

Title (en)
FUEL INJECTION PUMP FOR INTERNAL COMBUSTION ENGINE

Title (de)
KRAFTSTOFFEINSPRITZPUMPE FÜR VERBRENNUNGSMOTOR

Title (fr)
POMPE D INJECTION DE CARBURANT POUR MOTEUR À COMBUSTION INTERNE

Publication
EP 1911965 A1 20080416 (EN)

Application
EP 06767553 A 20060622

Priority
• JP 2006312936 W 20060622
• JP 2005209457 A 20050720

Abstract (en)
A fuel injection pump (1) configured such that incoming and outgoing of fuel to at least one inlet-cum-overflow hole (8) formed in a pump plunger bush (3) are controlled by a pump plunger (4) that reciprocally moves inside the pump plunger bush (3), with an early control groove (10) being formed in a wall portion of the inlet-cum-overflow hole (8), wherein the inlet-cum-overflow hole (8) comprises a small diameter hole (81) having in one end (81A) thereof an open surface (14) that looks into the inside of the pump plunger bush (3) and a large diameter hole (82) that is communicated with the other end (81B) of the small diameter hole (81), a bottom portion (10A) of the early control groove (10) slopingly extends upward in a direction away from the open surface (14), an inner surface of the communicating end portion of the large diameter hole (82) that is communicated with the small diameter hole (81) is configured as a curved surface portion (82C), and an open end portion of the large diameter hole (82) is configured as a chamfered end edge (82M), whereby the shape of the inlet-cum-overflow hole (8) is optimized so that the occurrence of cavitation erosion can be further reduced.

IPC 8 full level
F02M 59/26 (2006.01); **F02M 59/38** (2006.01); **F02M 59/44** (2006.01)

CPC (source: EP KR)
F02M 59/26 (2013.01 - KR); **F02M 59/265** (2013.01 - EP); **F02M 59/38** (2013.01 - KR); **F02M 59/44** (2013.01 - KR)

Citation (search report)
See references of WO 2007010719A1

Cited by
DE102008027651A1

Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 1911965 A1 20080416; CN 101228349 A 20080723; JP 2007023948 A 20070201; KR 20080028491 A 20080331;
WO 2007010719 A1 20070125

DOCDB simple family (application)
EP 06767553 A 20060622; CN 200680026650 A 20060622; JP 2005209457 A 20050720; JP 2006312936 W 20060622;
KR 20087003646 A 20080215