

Analysis Tool Wear Over Time in the Machining of Superalloys in Milling Process

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Author Note: The analysis of the machining of superalloys, a topic of great importance today and personally me much attention, to me, a student of 2nd year of university, having as advisers two people of great experience and are an example for me, thanking them for their unconditional support for introducing me to this field of research so amazing and great experiences.

Abstract: Machining processes are undergone to relevant improvements in the last years due to the development of high speed machines that allow to carry out some works on hard metals with high productivity. On the other hand, cutting speed increasing induces a significant worsening of all the wear related aspects. The high speed, in fact, generates a strong heat amount on the tool that may rapidly go out of service (Umbrello et al., 2008).

Tool wear prediction plays an important role in industry for higher productivity and product quality. Flank wear of cutting tools is often selected as the tool life criterion as it determines the diametric accuracy of machining, its stability and reliability (Palanisamy et al., 2008).

This paper aims to train a study on the roughness in machining superalloys, implementing the method of performing and analyzing response surfaces parameters optimally presented, for further investigation on this issue and thus seek to obtain favorable results for future work.

Keywords: Machining, Tool Wear, Superalloys, Milling Process