

Title (en)  
METHOD FOR COATING THE SURFACE OF A CLOSED COOLING CHANNEL OF A PISTON FOR AN INTERNAL COMBUSTION ENGINE

Title (de)  
VERFAHREN ZUR BESCHICHTUNG DER OBERFLÄCHE EINES GESCHLOSSENEN KÜHLKANALS EINES KOLBENS FÜR EINEN VERBRENNUNGSMOTOR

Title (fr)  
PROCÉDÉ DE REVÊTEMENT DE LA SURFACE D'UN CANAL DE REFROIDISSEMENT FERMÉ D'UN PISTON POUR UN MOTEUR À COMBUSTION INTERNE

Publication  
**EP 3307922 B1 20190522 (DE)**

Application  
**EP 16732963 A 20160610**

Priority  
• DE 102015007334 A 20150612  
• EP 2016063324 W 20160610

Abstract (en)  
[origin: WO2016198618A1] The present invention relates to a method for coating the surface (24) of a closed cooling channel (23) of a piston (10) for an internal combustion engine, said cooling channel comprising oil inlet and oil outlet boreholes (23', 23''), using a coating agent containing a hexagonal boron nitride, said method comprising the following method steps: a) introducing a defined amount of a coating agent in the form of a suspension of hexagonal boron nitride with a solution on the basis of at least one thermally hardenable inorganic binder and at least one solvent into the cooling channel (23); b) dispersing the coating agent on the surface (24) of the cooling channel (23) by moving the piston (10) about at least two spatial axes; c) drying the coating agent distributed on the surface (24) of the cooling channel (23) by means of a laminar air flow; d) thermally hardening the coating agent for completing a coating (25) that adheres on the surface (24) of the cooling channel (23).

IPC 8 full level  
**C23C 24/08** (2006.01); **F02F 3/22** (2006.01)

CPC (source: CN EP US)  
**B05D 7/22** (2013.01 - US); **C23C 24/08** (2013.01 - CN EP US); **F02F 3/22** (2013.01 - US); **F02F 3/225** (2013.01 - CN EP US)

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

DOCDB simple family (publication)  
**WO 2016198618 A1 20161215**; BR 112017025644 A2 20180911; CN 107787402 A 20180309; CN 107787402 B 20191119;  
EP 3307922 A1 20180418; EP 3307922 B1 20190522; JP 2018514701 A 20180607; JP 6408722 B2 20181017; US 10252293 B2 20190409;  
US 2018163310 A1 20180614

DOCDB simple family (application)  
**EP 2016063324 W 20160610**; BR 112017025644 A 20160610; CN 201680033189 A 20160610; EP 16732963 A 20160610;  
JP 2017560696 A 20160610; US 201615735464 A 20160610