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Two parameter active measuring probe for objects setting detection on CNC machines workspace(Conference Paper)

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Краткое описание

The paper contains the results of the research carried out to create new approaches to ensure the high accuracy of the precision detail's manufacture, which will accurately determine the distance of the tool to the workpieces, which greatly affects the accuracy of the detail's manufacture by the automated production. Purpose of the work was to create the principles of the operation of a two-parameter measuring probe for the control system of the workpiece's setting relatively to the instrument. On based of the processing system of the informative parameters of complex electromagnetic fields (in particular, the optical range), which prevents the destruction of process equipment in the detail's manufacture for precision devices. Consequently, the principles of construction of two-parameter electromagnetic systems of control and measurement of space-time coordinates of technological objects location in the workspace of the machine are proposed. The proposed action of the probe for the information-measuring system of contact provides an increase in the accuracy of the metalworking process during the manufacture of precision details of devices, which is especially important in the processing of metals on CNC machines. © COPYRIGHT SPIE. Downloading of the abstract is permitted for personal use only.