

Studying of Cutting Zone When Finishing Titanium Alloy by Application of Multifunction Measuring System

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With the development of the automotive and aerospace industry and also biomedicine, exotic alloys are more and more used from all machined materials, especially titanium and nickel alloys, but which are hard-machined materials. Therefore it is necessary to know their behavior when machining, thoroughly. Processes occurring in the cutting zone when machining, are so complicated and dynamic, that their definition is carried out by certain specified models. Because the models have errors and deviations, it is needed to improve their observation so, that these deviations will manifest minimally or not. Based on the scientific research of the cutting zone, the multifunction measuring system was designed, which allows simultaneous measuring of components force of cutting, heat distribution and deformation processes in cutting zone during machining without its interruption.

Keywords: multifunction measuring system, cutting zone, high-speed movie, titanium alloys

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