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A Study on the Effect of Boric Acid Mixture as Solid Lubricant Towards Machining Processes

Abstract

Increasing awareness for ‘green manufacturing’ globally and consumer focus on environment friendly products has put major concerns on industries to minimize the use of cutting fluids. In this research, dry machining, ordinary coolant (SAE 40) and various compositions of boric acid are tested in identifying the best composition ratio in producing better machining quality. At the end of research the best composition ratio of solid lubricant with cutting fluid achieved. This has been identified which is sample 7 (50%SAE40+50%H3BO3) that can produce RA at 2.61µm values.

Keywords: Boric Acid Solid Lubricant ; Machining Processes.