

Title (en)

OPERATIONAL METHOD WITH WATER INJECTION IN A COMBUSTION ENGINE DURING THE TRANSITION BETWEEN THE HCCI COMBUSTION MODE AND THE SPARK-IGNITED COMBUSTION MODE

Title (de)

BETRIEBSVERFAHREN MIT WASSEREINSPRITZUNG S IN EINER BRENNKRAFTMASCHINE WÄHREND DES WECHSELS ZWISCHEN DEN HCCI-BRENNVERFAHREN UND DEN - BRENNVERFAHREN MIT FREMDZÜNDUNG (SI)

Title (fr)

PROCÉDÉ DE FONCTIONNEMENT FAISANT INTERVENIR UNE INJECTION D'EAU DANS UN MOTEUR À COMBUSTION INTERNE LORS DE LA TRANSITION ENTRE UN MODE DE COMBUSTION HCCI ET UN MODE DE COMBUSTION AVEC ALLUMAGE COMMANDÉ.

Publication

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Application

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Abstract (en)

[origin: WO2012045452A2] The invention relates to an operational method for, in particular, a direct-injecting internal combustion engine having a plurality of combustion chambers, in particular for a direct-injection spark-ignition engine of a motor vehicle, with at least partial low NOx combustion (NAV) and with a plurality of operational sub-methods. A low NOx operation sub-method is used, in which at least water is injected into the respective combustion chamber. In the event of the low NOx sub method being ignited by means of an ignition device at an ignition time point (ZZP), a predominately homogeneous lean fuel/exhaust gas/air mixture having a combustion air ratio of  $\lambda=1$  is spark ignited in the respective combustion chamber, and the flame front combustion (FFV) started by spark ignition converts into a charge compression combustion (RZV). The low NOx operation sub-method can also be carried out, also at high engine loads, in an operationally stable due to the injection of water.

IPC 8 full level

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