

CRITICAL REVIEW OF OPTIMIZATION TECHNIQUES IN METAL CUTTING

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Abstract

The widespread use of highly automated machine tools in the industry, machining process requires reliable models and methods for the output performance of machining processes. So, optimization techniques in metal cutting processes are considered as an essential tool for continual improvement of product quality and reduction in the product cost. In this paper, the application potential of several modeling and optimization techniques in metal cutting processes, classified under several criteria, have been critically appraised and a generic framework for parameter optimization in metal cutting processes is suggested for the benefits of selection of an appropriate approach.

Keywords: Metal Cutting, optimization, cutting parameters