

Title (en)
LIGHTWEIGHT PISTON

Title (de)
LEICHTBAUKOLBEN

Title (fr)
PISTON DE CONSTRUCTION LEGERE

Publication
EP 1920151 A1 20080514 (DE)

Application
EP 06777082 A 20060826

Priority

- EP 2006008386 W 20060826
- DE 102005041002 A 20050829
- DE 102005041001 A 20050829

Abstract (en)
[origin: WO2007025686A1] The invention relates to a piston (1) comprising a piston head (2) that is provided with a field of rings (4) and a piston shaft (3) which is disposed thereupon. The piston shaft (3) is equipped with supporting shaft wall sections (5) and rear connecting walls (6) which interconnect the shaft wall sections (5), have an arched shape, and are fitted with a bolt bore (7). An undercut free space (8) is provided below the annular field (4) in the area of the bolt bore (7), in the region of the piston head (2). An arched zone (15) is embodied in the interior of the piston (1), at the transition from the bolt bore (7) in the direction of the shaft wall section (5f).

IPC 8 full level
F02F 3/00 (2006.01); **F01M 11/02** (2006.01)

CPC (source: EP KR US)
F01M 11/02 (2013.01 - KR); **F02F 3/00** (2013.01 - KR); **F02F 3/0076** (2013.01 - EP US); **F01M 2011/025** (2013.01 - EP US)

Citation (search report)
See references of WO 2007025686A1

Citation (examination)

- JP S61140257 U 19860830
- US 5746169 A 19980505 - ISSLER WOLFGANG [DE], et al
- DE 4111368 A1 19920109 - MAHLE GMBH [DE]
- WO 9320369 A1 19931014 - MAHLE GMBH [DE], et al
- DE 10255892 A1 20040609 - MAHLE GMBH [DE]
- DE 10227372 A1 20040115 - KS KOLBENSCHMIDT GMBH [DE]

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2007025686 A1 20070308; BR PI0615298 A2 20110517; EP 1920151 A1 20080514; JP 2009506259 A 20090212; KR 20080063269 A 20080703; US 2008264247 A1 20081030; US 7954421 B2 20110607

DOCDB simple family (application)
EP 2006008386 W 20060826; BR PI0615298 A 20060826; EP 06777082 A 20060826; JP 2008528395 A 20060826; KR 20087004726 A 20080227; US 6542106 A 20060826