

Title (en)

Determination of the piezoelectric element temperature and its utilization for correcting the drive voltage

Title (de)

Bestimmung der Temperatur eines piezoelektrischen Elements und Verwendung derselben zur Korrektur der Steuerspannung

Title (fr)

Détermination de la température d'un élément piézoélectrique et son utilisation pour corriger la tension de commande

Publication

EP 1138935 A1 20011004 (EN)

Application

EP 00106985 A 20000401

Priority

EP 00106985 A 20000401

Abstract (en)

The invention describes a method and an apparatus for charging a piezoelectric element, for example, used as an actuator in a fuel injection system of an internal combustion engine. The method and apparatus are characterized in that the piezoelectric element is activated by an activation voltage, which is corrected for the piezoelectric element's temperature. The piezoelectric element's temperature is determined by loss efficiency. <IMAGE>

IPC 1-7

F02M 59/46; **F02M 47/02**; **F02D 41/20**; **H01L 41/04**

IPC 8 full level

F02D 41/20 (2006.01); **F02M 45/08** (2006.01); **F02M 47/02** (2006.01); **F02M 59/46** (2006.01)

CPC (source: EP)

F02D 41/2096 (2013.01); **F02M 45/08** (2013.01); **F02M 47/027** (2013.01); **F02M 63/0026** (2013.01)

Citation (search report)

- [X] DE 19723932 C1 19981224 - SIEMENS AG [DE]
- [X] PATENT ABSTRACTS OF JAPAN vol. 013, no. 477 (M - 885) 27 October 1989 (1989-10-27)
- [X] PATENT ABSTRACTS OF JAPAN vol. 018, no. 447 (E - 1594) 19 August 1994 (1994-08-19)

Cited by

DE102008045955A1; US7102331B2

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 1138935 A1 20011004; **EP 1138935 B1 20071114**; AT E378510 T1 20071115; DE 60037104 D1 20071227; DE 60037104 T2 20080320; ES 2292387 T3 20080316

DOCDB simple family (application)

EP 00106985 A 20000401; AT 00106985 T 20000401; DE 60037104 T 20000401; ES 00106985 T 20000401