

Title (en)
CYLINDER HEAD WITH INTEGRALLY CAST WATER PUMP AND INTEGRATED THERMOSTAT

Title (de)
ZYLINDERKOPF MIT EINGEGOSSENER WASSERPUMPE UND INTEGRIERTEM THERMOSTAT

Title (fr)
CULASSE AVEC POMPE À EAU MOULÉE D'UN SEUL TENANT ET THERMOSTAT INTÉGRÉ

Publication
EP 4034760 A1 20220803 (DE)

Application
EP 20781434 A 20200917

Priority
• DE 102019006790 A 20190927
• EP 2020000159 W 20200917

Abstract (en)
[origin: WO2021058125A1] The invention relates to an internal combustion engine, which comprises at least one cylinder head with a water pump that is integrally cast in the cylinder head housing.

IPC 8 full level
F02F 1/10 (2006.01); **B60T 17/02** (2006.01); **B62D 5/06** (2006.01); **F01P 5/10** (2006.01); **F02B 67/04** (2006.01); **F02F 1/24** (2006.01); **F02F 1/38** (2006.01); **F04D 29/42** (2006.01); **F04D 29/60** (2006.01); **F04D 29/62** (2006.01)

CPC (source: CN EP US)
F01P 3/02 (2013.01 - CN EP US); **F01P 5/10** (2013.01 - CN EP US); **F01P 7/16** (2013.01 - CN EP); **F02B 67/04** (2013.01 - CN EP); **F02F 1/24** (2013.01 - CN EP); **F02F 1/38** (2013.01 - CN EP); **F02F 1/40** (2013.01 - US); **F04D 29/426** (2013.01 - CN EP); **F04D 29/605** (2013.01 - EP); **F04D 29/628** (2013.01 - CN EP); **F01P 2003/024** (2013.01 - CN EP US); **F02F 2200/06** (2013.01 - US)

Citation (search report)
See references of WO 2021058125A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
WO 2021058125 A1 20210401; CN 114514370 A 20220517; DE 102019006790 A1 20210401; EP 4034760 A1 20220803; JP 2022550262 A 20221201; US 11788487 B2 20231017; US 2022341372 A1 20221027

DOCDB simple family (application)
EP 2020000159 W 20200917; CN 202080067526 A 20200917; DE 102019006790 A 20190927; EP 20781434 A 20200917; JP 2022513849 A 20200917; US 202017763982 A 20200917