

Title (en)  
Thermal compensation arrangement

Title (de)  
Wärmekompensationsanordnung

Title (fr)  
Agencement de compensation thermique

Publication  
**EP 2141347 A1 20100106 (EN)**

Application  
**EP 08012066 A 20080703**

Priority  
EP 08012066 A 20080703

Abstract (en)  
A Thermal compensation arrangement (6) comprises a housing (4) including a central longitudinal axis (A). The housing (4) comprises a cavity (14) and a solid state actuator unit (10) being arranged in the cavity (14) and having a first axial end (10a) and a second axial end (10b). The second axial end (10b) acts as a drive side of the solid state actuator unit (10). A thermal compensation unit (8) is arranged at least partially in the cavity (14) and is coupled to the first axial end (10a) of the solid state actuator unit (10). The thermal compensation unit (8) comprises a casing (32) being mechanically coupled to the housing (4) and comprising a recess (34). A piston (36) is axially movable in the recess (34) and is designed to be coupled to the solid state actuator unit (10). The recess (34) is filled with a fluid (MRF) of a viscosity ( $\nu$ ) being influenceable by a magnetic field (B). An electromagnet (39) is arranged in the thermal compensation unit (8) and is designed to influence the viscosity ( $\nu$ ) of the fluid (MRF) by its magnetic field (B).

IPC 8 full level  
**F02M 51/06** (2006.01); **F02M 61/08** (2006.01); **F02M 61/16** (2006.01)

CPC (source: EP)  
**F02M 51/0603** (2013.01); **F02M 61/08** (2013.01); **F02M 61/167** (2013.01); **F02M 2200/9084** (2013.01)

Citation (search report)

- [X] DE 102005003449 A1 20060803 - SIEMENS AG [DE]
- [X] US 2002056768 A1 20020516 - CZIMMEK PERRY ROBERT [US]
- [A] DE 10203659 A1 20030731 - BOSCH GMBH ROBERT [DE]
- [A] EP 1450034 A1 20040825 - BOSCH GMBH ROBERT [DE]

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

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