BURR SIZE ANALYSIS ON MILLING PROCESS WITH CNC ROUTER CARBON STEEL ELBOW PROFILE

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ABSTRACT

Machine tool operations are the backbone of the production line. In order to increase capacity, effectiveness and efficiency, various techniques have been developed. However, one problem that has not been studied as much as others is burr control. The purpose of this study was to determine the value of the burr size with the variation of the chisel diameter and the variation of the coolant and to determine the effectiveness of the variation of the coolant on the burr size. This research method uses Taguchi and Anova analysis with Minitab 19 software. The results show that the burr value for the lowest inlet is obtained at 10mm tool, coolant coolant and speed 2000 rpm which is 0.368 and for the lowest outlet at 10mm tool parameter, coolant coolant and 2000 speed. rpm is 0.339333 while the highest burr value for the inlet is obtained at 6mm tool, 1000 speed, and the coolant coolant is 0.596, while for the highest outlet the parameter tool is 6mm, speed 1000, and coolant is 0.754667. Based on the Analysis of Variants (ANOVA), the most significant parameter affecting the burr size for the inlet and outlet is the tool.

Keyword: *Burr size, Milling, Taguchi, ANOVA*