Title (en)

COMBUSTION CONTROL VIA HOMOGENEOUS COMBUSTION RADICAL IGNITION (HCRI) OR PARTIAL HCRI IN CYCLIC IC ENGINES

Title (de)

VERBRENNUNGSSTEUERUNG MITTELS HOMOGENER VERBRENNUNGSRADIKALER ZÜNDUNG ODER TEILWEISER HOMOGENER VERBRENNUNGSRADIKALER ZÜNDUNG IN ZYKLISCHEN MOTOREN

Title (fr)

CONTRÔLE DE LA COMBUSTION AU MOYEN D'UN ALLUMAGE RADICAL DE COMBUSTION HOMOGÈNE (HCRI) OU D'UN HCRI PARTIEL DANS LES MOTEURS À COMBUSTION INTERNE CYCLIQUES

Publication

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Application

EP 11790475 A 20110603

Priority

- US 201161484179 P 20110509
- US 94530610 A 20101112
- US 35093910 P 20100603
- US 201061426503 P 20101222
- US 2011039090 W 20110603

Abstract (en)

[origin: WO2011153448A1] A process (800) is provided for improving combustion control and fuel efficiency in rotary and reciprocating IC engines by enabling leaner combustion at higher compression ratios using less heat for ignition. Embodiments employ secondary chambers (32) of minimal total volume within a cylinder periphery (36). These chambers (32) communicate with a main chamber (34) via conduits (42) and enable a radical ignition ("RI") species generation and supply process that starts in earlier cycles to be augmented and used in later cycles. Measures regulate the RI species generated and provided to the main chamber (34). These species alter dominant chain-initiation reactions of the combustion ignition mechanism. Also employed when preferable are fluids of higher heat of vaporization and volatility but lower ignitability than the fuel. This process improves combustion in radical ignition engines and radical augmented spark and compression ignition engines.

IPC 8 full level

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CPC (source: EP KR)

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Citation (search report)

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Designated contracting state (EPC)

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