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A study on the evaluation of product maintainability based on the life cycle theory

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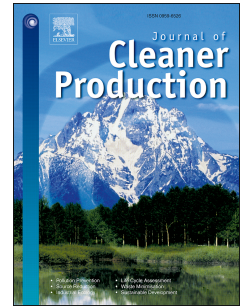
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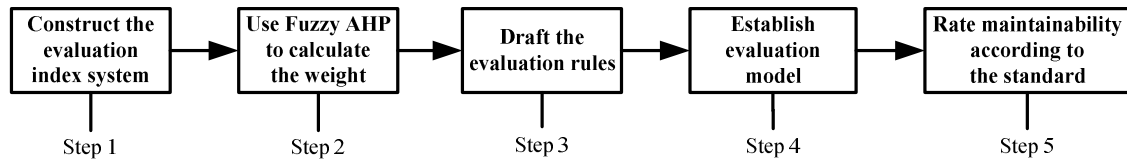
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This paper is aimed at clarifying the concept of maintainability, distinguishing the confusion between repair and maintenance, defining the object of study, and studying the maintainability of products. Considering the actual demand for practical application and operational feasibility, this paper uses the combination of the fuzzy analytic hierarchy process (FAHP) method, indirect quantification method along with expert opinions to establish an evaluation model for product maintainability. This contributes to the ease of grading the convenience of maintaining the product for engineers. The FAHP method is used to calculate the coefficient indicators, and the indirect quantification method is used to draft the evaluation rules for each indicator. Finally, the product maintainability can be acquired by calculating the scores given by experts. The advantage of the proposed work lies in the comprehensive, scientific and meticulous inspection of product maintainability. Moreover, the evaluation method suitable for engineering practice is suggested.

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