Title (en)

CONTROL DEVICE FOR AN INTERNAL COMBUSTION ENGINE

Title (de)

STEUERGERÄT FÜR EINEN VERBRENNUNGSMOTOR

Title (fr)

CONTRÔLEUR POUR UN MOTEUR À COMBUSTION INTERNE

Publication

EP 3221573 B1 20200422 (DE)

Application

EP 15795168 A 20151117

Priority

- DE 102014116748 A 20141117
- EP 2015076845 W 20151117

Abstract (en)

[origin: WO2016079132A1] Control device (1) for an internal combustion engine (2), having a function which determines a reference variable (x(t)) taking into account an operating state information item (FW, SB) of an upper limit and a cumulated actual variable, which reference variable (x(t)) influences an operating state of the internal combustion engine (2) with the result that multiple actual variables are set in such a way that in an operating time period with a combination of different arbitrary operating states of the internal combustion engine (2), set in a random sequence, cumulated actual variables do not exceed upper limits for this operating time period, wherein a target function is minimized by selecting the reference variable (x(t)) from Pareto-optimum alternatives by means of an indifference curve (I).

IPC 8 full level

F02D 41/14 (2006.01)

CPC (source: CN EP KR US)

F02D 41/1406 (2013.01 - CN EP KR US); F02D 2250/36 (2013.01 - CN EP KR US); F02D 2250/38 (2013.01 - CN EP KR US)

Citation (examination)

- US 2011264353 A1 20111027 - ATKINSON CHRISTOPHER M [US], et al
- R. TIMOTHY MARLER ET AL: "The weighted sum method for multi-objective optimization: new insights", STRUCTURAL AND MULTIDISCIPLINARY OPTIMIZATION, vol. 41, no. 6, 12 December 2009 (2009-12-12), Berlin/Heidelberg, pages 853 - 862, XP055535565, ISSN: 1615-147X, DOI: 10.1007/s00158-009-0460-7

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

DOCDB simple family (publication)

DE 102015222684 A1 20160519; **DE 102015222684 B4 20191107**; CN 107002576 A 20170801; CN 107002576 B 20201023; EP 3221573 A1 20170927; EP 3221573 B1 20200422; KR 101836787 B1 20180419; KR 20170067890 A 20170616; US 10690075 B2 20200623; US 2017248091 A1 20170831; WO 2016079132 A1 20160526

DOCDB simple family (application)

DE 102015222684 A 20151117; CN 201580061916 A 20151117; EP 15795168 A 20151117; EP 2015076845 W 20151117; KR 20177013137 A 20151117; US 201715596013 A 20170516