

Makarov V.F., Pesin M.V., Norin A.O.

Features of Using the Multi-Coordinate Grinding CNC Machine to Improve Precision Machining of the Gas Turbine Parts

Abstract: The article presents the results of using a multi-coordinate five-axis profile-grinding CNC machining center MFP–050.65.65 by Magerle (Switzerland), which made it possible to reduce by five times the number of operations, universal machines, special devices and cutting tools due to increasing the number of surfaces machined at a time during machining the aircraft gas turbine nozzle blades. At the same time, an important task on improving the precision of the turbine nozzle assembly flow areas have been solved by the integrated usage of the CNC system and the special software for mitigating the shortcomings of cast surfaces of detail parts during their installation, rotation and creep- feed grinding of main surfaces.