

Title (en)

Accumulation-type fuel injection system and accumulation chamber pressure control method therefor

Title (de)

Speicherkraftstoffeinspritzsystem und Verfahren zur Regelung des Kraftstoffdruckes dafür

Title (fr)

Dispositif d'injection de combustible à accumulateur et méthode de commande de pression associé

Publication

**EP 1024274 A3 20020327 (EN)**

Application

**EP 00100432 A 20000110**

Priority

- JP 1992499 A 19990128
- JP 20447099 A 19990719

Abstract (en)

[origin: EP1024274A2] A spill control valve such as an electromagnetic valve (1a) of an injector (1) is ineffectively driven to open for a period (Tq) shorter than a delay period (tm) by which a nozzle needle (37) opens, when a pressure reducing condition to reduce fuel pressure in a common rail (3) is satisfied. A temperature of an injector driving circuit (79) in an ECU (7) is estimated from a coolant temperature detected by a coolant temperature sensor (71). A cycle period of an ineffective driving is determined from the estimated temperature so that a thermal load applied to the injector driving circuit does not exceed a limit. <IMAGE>

IPC 1-7

**F02D 41/38; F02M 63/02**

IPC 8 full level

**F02M 37/00** (2006.01); **F02D 41/04** (2006.01); **F02D 41/20** (2006.01); **F02D 41/38** (2006.01); **F02M 47/00** (2006.01); **F02M 47/02** (2006.01);  
**F02M 51/00** (2006.01); **F02M 55/02** (2006.01); **F02M 63/02** (2006.01); **F02M 63/00** (2006.01)

CPC (source: EP)

**F02D 41/20** (2013.01); **F02D 41/3872** (2013.01); **F02M 47/027** (2013.01); **F02M 63/0225** (2013.01); **F02D 2041/2065** (2013.01);  
**F02D 2041/389** (2013.01); **F02D 2200/0602** (2013.01); **F02D 2250/31** (2013.01); **F02M 2200/21** (2013.01)

Citation (search report)

- [PX] DE 19857260 A1 19990617 - DENSO CORP [JP]
- [A] US 5711274 A 19980127 - DRUMMER EUGEN [AT]
- [A] US 5148987 A 19920922 - TAUE JUN [JP]
- [A] US 5090381 A 19920225 - TANABE YOSHIYUKI [JP]
- [A] HOFFMANN K-H ET AL: "DAS COMMON-RAIL-EINSPIRZSYSTEM-EIN NEUES KAPITEL DER DIESELEINSPIRZTECHNIK", MTZ MOTORECHNISCHE ZEITSCHRIFT, FRANCKH'SCHE VERLAGSHANDLUNG, ABTEILUNG TECHNIK, STUTTGART, DE, vol. 58, no. 10, 1 October 1997 (1997-10-01), pages 572 - 582, XP000720118, ISSN: 0024-8525

Cited by

EP2333283A1; EP1950402A1; CN103097711A; EP2075446A3; CN114810442A; DE102005012998B3; DE102005012997A1;  
DE102005012997B4; CN100387825C; EP1520979A4; CN103097712A; US2013233282A1; CN103726966A; US6854445B2; WO2006100207A1;  
WO2006038428A1; WO0233241A1; US6877487B2; US7240660B1; US8206204B2; WO2004007945A1; WO2012034773A1; US7263973B2;  
US7380539B2; US7389766B2

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

**EP 1024274 A2 20000802; EP 1024274 A3 20020327; EP 1024274 B1 20040324**; DE 60009180 D1 20040429; DE 60009180 T2 20050120;  
JP 2000282998 A 20001010; JP 3458776 B2 20031020

DOCDB simple family (application)

**EP 00100432 A 20000110**; DE 60009180 T 20000110; JP 20447099 A 19990719