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Analyzing Damage of the Cutting Tools out of Carbide Metallic during the Turning of a Soaked and Not Hardened Steel XC38

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Abstract : The purpose of this study widened knowledge on the use of the cutting tools out of metal carbide and to define it the influence of the elements of the mode of cut on the behavior of these tools during the machining of treated steel XC38 and untreated. This work aims at evolution determined in experiments of the wear of a cutting tool out of metal carbide with plate reported of P30 nuance for an operation of slide-lathing in turning on soaked and not hardened steel XC38 test-tubes. This research is based on the model of Taylor to determine the life span of the cutting tool according to the various parameters of cut, like the cutting speed Vc, the advance of cut a, the depth of cutting P. In order to express the operational limits of the tool for slide-lathing in a preventive way. The model makes it possible to determine the time of change of the tool and to regard it as a constraint for the respect of the roughness of the workpiece during a work of series in conventional machining.

Keywords : machining, wear, lifespan, model of Taylor, cutting tool, carburize metal
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