

An Integrated Eco-Design Decision Making Tool

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ABSTRACT

The application of an integrated eco-design decision making tool is presented as a case study considering the design of an office chair base. This study brings together the analysis of factors relating to manufacturing processes, product usage and end-of-life strategy to demonstrate the operation of an eco-design case-based reasoning tool. This is shown to meet the requirement of the data storage, retrieval and re-use. A framework is provided to facilitate the application of sustainability criteria in the early design phase in a context with which designers are familiar. Such consideration can be made more understandable and relevant as more information is added. This makes all aspects of the process more rewarding for the participants and increases considerations of sustainability.

KEYWORDS: Sustainable product development; Quality function deployment; Life cycle assessment; Eco-design process

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