

Improvement in the technology of manufacturing disk workpieces for metal lining of compact aircrafts

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The article presents the results of experimental studies of the manufacturing technology for disk workpieces with a conical surface for metal lining of compact aircrafts. To obtain the workpiece, it is necessary to create a periodic profile of the cross section of the workpiece in the circumferential direction when turning its end. Several variants of the work sequence are considered. The errors of the disk workpiece occurring in the production process are reduced comparing with the errors in the previous experiments with a complex treatment route and periodic cooling the workpiece. It was found that deformations of these thin-walled disk workpieces due to machining heating significantly affect the accuracy. Cooling is proposed to introduce between the end-turning passes. The treatment scheme is determined and the design of the workpiece with a wide technological shoulder is justified, ensuring the necessary accuracy of its manufacture.

Ключевые слова: *harmonic analysis, workpiece deformation, technological heredity, work sequence*

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