

## SOME PHENOMENOLOGICAL ASPECTS AT THE ULTRASONIC MACHINING

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**Abstract:** The ultrasonic machining is a method which allows obtaining different categories of surfaces in workpieces made of fragile materials. The process abrasive component refers to the material removal as consequence of some micro-cracking and micro-cutting effects. The paper presents some authors considerations concerning the mechanism of ultrasonic machining and practical problems specific to this machining method. In the frontal gap between the tool and the workpiece, the microcracking can be considered as the main phenomenon which leads to the material removal from the workpiece. A problem specific to the ultrasonic machining process is the maintaining of the pressure between the tool and the workpiece during the machining process; some solutions to solve this problem are discussed and an equipment is proposed.

**Key words:** ultrasonic machining, phenomena, microcracking, work pressure