

Title (en)  
BENT AXIS TYPE HYDRAULIC ROTATING MACHINE

Title (de)  
HYDRAULISCHE SCHRÄGACHSENROTATIONSMASCHINE

Title (fr)  
MACHINE TOURNANTE HYDRAULIQUE DU TYPE À AXE COUDÉ

Publication  
**EP 2587058 B1 20200325 (EN)**

Application  
**EP 11798014 A 20110614**

Priority  
• JP 2010142347 A 20100623  
• JP 2011063586 W 20110614

Abstract (en)  
[origin: EP2587058A1] A surface treatment layer (15) is formed to cover a surface side of a cylinder block (6) including a center hole (7) and a plurality of cylinder holes (8) wholly. The surface treatment layer (15) is constituted by a nitriding layer (17) formed by executing nitride-based heat treatment to a base material (16) of the cylinder block (6) formed using an iron-based material such as cast iron or cast steel and a chemical conversion film (18) of manganese phosphate. The chemical conversion film (18) forms a chemical conversion film of manganese phosphate on a surface side of the nitriding layer (17). The chemical conversion film (18) is excellent in initial fitting properties to a sliding material such as a tapered piston (10). Therefore, wear in a contact section between each of cylinder holes (8) of the cylinder block (6) and the tapered piston (10) can be suppressed.

IPC 8 full level  
**F04B 1/24** (2006.01); **F03C 1/24** (2006.01); **F04B 53/00** (2006.01); **F04B 53/14** (2006.01); **F04B 53/16** (2006.01)

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Cited by  
US11396872B2; EP3495657A4

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DOCDB simple family (publication)  
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