

TOOL WEAR IMPACTS ON CUTTING POWER AND SURFACE QUALITY IN PERIPHERAL WOOD MILLING

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ABSTRACT

*The aim of the research presented in this paper is to determine the impacts of tool wear on the cutting power and quality of the processed surface, as selected workability criteria for different peripheral milling regimes. The test was carried out on test samples made from beechwood (*Fagus silvatica* L) planks of uniform density and moisture content and without visible wood structure flaws. The tool wear in this paper was defined using the values of flank wear width before and after peripheral milling of beech samples. The dependences of the examined criteria (cutting power and surface quality) on the level of tool wear in different processing regimes were determined. On basis of the test results obtained, it can be concluded that tool wear undoubtedly significantly affects the cutting power and processed surface quality, which could be important when determining the cutting regime and the interval of tool replacement.*

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