SELECTION OF MAINTENANCE STRATEGY FOR A MANUFACTURING COMPANY WITH FUZZY MOORA METHOD

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ABSTRACT

In today’s competitive environment, there is a pressure on companies for reducing costs and increasing the quality by providing on time delivery. Maintenance, plays an important role in reducing cost, improving quality, reducing failures, minimizing machine downtime, increasing productivity and as a result achieving objectives of company. The aim of this paper is to select best maintenance strategy for a manufacturing company by using Fuzzy MOORA (Multi Objective and Optimization on the Basis of Ratio Analysis) method. The selection of maintenance strategy is a multi-criteria decision making (MCDM) problem. As this problem includes uncertainties and difficulty in evaluating alternatives and criteria with definite expressions, fuzzy MOORA method is proposed for selecting the best maintenance strategy. Implementation of the proposed method will assist the managers and decision makers in determining the most appropriate maintenance strategy for their company.

Keywords: MCDM, fuzzy sets, fuzzy MOORA, maintenance, strategy