Extendible Operation Sequencing for Turn-Milled Components

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Abstract

Research in operation sequencing has hitherto been based on fixed heuristics with no obvious scientific basis. Often, the heuristics contain no technological considerations. This paper provides a scientific approach for the sequencing of features based on maximising the stiffness of the intermediate component. In the case of intersecting feature volumes, preference is given to a feature with a lower machining cost. This scientific approach is embedded within a flexible environment in which heuristic rules can be constructed from a rich vocabulary covering geometric and technological attributes, without the need for additional programming. Examples illustrating the capabilities of the system are described.

Keywords

CAPP; Operation Sequencing; Customisation