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SUPPLIER SELECTION USING FUZZY-TOPSIS METHOD: A CASE STUDY IN A CEMENT INDUSTRY

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ABSTRACT

A number of manufacturing firms in developing countries do not practice affordable, efficient and user friendly supplier selection tools because of its cost of an adequate planning and inappropriateness of application. If a systematic method is performed then it is possible to select the most suitable suppliers efficiently with respect to time, cost and quality. This study depicts an overview of the FUZZY-TOPSIS methods for multi-criteria decision making problem under uncertain environments. A qualitative and quantitative criterion comprises this supplier selection mode in this paper. This study also deals with optimum decision making for supplier selection and allocating order by applying the proposed method. This proposed method with triangular fuzzy numbers is utilized for dealing with uncertain and imprecise judgment of decision makers. A detailed step by step implementation method is proposed in this paper. At last a case study is made at Holcim Cement Bangladesh Ltd. Mongla Plant, Khulna.

KEYWORDS: Supplier Selection, Fuzzy Topsis Method, Triangular Fuzzy Method, Multi-Criteria Decision Making