Title (en)
METHOD FOR OPERATING A VALVE

Title (de)
VERFAHREN ZUM BETREIBEN EINES VENTILS

Title (fr)
PROCÉDÉ PERMETTANT DE FAIRE FONCTIONNER UNE SOUPAPE

Publication
EP 2861855 A1 20150422 (DE)

Application
EP 13724550 A 20130514

Priority
• DE 102012209965 A 20120614
• EP 2013059913 W 20130514

Abstract (en)
[origin: WO2013185996A1] The invention relates to a method for operating a valve (18; 38), wherein a valve element (56) of the valve (18; 38) can be moved from a first position into a second position by activation of an electrically operable actuator (20). According to the invention, the actuator (20) is activated at least once in a first time interval and is subsequently not activated in a second time interval (64), wherein a signal (62) which characterizes an abutment of the valve element (56) against the first position is determined at electrical terminals (55a, 55b) of the actuator (20). Here, an activation energy of the actuator (20) is varied in a stepped manner, wherein a threshold value (31) of the activation energy at which the valve element (56) can still just lift off from the first position, or can just no longer lift off from the first position, is determined.

IPC 8 full level
F02D 41/20 (2006.01); F02D 41/24 (2006.01); H10N 30/80 (2023.01)

CPC (source: EP KR US)
F02D 41/20 (2013.01 - EP KR US); F02D 41/2096 (2013.01 - EP KR US); F02D 41/2467 (2013.01 - EP KR US); F02D 41/26 (2013.01 - US); F02M 51/0603 (2013.01 - KR); H02N 2/06 (2013.01 - EP KR US); F02D 2041/2024 (2013.01 - US); F02D 2041/2051 (2013.01 - EP KR US); Y10T 137/0318 (2015.04 - EP US); Y10T 137/86389 (2015.04 - EP US)

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)
WO 2013185996 A1 20131219; CN 104350262 A 20150211; CN 104350262 B 20180330; DE 102012209965 A1 20131219; EP 2861855 A1 20150422; IN 8080DEN2014 A 20150501; JP 2015519513 A 20150709; JP 6038300 B2 20161207; KR 20150023365 A 20150305; US 2015167571 A1 20150618; US 9567932 B2 20170214

DOCDB simple family (application)
EP 2013059913 W 20130514; CN 201380030934 A 20130514; DE 102012209965 A 20120614; EP 13724550 A 20130514; IN 8080DEN2014 A 20140926; JP 2015516528 A 20130514; KR 20147034657 A 20130514; US 201314406830 A 20130514