

Title (en)

Radial piston pump for a fuel injection system having improved high-pressure resistance

Title (de)

Radialkolbenpumpe für Kraftstoffeinspritzsystem mit verbesserter Hochdruckfestigkeit

Title (fr)

Pompe a pistons radiaux destinée a un système d'injection de carburant présentant une meilleure résistance aux pressions élevées

Publication

EP 1818539 A2 20070815 (DE)

Application

EP 07109457 A 20030513

Priority

- EP 03749849 A 20030513
- DE 10221305 A 20020514

Abstract (en)

Radial piston pump comprises preferably several pump elements arranged radially to a drive shaft positioned in a pump housing (1). The pump elements are operated by the drive shaft and each pump element has an intake side and a high pressure side. The pump housing has high pressure channels (27a-c) which connect the high pressure side of a pump element to a high pressure connection (33). The high pressure channels have very few branches (35, 37). The angle (alpha , beta) between a high pressure channel and another high pressure channel is approximately 90[deg]. Preferred Features: The high pressure channels are reinforced by tubular inserts (39a-c) made of a strong material, especially high strength steel.

Abstract (de)

Es wird eine Radialkolbenpumpe mit einem Pumpengehäuse (1) und darin eingesetzten Pumpenelementen (9) beschrieben, deren im Pumpengehäuse (1) verlaufenden Hochdruckkanäle so gestaltet sind, dass die zulässigen Betriebsdrücke signifikant gesteigert werden.

IPC 8 full level

F02M 59/06 (2006.01); **F04B 53/16** (2006.01); **F04B 1/04** (2006.01); **F04B 1/047** (2006.01); **F04B 1/053** (2006.01); **F04B 53/10** (2006.01)

CPC (source: EP US)

F02M 59/06 (2013.01 - EP US); **F02M 59/102** (2013.01 - EP US); **F02M 59/462** (2013.01 - EP US); **F02M 59/485** (2013.01 - EP US); **F04B 1/0404** (2013.01 - EP US); **F04B 53/16** (2013.01 - EP US); **F05C 2253/22** (2013.01 - EP US); **Y10T 137/7927** (2015.04 - EP US)

Citation (applicant)

EP 0337439 A2 19891018 - NISSAN MOTOR [JP]

Cited by

CN102483017A; WO2009058279A1; WO2010060838A1; WO2011020635A1; WO2009115356A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 03095839 A1 20031120; CN 100476209 C 20090408; CN 1653268 A 20050810; DE 10221305 A1 20031127; DE 50311781 D1 20090917; DE 50312918 D1 20100902; EP 1506349 A1 20050216; EP 1506349 B1 20090805; EP 1818539 A2 20070815; EP 1818539 A3 20080319; EP 1818539 B1 20100721; JP 2005525502 A 20050825; JP 4589104 B2 20101201; US 2005207908 A1 20050922; US 7775192 B2 20100817

DOCDB simple family (application)

DE 0301541 W 20030513; CN 03810947 A 20030513; DE 10221305 A 20020514; DE 50311781 T 20030513; DE 50312918 T 20030513; EP 03749849 A 20030513; EP 07109457 A 20030513; JP 2004503802 A 20030513; US 51399305 A 20050525