Prediction of end-of-life strategies for household equipments using artificial intelligent

ABSTRACT

Problem statement: Environment issue on the dumping of used household product is a big challenge nowadays. Towards green design, life cycle of a product is very crucial. This study discussed on recycling strategies which include reuse, service, remanufacture and recycle with or without disassembly by using Support Vector Machine Method (SVM). Approach: In early stage of prediction, the input parameters of wear-out life; technology cycle, level of integration, number of parts, reason for redesign and design cycle were incorporated. Six household equipments were studied includes vacuum cleaner, washing machine, television, portable radio and hand held vacuum. Results: The end life predicted results were compared with the previous literature study. Conclusion: The developed End Of Life (EOL) strategies model is good in agreement with existing industry practice.

Keyword: Environment issue; Life cycle engineering; Support vector machine; Recycling strategy; Household equipments