

The impact of generator parameters on cutting width in machining nickel alloys using WEDM technology

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The objective of this study is to analyze the influence of generator parameters on the kerf width in Wire Electrical Discharge Machining (WEDM) technology for the nickel alloy Inconel 718. An experiment was designed using selected parameters that could affect the kerf width based on the acquired knowledge. The introduction covers the general principles of EDM and WEDM technology, discusses the method of spark generation using a generator, and focuses on how electrical discharge machining impacts Inconel 718. The experimental part was conducted on a WEDM machine from Charmilles Technologies. During the experiment, two responses were recorded: the groove width, measured using Dino-Lite and Alicona optical devices, and the cutting speed. The final part of the thesis presents a statistical evaluation of the influence of individual parameters on the cut.

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