

Title (en)

APPARATUS FOR MACHINING VERY HARD MATERIAL BY MEANS OF A MACHINING TOOL, AND METHOD THEREFOR

Publication

**EP 0340661 A3 19901205 (DE)**

Application

**EP 89107753 A 19890428**

Priority

DE 8805832 U 19880503

Abstract (en)

[origin: EP0340661A2] So that an ultra-hard material (5) or a workpiece made of this material (5) can be machined in an accelerated manner by means of suspension or the like, the machining tool (4) is utilised both as an ultrasonic machining tool and in the manner of a lapping mandrel or the like, i.e. it is moved ultrasonically in the axial direction as well as set in high rotation. With the conventional cross-sections of an ultrasonic machining tool, speeds in the order of magnitude of four thousand to about eight thousand revolutions per minute are possible, and higher or lower values, for instance, may also be suitable. On account of two drives which can be engaged and disengaged separately, the apparatus for machining the material is able to utilise the machining tool only in ultrasonic mode or only as a rotary tool or is able to use both types of operation at the same time. In addition, a workpiece can be ground with this apparatus, for example in a conventional manner, without it being absolutely necessary to remove the ultrasonic transformer (17). For if a grinding mandrel which consists of firm grain or is set, for example, with diamonds is inserted in the tool holder (18), work can be carried out as with a conventional grinding machine with the ultrasonic drive disengaged. <IMAGE>

IPC 1-7

**B24B 1/04**

IPC 8 full level

**B24B 1/04** (2006.01)

CPC (source: EP)

**B24B 1/04** (2013.01)

Citation (search report)

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