

Title (en)  
Method for machining cylinder bores

Title (de)  
Verfahren zur Bearbeitung von Zylinderlaufflächen

Title (fr)  
Procédé d'usinage d'alésages de cylindres

Publication  
**EP 0818271 B1 20011121 (DE)**

Application  
**EP 97110011 A 19970619**

Priority  
DE 19627926 A 19960711

Abstract (en)  
[origin: EP0818271A1] In order to expose the hard solid phases the cylinder surface is honed by reversing the light metal matrix instead of using an etching process. A honing tool is used whose cutting material is embedded in a pliable matrix so that the cutting material particles are pressed between the hard material phases to expose and round off same. The cutting material can be embedded in a porous matrix. When exposing the hard solid phases a mean roughness depth of 1.0 to 3.0 um is produced. After fine drilling the cylinder bore and before exposing the hard material phases the cylinder surface is processed in a first honing step by using a honing tool whose cutting material is held substantially unyielding in a metal compound or resin so that a surface layer of the cylinder surface is removed in which the hard solid phases were destroyed by the fine drilling.

IPC 1-7  
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IPC 8 full level  
**B24B 33/02** (2006.01); **B24B 33/08** (2006.01); **B24D 13/00** (2006.01)

CPC (source: EP)  
**B24B 33/02** (2013.01); **B24B 33/086** (2013.01); **B24D 13/00** (2013.01)

Cited by  
DE102005018277B4; DE102012002765A1; DE102006003994B4; DE102006003994A1; DE102005022469B4; EP1103344A3; WO2010102805A1; DE102009013625A1; DE102007032915A1; DE102007032915B4

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