

# The Stress Analysis and Vibration Characteristics of End Mills

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## ABSTRACT

This study was finite element analysis (FEA) to determine the modal properties of the tool. Theoretical natural frequencies and modality shape can be obtained by FEA. Establishment the different spiral angle of end mill by SoliWorks cartography software. Then uses the COSMOSWorks analysis software to make the frequency and static analysis for the different spiral angle of two edges , three edges , four edges and six edges. The frequency analysis and static analysis for the end mill can then be carried out. The strength and vibration characteristics of milling tools on milling process will be discussed in future work.

Keywords : Finite Element ; End Mill ; Vibration ; Frequency ; Statics

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