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

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Application

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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.

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