THE IMPACTS OF WORKCELL STRATEGY QUANTITY POLICY ON JIT PRODUTION

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ABSTRACT

本論文之目標在於研究複雜之間歇性工場之新的關念、方法及模式，以利 於在今日全球市場具有優勢的競爭力。為了解決多餘的 WIP 存貨及長的 製造前置時間...等問題，本研究深入地探討蜂巢式製造模式及群組技術 觀念。文中提出了不同機器設備製造部件族之工作區形成方法，並設計雙 向降階集群辨別分析及製造程序流程分析兩種模式以解決工作區形成之問題。對此二種方法各提出例子說明之。值得注意的是，相同數據分別用此 二法，其結果是相同的。製造程序流程分析法乃使用現有之製程表來形成 不同機器群及辨別相關部件族，但集群辨別法則可用或不用路線圖。雖然 二種方法都很冗長，但較之群組技術方法仍是較為經濟及需要較少之人力 與時間。但現實情況，工場生產系統是很複雜的。某些因子可控制，但許 多則無法控制及解釋。這些方法形成之製造工作區，仍有賴工的專家群加 以 解釋，經由實驗、評估及改進直到滿意是一個學習之過程。在本研究 中發展出之工作區之最小批量公式提供在無法達到批量為〝1〞之環境下 一個適合解。此一模式同時也顯示在不增成本之條件下為了達成較小批量 ，降低整備時間是重要且必需的。同時也陳述了 ANOVA之實驗設計，可用 以評估工作區執行及批量減少對工場效能之影響。它對于辨識設計變數之 統計顯著性，及估計主要與交互效應係一有效工具。總之，此一整體方法 、模式及程式提供了形成製造工作區以達成 JIT生產的有效且有力之方法 。

Keywords : CELLULAR MANUFACTURING ; LOT-SIZING POLICY ; JIT

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