

عنوان مقاله:

A Single Machine Sequencing Problem with Idle Insert: Simulated Annealing and Branch-and-Bound Methods

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خلاصه مقاله:

In this paper, a single machine sequencing problem is considered in order to find the sequence of jobs minimizing the sum of the maximum earliness and tardiness with idle times ($n/1/I/ET_{max}$). Due to the time complexity function, this sequencing problem belongs to a class of NP-hard ones. Thus, a special design of a simulated annealing (SA) method is applied to solve such a hard problem. To compare the associated results, a branch-and-bound (B&B) method is designed and the upper/lower limits are also introduced in this method. To show the effectiveness of these methods, a number of different types of problems are generated and then solved. Based on the results of the test problems, the proposed SA has a small error, and computational time for achieving the best result is very small.

کلمات کلیدی:

Single machine sequencing, Earliness/ tardiness, Idle insert, Simulated annealing, Branch-and-bound methods

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