基因演算法於預鑄工廠排程最佳化之研究

汪書帆、柯千禾

E-mail: 9510691@mail.dyu.edu.tw

摘 要

排程(Scheduling)在預鑄廠中扮演著重要角色，良好的排程會帶給公司資源上最有效的運用，減少不必要的浪費，然而目前預鑄廠的排程大多仰賴經驗法則，如此作法可能導致資源無效的運用與錯失交期。電腦化排程技術可提供比人工排程更精確之排程計畫，本研究提出一個符合預鑄廠生產情況的流程型生產排程模型，考慮生產暫存區容量，並以多目標基因演算法對此模型進行搜尋，搜尋目標分別為總完工時間最小化與延遲懲罰值最小化，最後，以範例來測試基因演算法的效率與績效，測試結果顯示基因演算法能夠有效地對此一模型進行求解，此外，本研究將生產暫存區容量納入排程考量，可獲得較合理且可行之排程計畫。

關鍵詞 : 預鑄 ; 排程 ; 流程型生產排程 ; 基因演算法 ; 暫存區

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