

HIGH-PRODUCTION LATHE-TURNING WITH $Ra \leq 1\mu m$

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At classical machining with a tool having defined tip radius, the shape of tip is copied onto the machined surface of workpiece. Among the highest height of profile unevenness Rz , shift f and tip radius, the analitical relation is valid, by which increasing of f strongly increases Rz . This is the main obstacle in increasing machining productivity. The solution is in increasing the tip radius of tool. Within enourmous increase of re even by roughing, the medium arithmetic height of unevenness of machined profile Ra less than $1\mu m$ can be obtained. This contribution analyses this option.

Keywords: machining, workpiece, surface roughness, tool

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