以模擬退火處理中空基材之排版研究

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摘 要

一個排版問題主要由兩個過程來完成，一是零件排列次序(Permutation) 之決定，另一是排放零件至基板的排置(Placement)方法；這兩個過程就主宰了一次排版結果的優劣。如果次序對了，排置方法也滿足需求，這個時候我們就可以找到正解或最佳解；但是往往無法得知正確的排列次序，因此需要利用搜尋法則來尋找最佳解。但是如果排置的方法不佳，即使排列的次序對了，排版出來的結果也不盡完善。 二維排版問題最佳化的目的乃將特定數量的相同或不同工件(piece)排列於基材(sheet)上，期使基材使用率最高或浪費最少為目標，如此基板的使用率最高以減少物料成本。本研究針對具間隙零件的排版需求，開發創新的排置演算法(Placement Algorithm)，結合模擬退火法(Simulated Annealing)之特點而來進行排版系統之最佳決策，找出最好的排版效果。

關鍵詞 : 排版、排置演算、模擬退火

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