

Title (en)
RADIAL PISTON PUMP FOR GENERATING HIGH PRESSURE FOR FUEL IN FUEL INJECTION SYSTEMS OF COMBUSTION ENGINES

Title (de)
RADIALKOLBENPUMPE ZUR KRAFTSTOFFHOCHDRUCKERZEUGUNG BEI KRAFTSTOFFEINSPRITZSYSTEMEN VON BRENNKRAFTMASCHINEN

Title (fr)
POMPE A PISTONS RADIAUX POUR PRODUCTION DE HAUTE PRESSION POUR CARBURANT DANS DES SYSTEMES D'INJECTION DE CARBURANT DE MOTEURS A COMBUSTION INTERNE

Publication
EP 1633971 A1 20060315 (DE)

Application
EP 04736393 A 20040609

Priority
• EP 2004006207 W 20040609
• DE 10326880 A 20030614

Abstract (en)
[origin: WO2004111435A1] The invention relates to a radial piston pump (1) for generating high pressure in fuel injection systems of combustion engines, particularly in a common rail injection system, comprising a drive shaft (4), which is mounted in a pump case (2), has an eccentric shaft section (6), on which a roller (8) is mounted, and which preferably has a number of pistons (16). These pistons are placed in a respective cylinder (14) while being arranged radial to the drive shaft (4), and a piston foot plate (18) is placed at the ends of the piston facing the roller (8) while being in contact with the peripheral surface (10, 12) of the roller (8). The invention provides that at least the surface (28) of the piston foot plate (18) that contacts the peripheral surface (10, 12) of the roller (8) is made of a wear-resistant material, namely of hard metal, a ceramic material, a cast carbidic material or of cermet, and/or that at least one portion of the roller (8), particularly at least one portion of the peripheral surface (10, 12) of the roller (8), is made of a wear-resistant material, namely of hard metal, a precision cast material, a cast carbidic material, a sintered tool steel or of an alloyed nitrided steel and/or that the piston (16) is made of a ceramic material.

IPC 1-7
F02M 59/06; **F02M 59/44**; **F02M 59/10**

IPC 8 full level
F02M 59/06 (2006.01); **F02M 59/10** (2006.01); **F02M 59/44** (2006.01); **F04B 1/04** (2006.01)

CPC (source: EP KR US)
F02M 59/06 (2013.01 - EP KR US); **F02M 59/10** (2013.01 - KR); **F02M 59/102** (2013.01 - EP US); **F02M 59/44** (2013.01 - KR); **F02M 59/445** (2013.01 - EP US); **F04B 1/0426** (2013.01 - EP US); **F05C 2203/08** (2013.01 - EP US); **F05C 2203/0843** (2013.01 - EP US); **F05C 2251/10** (2013.01 - EP US)

Citation (search report)
See references of WO 2004111435A1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
DE 10326880 A1 20041230; DE 502004003060 D1 20070412; EP 1633971 A1 20060315; EP 1633971 B1 20070228; JP 2006527329 A 20061130; KR 20060021377 A 20060307; US 2006222517 A1 20061005; WO 2004111435 A1 20041223

DOCDB simple family (application)
DE 10326880 A 20030614; DE 502004003060 T 20040609; EP 04736393 A 20040609; EP 2004006207 W 20040609; JP 2006515862 A 20040609; KR 20057023959 A 20051213; US 56046504 A 20040609