INFLUENCE OF FEED RATE ON CUTTING FORCE AND CUTTING POWER DURING WOODPROCESING ON BAND SAW

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ABSTRACT

The defining and determining of the cutting process between the tool and the wood is the crucial factor for the product and production quality, tool efficiency and industrial safety. The economy of the machine as well as the whole production depend on it.

These are the main reasons why the optimal determining of the woodcutting process today attains greater importance in the wood processing industry.

The research was focused on creating a mathematical model of the interaction mechanism between the tool and the wood. An analytical tool is designed for determining some important factors in the wood cutting process – cutting force, cutting power, etc. All of these factors are calculated as a function of exactly defined input parameters, grouped in several categories. The mathematical model is supported with appropriate software.

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