

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 POUR LA COMMANDE ET LA RÉGULATION BASÉES SUR DES MODÈLES D'UN MOTEUR À COMBUSTION INTERNE

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Application

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Abstract (en)

[origin: WO2018234093A1] The invention relates to a method for the model-based open-loop and closed-loop control of an internal combustion engine (1), in which injection system set points for activating the injection system actuator are calculated as a function of a torque setpoint via a combustion model (19), and gas path set points for activating the gas path actuators are calculated via a gas path model (20), in which a measure of quality is calculated by an optimizer (21) as a function of the injection system set points and the gas path set points, the measure of quality is minimized by the optimizer (21) by changing the injection system set points and gas path set points within a prediction horizon, and in which, by using the minimized measure of quality, the injection system set points and gas path set points are set by the optimizer (21) as definitive for adjusting the operating point of the internal combustion engine (1).

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