

Title (en)  
METHOD FOR FINE PROCESSING OF BOREHOLES, PROCESSING TOOL AND PROCESSING MACHINE FOR SAME AND WORK PIECE

Title (de)  
VERFAHREN ZUR FEINBEARBEITUNG VON BOHRUNGEN, BEARBEITUNGSWERKZEUG UND BEARBEITUNGSMASCHINE HIERFÜR SOWIE WERKSTÜCK

Title (fr)  
PROCÉDÉ DE FINITION D'ALÉSAGES, OUTIL D'USINAGE ET MACHINE D'USINAGE ASSOCIÉE, AINSI QUE PIÈCE

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**EP 2406037 A1 20120118 (DE)**

Application  
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Abstract (en)  
[origin: WO2010102805A1] In a method for fine processing of an internal surface of a borehole in a work piece, which is composed at least in the region of the borehole substantially of a light metal material, a processing tool performs during at least one processing operation a working motion within the borehole to be processed. The method comprises a friction strengthening operation, wherein a processing tool is used which has at least one friction element, which has at least one contact surface provisioned for friction contact with the internal surface. The friction element is moved over the internal surface at a relative speed with respect to the internal surface and at a friction-inducing pressure so that under the influence of dynamic friction and pressure in the region of the internal surface, a friction strengthened layer is produced which is induced essentially by friction and pressure. The method can be used in particular for processing cylinder running surfaces in the production of light-metal engine blocks.

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