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Flank wear analysing of high speed end milling for hardened steel D2 using Taguchi Method

(Conference Paper)

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Abstract

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One of the main challenges for any manufacturer is how to decrease the machining cost without affecting the final quality of the product. One of the new advanced machining processes in industry is the high speed hard end milling process that merges three advanced machining processes: high speed milling, hard milling and dry milling. However, one of the most important challenges in this process is to control the flank wear rate. Therefore a analyzing the flank wear rate during machining should be investigated in order to determine the best cutting levels that will not affect the final quality of the product. In this research Taguchi method has been used to investigate the effect of cutting speed, feed rate and depth of cut and determine the best level s to minimize the flank wear rate up to total length of 0.3mm based on the ISO standard to maintain the finishing requirements. © Published under licence by IOP Publishing Ltd.

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