINE LOADING PROBLEM IN A FLEXIBLE MANUFACTURING SYSTEM

محل انتشار:

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خلاصه مقاله:

The evolution of flexible manufacturing systems (FMSs) offers great potential for increasing flexibility by ensuring both cost effectiveness and customized manufacturing at the same time. Machine loading problem of a FMS encompasses various types of flexibility aspects pertaining to part selection and operation assignments. This paper proposes a linear mathematical programming model for job selection and operation allocation problem of FMS to maximize profitability and utilization of system. The proposed model assigns operations to different machines considering the capacity of tool magazines, capacity of machines, batch sizes, tool slots, etc. The attempted model has been coded in Lingo Software to demonstrate applicability of the proposed model to industrial cases. Performance of the proposed model is evaluated based on some benchmark problems adopted from the literature. Comparison of the results with those published in the literature indicates supremacy of the proposed model.

کلمات کلیدی:

Flexible manufacturing systems - Machine loading problem -Operation allocating