

Title (en)

COMMON AIR SUPERCHARGED FOUR-STROKE INTERNAL COMBUSTION ENGINE WITH OVERHEATED FUEL INJECTION AND SCREENED COMBUSTION CHAMBER

Title (de)

GELÄUFIGER LUFTAUFGELADENER VIERTAKT-VERBRENNUNGSMOTOR MIT EINSPRITZUNG VON ÜBERHITZTEM KRAFTSTOFF UND ABGESCHIRMTER BRENNKAMMER

Title (fr)

MOTEUR À COMBUSTION INTERNE À QUATRE TEMPS SURALIMENTÉ À AIR COMMUN AVEC INJECTION DE CARBURANT SURCHAUFFÉ ET CHAMBRE DE COMBUSTION À ÉCRAN

Publication

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Application

EP 17738241 A 20170112

Priority

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- HU 2017000001 W 20170112

Abstract (en)

[origin: WO2017122036A1] The subject of the invention is a common air supercharged four-stroke internal combustion engine with overheated fuel injection and screened combustion chamber (106). The engine is supercharged with three swept volume air, has a combustion chamber (106) equipped with a screen (48) to reduce thermal loss and features direct injection of overheated fuel to reduce harmful emissions. This engine has a swept volume of one third of that of a naturally aspirated engine (104) with the same output. Two swept volume supercharging air is generated in the supercharging compressor chamber (7) underneath the piston (4), and one swept volume supercharging air is generated during the suction stroke. The supercharging air is stored in tanks from which the air is released for the supercharging action to take place. Both the temperature and the mass of the supercharging air are adjustable. The supercharging action and energy generation can be suspended for each cylinder (1) in case of partial workload (when the full output of the engine is not momentarily utilized). The invention converts exhaust gas energy into electric energy by use of a turbo generator (43).

IPC 8 full level

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CPC (source: EP HU)

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