

DEVELOPMENT OF RULES FOR METHOD SELECTION FOR THE SURFACES OF MACHINING CYLINDRICAL PART TO FACILITATE COMPUTER AIDED PROCESS PLANNING (CAPP) FOR JOBBING TYPE MANUFACTURING INDUSTRIES

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ABSTRACT

This paper presents an attempt made to develop clear rules/ideas for the development of fundamental base required for **generative CAPP** for **method selection** for machining of cylindrical parts. The new ideas of analysis and breaking the present concept, **method selection** decisions into its basic elements introduced is used for development of CAPP. For all the element of method selection, the rules are developed for machining of cylindrical part. The processing decision rules for (i) locating surface (ii) holding or clamping surface, (iii) selection of work-holding methods and (vi) confirmation/correctness of job set up are presented in the paper.

The paper highlights the developed and integrated rules specifically for machining of cylindrical part based on (i) technological requirements (finish part database) of the components, (ii) input of raw material either in bar type or single piece and (iii) the initial and final condition during processing of the component. The effectiveness of proposed rules is confirmed with an example.

The developed rules and integrated domain knowledge is useful for development of CAPP for jobbing industries is engaged in producing cylindrical parts.

KEYWORDS: CAPP, Cutting Operation, Process Planning, Locating Surface, Holding Surface, Work-Holding Methods