

Title (en)

PROCESS AND APPARATUS FOR ADAPTING THE OPERATION CHARACTERISTIC OF AN ACTUATING ROD

Publication

**EP 0162203 B1 19900110 (DE)**

Application

**EP 85102283 A 19850301**

Priority

DE 3415183 A 19840421

Abstract (en)

[origin: EP0162203A2] 1. Claims for contracting states AT, IT Method is conjunction with a control or regulation system for the speed of an internal combustion engine in the case of idling via an electromechanical final control element, for controlling the air quantity or mass taken in by means of an adaptation of the shape of a characteristic of the continuously operating final control element of the internal combustion engine by converting the controlling variable (Qset , mset ) fed to the final control element (12, Id-ACT.) by the control or controller output into an adapted electrical manipulated variable (tau) for the final control element in which the controlling variable (Qset , mset ) is combined multiplicatively and/or by summation with at least one stored value (I1 , I2 ) influencing the offset and/or the slope of the characteristic of the final control element, the stored values representing an output signal of in each case one control loop which is activated in the event of certain operating conditions and, from a comparison of the controlling variable (Qset , mset ) with an actual measured value of the air-mass or air-quantity measuring device, generates the output signal with which at least one of the stored values (I1 , I2 ) is altered to produce a relatively slight control deviation, the value thus altered being stored at the temporal end of the particular operating condition. 1. Claims for contracting states DE, FR, GB Method is conjunction with a control or regulation system for the speed of an internal combustion engine in the case of idling via an electromechanical final control element, for controlling the air quantity or mass taken in by means of an adaptation of the shape of a characteristic of the continuously operating final control element of the internal combustion engine by converting the controlling variable (Qset , mset ) fed to the final control element (12, Id-ACT.) by the control or controller output into an adapted electrical manipulated variable (tau) for the final control element in which the controlling variable (Qset , mset ) is combined multiplicatively or by summation with at least one stored value (I1 , I2 ) influencing the offset and/or the slope of the characteristic of the final control element, the stored values representing an output signal of in each case one control loop which is activated in the event of certain operating conditions and, from a comparison of the controlling variable (Qset , mset ) with an actual measured value of the air-mass or air-quantity measuring device, generates the output signal with which at least one of the stored values (I1 , I2 ) is altered to produce a relatively slight control deviation, the value thus altered being stored at the temporal end of the particular operating condition, characterized in that an interlocking of offset and slope adaptation takes place to the effect that, after each slope adaptation, an offset adaptation (Qset = Qactual ) first of all takes place before another slope adaptation is enabled.

IPC 1-7

**F02D 31/00; F02D 41/16; F02D 41/26; F02M 3/06**

IPC 8 full level

**F02D 41/16** (2006.01); **F02D 31/00** (2006.01); **F02D 41/14** (2006.01); **F02D 41/24** (2006.01); **F02D 41/26** (2006.01); **F02M 3/06** (2006.01); **G05B 11/36** (2006.01)

CPC (source: EP)

**F02D 41/14** (2013.01); **F02D 41/2464** (2013.01)

Citation (examination)

- EP 0136449 A2 19850410 - BOSCH GMBH ROBERT [DE]
- GB 2084353 A 19820407 - BOSCH GMBH ROBERT

Cited by

EP0250873A3; GB2199428A; GB2199428B; WO9205354A1; EP0190268B1

Designated contracting state (EPC)

AT DE FR GB IT

DOCDB simple family (publication)

**EP 0162203 A2 19851127; EP 0162203 A3 19880107; EP 0162203 B1 19900110**; AT E49458 T1 19900115; AU 4079985 A 19851024; AU 577843 B2 19881006; DE 3415183 A1 19851031; DE 3575330 D1 19900215; JP H0574698 B2 19931019; JP S60224950 A 19851109

DOCDB simple family (application)

**EP 85102283 A 19850301**; AT 85102283 T 19850301; AU 4079985 A 19850403; DE 3415183 A 19840421; DE 3575330 T 19850301; JP 6107585 A 19850327