

Title (en)

SPRAY NOZZLE FOR COOLING THE PISTON OF AN INTERNAL COMBUSTION ENGINE

Title (de)

SPRITZDÜSE ZUR KOLBENKÜHLUNG BEI EINER BRENNKRAFTMASCHINE

Title (fr)

BUSE D'ARROSAGE POUR LE REFROIDISSEMENT DU PISTON DANS UN MOTEUR A COMBUSTION

Publication

EP 1629182 B1 20060830 (DE)

Application

EP 04731186 A 20040505

Priority

- EP 2004050711 W 20040505
- DE 10320576 A 20030507

Abstract (en)

[origin: WO2004099580A1] The invention relates to a spray nozzle for cooling the piston of an internal combustion engine, said spray nozzle comprising a cooling fluid outlet having an outflow geometry that prevents the cooling fluid from flowing into an inner region located inside an imaginary extension of the outlet and surrounded by otherwise outwardly sprayed cooling fluid. The inventive spray nozzle is characterised by a plurality of connecting sections that cross the outflow cross-section of the outlet (15) in such a way that the cooling fluid (12) flowing out of the nozzle is fragmented into individual partial jets (17) that encircle the inner region (7) kept free of cooling fluid.

IPC 8 full level

F01P 3/08 (2006.01); **F01P 3/10** (2006.01)

CPC (source: EP US)

F01P 3/08 (2013.01 - EP US); **F01P 3/10** (2013.01 - EP US)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2004099580 A1 20041118; AT E338201 T1 20060915; DE 502004001368 D1 20061012; EP 1629182 A1 20060301; EP 1629182 B1 20060830; US 2007108315 A1 20070517

DOCDB simple family (application)

EP 2004050711 W 20040505; AT 04731186 T 20040505; DE 502004001368 T 20040505; EP 04731186 A 20040505; US 55515104 A 20040505