

Title (en)

Process and apparatus for adapting the operation characteristic of an actuating rod.

Title (de)

Verfahren und Vorrichtung zur Adaption eines Stellglied-Kennlinienverlaufs.

Title (fr)

Procédé et dispositif d'adaptation du comportement de la caractéristique d'une tige d'actionnement.

Publication

EP 0162203 A2 19851127 (DE)

Application

EP 85102283 A 19850301

Priority

DE 3415183 A 19840421

Abstract (en)

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.

Abstract (de)

Regelverfahren und Vorrichtung zur Adaption eines Stellglied-Kennlinienverlaufs zur Eliminierung von Stör- und sonstigen unerwünschten Einflußgrößen, insbesondere zur Adaption der Stellerkennlinie bei der Leerlauf-Füllungs-regelung von Brennkraftmaschinen. Ein von einem Regler aufgrund verschiedener Betriebszustände herausgegebener Luftmengensollwert erfährt vor seiner Zuführung zum Leerlaufsteller, durch welchen sich beispielsweise der Öffnungsquerschnitt eines Bypass in der Kraftstoffdosiereinrichtung der Brennkraftmaschine verändern läßt, durch multiplikative und/oder additive Einwirkung eine Korrektur. Diese Korrektur betrifft eine Kennlinienadaption des Leerlaufstellers bezüglich offset (Fußpunkt) und Steigung, indem die Ausgangssignale mindestens eines Offset-Integrators oder eines Steigungs- Integrators zur Erstellung einer adaptierten elektrischen Ansteuergröße für den Leerlaufsteller ausgewertet werden. Die Integratoren sind je nach Betriebszuständen freigegeben und sie erhalten ein Eingangsdifferenzsignal aus Luftmengensollwert vom Regler und einem Luftmengenistwert.

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