

Title (en)

VALVE ASSEMBLY AND METHOD FOR CONTROLLING A FLOW OF A FLUID USING A SHAPE MEMORY ALLOY MEMBER

Title (de)

VENTILANORDNUNG UND VERFAHREN ZUM STEUERN EINES FLUSSES EINER FLÜSSIGKEIT UNTER VERWENDUNG EINES FORMGEDÄCHTNISLEGIERUNGSELEMENTS

Title (fr)

ENSEMBLE SOUPEPE ET PROCÉDÉ DE COMMANDE D'UN ÉCOULEMENT D'UN FLUIDE À L'AIDE D'UN ÉLÉMENT EN ALLIAGE À MÉMOIRE DE FORME

Publication

EP 3538800 A1 20190918 (EN)

Application

EP 17792055 A 20171030

Priority

- GB 201618842 A 20161108
- EP 2017077839 W 20171030

Abstract (en)

[origin: GB2555655A] The valve assembly comprises a valve housing 1 defining a cavity 2 for receiving and expelling a fluid, and a spool 3 disposed in the cavity 2 and movable therein between first and second positions. The fluid may flow through a first port 4 of the cavity 2 when the spool 3 is in the first position and may flow through a second port 5 of the cavity 2 when the spool 3 is in the second position. An actuator 6 is attached to the spool, the actuator including a shape memory alloy member 7 and a spring 8. The actuator 6 moves the spool 3 between the first and second positions. The shape memory alloy member 7 is in a deactivated state when the spool 3 is in the first position and changes to an activated state during a transition of the spool to the second position. An electric circuit 9 is provided for conducting an electric current through the shape memory alloy member 7 and a resistance meter 15 connected to the electric circuit 9 measures a development over time of an electrical resistance of the shape memory alloy member 7.

IPC 8 full level

F16K 37/00 (2006.01); **F16K 11/07** (2006.01); **F16K 31/02** (2006.01); **G05D 23/02** (2006.01); **G05D 23/19** (2006.01)

CPC (source: EP GB)

F16K 11/0716 (2013.01 - EP); **F16K 31/002** (2013.01 - GB); **F16K 31/025** (2013.01 - EP); **F16K 37/0041** (2013.01 - EP GB); **F16K 37/0083** (2013.01 - EP GB); **G05D 23/025** (2013.01 - EP); **G05D 23/1921** (2013.01 - EP)

Citation (search report)

See references of WO 2018086954A1

Cited by

EP3889483A1; US11499652B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

GB 2555655 A 20180509; EP 3538800 A1 20190918; WO 2018086954 A1 20180517

DOCDB simple family (application)

GB 201618842 A 20161108; EP 17792055 A 20171030; EP 2017077839 W 20171030