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Risk Factors for Superficial Quality in Superalloy Machining Process

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Abstract: When machining a part, machining parameters as well as precision and superficial quality plays a significant role in performing successful and efficient machining operations and on the overall quality of the products, that`s the reason why the determination of the best machining parameters is still the subject of many studies which are using very different approaches to make improvements that can have a practical application for the manufacture companies. This paper describes the development of modeling which determines the optimum machining parameters for milling operations analyzing several factors such as the tool geometry and wear, feed, speed. Among the most critical superficial attributes that can be affected by the variation of the parameters are flatness and roughness, which are major indicator for superficial quality. When control of the flatness and roughness it's achieve and maintain over time, it will have a direct impact on the superficial quality improving our client's satisfaction due quality assurance and will be creating a source of opportunities to achieve savings for manufacture companies, hence there is a lot of interest and potential for research that leads to the identification of practical solutions that solve the problems that we find due to the risk factors previously mentioned.

Keywords: machining parameters, roughness, flatness