**Java based expert system for selection of natural fibre composite materials**

ABSTRACT

Many research papers are published in the field of materials selection for manufacturing process and design of polymer composite materials. However, least consideration has been given for material selection of natural fibre composites. Intensive research carried out to use natural fibres as alternative materials for petrochemical based synthetic materials to enforce green technology in manufacturing engineering. There are several algorithm and methods are being proposed by various researchers in this field. Computer oriented materials selection and knowledge-based expert systems are the prevailing approach in materials selection. In this paper, we develop a technology for the materials selection system using Java based expert system. The weighted-range method (WRM) was implemented to identify the range value and to scrutinise the candidate materials. The expert system performance tested with automotive component as case study with high, medium and low precision criteria and the result sets generated by the expert system comply with industrial benchmark.