GEOMETRIC FEATURES EXTRACTION OF A 3D CAD MODEL FOR RECONFIGURABLE MANUFACTURING

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ABSTRACT

Reconfigurable manufacturing systems are planned to allow the use of a variable number of spindles so as to allow meeting the machining requirements of the different batches of components in a single setup and thereby facilitating faster machining and better correlation between the different geometric surfaces. Computer aided process planning is a vital link which gives the complete process plan that can be further used to calculate the number of spindles required to machine the component in a single setup and the planes in which these spindles have to be installed. For Computer aided process planning, the design features have to be converted into manufacturing features for further processing. The CAD information in neutral design data format can be used most effectively for further stages in the product manufacturing by extracting fundamental information necessary for the particular stage. In this paper, methodology is proposed for generic feature extraction system from 3D CAD model cased on STEP format.

KEYWORDS: CAD, CAPP, STEP & CAI

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