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Research, Innovation & Invention Exhibition 2010 (IRIIE 2010)

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algorithms that take maximum advantage of the unique features of the MR damper, models must be developed that can adequately characterize the damper's intrinsic nonlinear behavior. Following a review of several idealized mechanical models for controllable fluid dampers, a model is proposed that can effectively portray the behavior of a typical magneto-rheological damper. Comparison with experimental results for a prototype damper indicates that the model is accurate over a wide range of operating conditions and is adequate for control design and analysis.

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Development of Remote Operability CNC Milling

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Capability of remote operation of a CNC milling machine is demonstrated. Unattended machining operation is possible to be performed by executing NC program sent from remote user. The system is designed using a computer server and connected to a PC based controlled CNC machine for real time axis monitoring remote desktop. A client accesses the machine through Internet and operate and simulate the machine activity. Operability of CNC machine supported by combination between real time virtual simulation and using remote desktop tool and Setup Free Pin type Attachment. An auto setup CNC milling machine which is equipped with specially developed Setup Free Attachment has been investigated as one solution for unattended machining process. A specially designed attachment with setup free machining methodology has been developed for horizontal machining center. Attachment consists of three main equipments; material indexing device, Sub clamp with pin and vise index.

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Integrated Solid Wastes Management for KL

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Issues on pollution and waste disposal problems have post a great challenge to manager and planner of Kuala Lumpur since the number of population and the growth of industry sector in Malaysia have been increased. The purpose of this research is to study the current solid waste management in Kuala Lumpur and to recommend as well as develop an integrated approach by using knowledge-based system. Data on solid waste disposal system and waste generated by various regions in Kuala Lumpur from Department of Environment (DOE) Malaysia, Dewan Bandaraya Kuala Lumpur (DBKL), and Alam Flora Sdn Bhd (AFSB) are collected in order to be implemented in the expert system. A programming language called Visual Basic is used since it is an ideal programming language for developing sophisticated professional applications for Microsoft Windows. In this project, the user interface on solid waste management is designed and the conceptual structure of the relational database model on "solid waste management system" is graphically summarized. The overall development of expert system has been carried out in several phases, including problem definition, knowledge acquisition, knowledge base, prototype development, prototype validation and implementation. Solid waste expert system contains sub forms which the user can obtain a comprehensive background of the current solid waste management in Kuala Lumpur. It allows the user to browse around the knowledge that has been extracted from books, published research articles, reports, and expertise who involved in solid waste management activities. User can ask for clarification, view the problems faced in solid waste management, forecast the future trend of solid waste generation and learn how to solve the problems in solid waste management.