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THE MAIN PARAMETERS OF THE CUTTING PROCESS AND TECHNOLOGICAL FACTORS AFFECTING THE RELIABILITY OF THE AXIAL TOOL

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ABSTRACT

This article discusses the main parameters of the cutting process that affect the reliability of the axial tool. The stability of the technological process of machining is largely determined by the quality characteristics of the tool used: its design, tool materials and modes of its operation, which are determined at the design stage of the technological process. A drill with MNP (multi-faceted non-resurfacing plates) of a new design was developed at the Department of Engineering Technology of the Tashkent State Technical University named after I.A.Karimov, and the study was carried out on the same drill. According to the research carried out: when processing steel 12X18H10T, the specific energy consumption of the cutting process with a drill with MNP is more than 5.0 times lower than that when processing with a twist drill, and when drilling steel 45, it is almost 2 times lower.

KEYWORDS: *Process Mechanics, Drills With MNP, Built-Up Zones, Chip Shrinkage, Friction Coefficient, "Column" Formation, Energy Consumption, Hole Length, Specific Energy, Rotational Speed, Cyclic Load*

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