International J. of Engg. Research & Indu. Appls. (IJERIA).
ISSN 0974-1518, Vol.4, No. IV (November 2011), pp. 357-376

STEP BASED HYBRID METHOD FOR RECOGNISING INTERACTING SLOT AND HOLE FEATURES OF A PRISMATIC PART

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Abstract

Automation of production system has become one of the key issues in manufacturing industry and it can be achieved by integrating CAD , CAPP and CAM. The automation of process planning requires the implementation of feature recognition procedures, as it is first and most important activity in the development of a CAPP system. Though considerable work has been carried out on feature recognition, majority have concentrated on primitive features and there is a need to focus on interacting features. This paper presents an approach for recognizing the interacting features, Through Slot and Through Hole), which are commonly found in the prismatic parts. The proposed approach employs the STEP (Standard for the Exchange of Product model data) neutral file which is generated from the CAD model of the part and apply combination of hint and syntactic pattern recognition methods which is a termed as Hybrid method. The work presented in this paper is a part of the ongoing research work in the development of Computer Aided Process Planning (CAPP) using ISO standard STEP 10303-21 neutral file.

Keywords : CAD , CAPP , CAM , CIM, Feature recognition , Interacting features and STEP