

Tool Guarantee of Intermittent Cutting Processes

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Reforming obsolete technologies, increasing production of new machines and devices are impossible without modern and reliable instrumentation. The high structural complexity of the manufactured parts creates problems for the use of a blade tool that, along with high hardness, has considerable brittleness. As a rule, the processing of intermittent surfaces by turning is accompanied by chipping of the cutting edges.

The disadvantages of alternative grinding technologies are the high cost of equipment, low productivity, as well as the problems of forming the required quality parameters of the surface layer due to the specificity of operation of the grinding tool.

The solutions protected by patents of the Russian Federation, allowing to exclude negative factors of intermittent cutting are offered. The scientific novelty of the decisions made is to give the damping tool a special position that excludes negative interaction between sharp tip of cutting element and intermittent surface, which provides the possibility of stable operation of brittle tool material on the basis of the developed mechanism for controlling the position of the cutter tip.

Keywords: Composites, intermittent surface, interrupted cutting, damping, quality of surface.

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