

Title (en)

Determining the piezoelectric element temperature using a model of the energy balance of the piezoelectric element

Title (de)

Bestimmung der Temperatur eines piezoelektrischen Elements unter Verwendung eines Energiebilanzmodells des piezoelektrischen Elements

Title (fr)

Détermination de la température de l'élément piézoélectrique utilisant un modèle du bilan d'énergie d'un élément piézoélectrique

Publication

EP 1138914 B1 20050302 (EN)

Application

EP 00106995 A 20000401

Priority

EP 00106995 A 20000401

Abstract (en)

[origin: EP1138914A1] 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 using an energy balance model. <IMAGE>

IPC 1-7

F02D 41/20

IPC 8 full level

F02M 47/00 (2006.01); **F02D 41/20** (2006.01); **F02M 51/00** (2006.01); **F02M 51/06** (2006.01); **H10N 30/20** (2023.01); **H10N 30/50** (2023.01)

CPC (source: EP)

F02D 41/2096 (2013.01)

Cited by

US6509672B2; US8324783B1; WO03091559A1; WO2010040633A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 1138914 A1 20011004; **EP 1138914 B1 20050302**; DE 60018385 D1 20050407; DE 60018385 T2 20051229; JP 2001349237 A 20011221

DOCDB simple family (application)

EP 00106995 A 20000401; DE 60018385 T 20000401; JP 2001103955 A 20010402