

應用模糊理論建構彈性製造系統配置規劃之 決策支援系統

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【摘要】

由於彈性製造系統所需之期初投資經費昂貴，而其建構後卻在不確定性製造環境下營運，因此企業欲採用此種生產系統前，必須詳加評估其生產效益而後進行其最佳配置之規畫，其規劃之結果常關係整個企業營運之良莠；近年來彈性製造系統的發展很快，其型態種類有很多，規模大者如：彈性製造線，小者可如：彈性製造模組。因此為因應不同型態的評估方式同時綜觀考量各種有形與無形因素，本研究擬應用模糊理論、分析層級程序法、多準則決策法來建構彈性製造系統配置規劃之決策支援系統，此系統之輸出結果可提供採購商作為應採購何種配置規劃之參考依據。

關鍵詞：彈性製造系統、模糊理論、分析層級程序法、多準則決策

Fuzzy Theory Applied in Implementing The Decision Support System of The Flexible Manufacturing System Allocation Planning

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【Abstract】

Due to the flexible manufacturing systems cost too much money in the early stage of investment, and it works under the uncertainly making environment after implementing. Therefore, a business must estimate its benefit in detail and plan its best deployment before adopting the system. The results of plan often relations business working well or badly. These years, the flexible manufacturing system develops fast. There are many types of the flexible manufacturing system. The big scale, for example, flexible manufacturing line. And the small scale, for example, flexible manufacturing Module. For this reason, in order to take actions that suit different types of the estimation and to make a comprehensive survey of every kind of visible and invisible causes. This research plans to apply in the fuzzy theory, analytic hierarchy process, and multiple criteria decision making to implement the DSS of flexible manufacturing system allocation planning. The output of DSS can be the referenced the material purchasing agent.

Keyword : Flexible Manufacturing System, Fuzzy Theory, Analytic Hierarchy
Process, Multiple Criteria Decision Making