MULTIPLE-STAGE PRODUCTION PLANNING WITH FUZZY SETUP RESOURCE

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ABSTRACT

In most cases, the confusing factor in the complicated production planning process is to find the most reliable information and to make decision rather than choosing the skill of planning production. People usually adopted probability model as the way of prediction in handling uncertain and imprecision environment. However, the probability model is not so good to describe the meaning of the conversation. Fuzzy numbers is developed to handle the uncertain information by the decision makers through out the understanding of outside environment. The advantage of the expression can assist decision makers not only using the historical data as references, but also have the opinion of professionals. This work is to apply the MRP system as a fundamental production planning model that is well adopted by firms. It considered the possible volume of production, fuzzy demand, fuzzy setup and fuzzy capacity limit to conclude the most likely information and defuzzification the outcome as the principle of production planning adjustment.

Keywords : material requirement planning ; multiple-stage production planning ; fuzzy set ; fuzzy setup ; fuzzy reasoning

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