عنوان مقاله:

Integrating Production Scheduling with Mid-Term Planning Decisions Using a Decomposition Based Solution Approach

محل انتشار:

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خلاصه مقاله:

In this paper, an operational scheduling problem integrated with a tactical planning decision is considered. We propose resource-dependent processing times (RDPT) for permutation flow shop scheduling problems (FSSP) in which the processing time of a job depends on the amount of several types of additional resources should be assigned to that job in planning stage. To make a trade-off between makespan and required amount of resources, a linear combination of two criteria is considered: the maximum completion time and the total cost of resources. This problem has not been treated in literature yet. Furthermore, a decomposition approach is suggested that strives to tackle the main problem via two subproblems: sequencing problem and resource allocation problem. A discrete differential evolution (DDE) algorithm and a variable neighborhood search (VNS) are combined to solve two subproblems effectively.

کلمات کلیدی:

production scheduling; planning decisions; flow shop; hybrid algorithm

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