

Title (en)
Internal combustion engine.

Title (de)
Brennkraftmaschine.

Title (fr)
Moteur à combustion interne.

Publication
EP 0449129 B1 19940427

Application
EP 91104511 A 19910322

Priority
DE 4010087 A 19900329

Abstract (en)
[origin: EP0449129A1] The invention relates to a reciprocating piston internal combustion engine, the heat-exposed components of which are cooled by a coolant, the internal combustion engine having at least one cylinder with piston and a related cylinder head with an exhaust gas duct and at least one liquid-air heat exchanger, which is flow connected on the air side to a cooling fan. <??>The object of the invention therefore is to create as compact a cooling system as possible for a liquid-cooled internal combustion engine. <??>The object is achieved by the following characteristics:
a) The cooling fan (2) has a guide wheel (3); b) the liquid-air heat exchanger(s) (1) is/are adjusted to the increased cooling air pressure of the cooling fan (2); c) the pressure of the coolant system and/or the composition of the coolant are so selected that the boiling temperature of the coolant is between 110 DEG C and 130 DEG C, preferably 125 DEG C; d) the exhaust gas duct (5) in the cylinder head (4) is, as far as possible, uncooled and/or thermally insulated from adjoining cylinder head areas. <IMAGE>

IPC 1-7
F01P 5/06; **F01P 3/18**; **F01P 3/22**

IPC 8 full level
F01P 3/18 (2006.01); **F01P 3/22** (2006.01); **F01P 5/06** (2006.01); **F01P 3/00** (2006.01)

CPC (source: EP US)
F01P 3/18 (2013.01 - EP US); **F01P 3/2207** (2013.01 - EP US); **F01P 5/06** (2013.01 - EP US); **F01P 2003/003** (2013.01 - EP US); **F01P 2003/006** (2013.01 - EP US)

Cited by
FR2772426A1

Designated contracting state (EPC)
DE ES FR GB IT NL

DOCDB simple family (publication)
EP 0449129 A1 19911002; **EP 0449129 B1 19940427**; DE 4010087 A1 19911002; ES 2051536 T3 19940616; US 5209189 A 19930511

DOCDB simple family (application)
EP 91104511 A 19910322; DE 4010087 A 19900329; ES 91104511 T 19910322; US 67507391 A 19910325