Title (en)

METHOD FOR THE MODEL-BASED OPEN-LOOP AND CLOSED-LOOP CONTROL OF AN INTERNAL COMBUSTION ENGINE

Title (de)

VERFAHREN ZUR MODELLBASIERTEN STEUERUNG UND REGELUNG EINER BRENNKRAFTMASCHINE

Title (fr)

PROCÉDÉ DE COMMANDE REPOSANT SUR UN MODÈLE EN BOUCLE OUVERTE ET EN BOUCLE FERMÉE D'UN MOTEUR À COMBUSTION INTERNE

Publication

EP 4158176 A1 20230405 (DE)

Application

EP 21729461 A 20210525

Priority

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- EP 2021063945 W 20210525

Abstract (en)

[origin: WO2021239752A1] What is proposed is a method for the model-based open-loop and closed-loop control of an internal combustion engine, in which a pre-optimized quality measure (J(VO)) is calculated on the basis of the operating situation (BS) by an optimizer in a first step, wherein, in the calculation of the pre-optimized quality measure (J(VO)), discrete manipulated variables having discrete settings are interpreted as continuous manipulated variables (SG(k)) having a continuous settings range, in which these continuous manipulated variables (SG(k)) are quantized and set as new discrete manipulated variables (SG(new)) having discrete settings in a second step, in which a post-optimized quality measure (J(NA)) is calculated on the basis of the new discrete manipulated variables (SG(new)) and the operating situation (BS) of the internal combustion engine (1) by the optimizer in a third step, and the post-optimized quality measure (J(NA)) is set as critical for the operating point of the internal combustion engine (1) by the optimizer (21).

IPC 8 full level

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CPC (source: EP US)

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