

實體規劃應用於印刷電路板生產組裝之問題研究

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摘要

印刷電路板組裝的相關研究中，多數的相關研究都著重在單機最佳化問題上，甚少同時考慮中程決策目標及短程決策目標，故在中程決策目標上，本研究以降低成本為目標考量對主生產排程做決策分析，在短程決策目標上以縮短印刷電路板組裝時間為目標考量對最終組裝排程做排程規劃。目標規劃在多目標決策上已被沿用多年，但是在於處理目標權重上並不十分客觀，因此有研究學者提出實體規劃作為另一種多目標決策的方法，本研究將此方法應用在印刷電路板組裝問題上的中程目標決策上。中程目標決策結果投入到短程目標決策後，以基因演算法求解，由於基因演算法近年來被廣泛應用在各個領域，且都能夠證實有不錯的求解績效，因此本研究選擇以此演算法求解短程目標並與最佳化方法做一比較。而研究的結果顯示：本研究所應用的實體規劃及基因演算法的求解品質都有顯著之成效。

關鍵詞：印刷電路板組裝；主生產排程；最終組裝生產排程；實體規劃；基因演算法

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