

## عنوان مقاله:

Effect of Cutting Environment and Swept Angle Selection in Milling Operation

## محل انتشار:

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## خلاصه مقاله:

Cutting fluids are frequently aim to enhance machinability through cooling, lubricating and flushing actions. However, their use in machining creates major concerns in terms of health footprint and environmental effect. and human health throughout their lifecycle. To diminish these problems, alternative methods were used, namely; dry cutting and minimum quantity lubrication. This research also will investigate the effect of swept angle selection, ۳۰% and ۶۰% of tool diameter stepover under different cutting conditions during milling of aluminum alloy material. Their impact on tool wear, surface roughness, burr and chip formation were compared. Results pointed that the application of lower swept angle in conjunction with minimum quantity lubricant system, has significantly reduced tool wear, decreased burr and chip formation, as well as improved surface quality as compared to dry machining. The work clearly shows how the importance of swept angle selection and cutting condition in refining machining performance could improve the .machinability of the material

## کلمات کلیدی:

Minimum quantity lubricant, Dry cutting, Tool Wear, Surface roughness, Chip size, Burr formation

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1267389>

