Title (en)

AIR-COOLED ENGINE, CYLINDER BODY MEMBER FOR AIR-COOLED ENGINE, AND VEHICLE EQUIPPED WITH AIR-COOLED ENGINE

Title (de)

LUFTGEKÜHLTE BRENNKRAFTMASCHINE, ZYLINDERKÖRPER FÜR EINE LUFTGEKÜHLTE BRENNKRAFTMASCHINE UND FAHRZEUG MIT LUFTGEKÜHLTEM MOTOR

Title (fr)

MOTEUR REFROIDI À L'AIR, ÉLÉMENT DE CORPS DE CYLINDRE POUR MOTEUR REFROIDI À L'AIR, ET VÉHICULE AVEC MOTEUR REFROIDI À L'AIR À BORD

Publication

EP 3263878 A4 20180502 (EN)

Application

EP 15883326 A 20151104

Priority

- JP 2015033026 A 20150223
- JP 2015081066 W 20151104

Abstract (en)

[origin: EP3263878A1] An object of the present teaching is to provide an air-cooled engine that is able to improve cooling efficiency, and particularly cooling efficiency at a time of initial sliding of a piston part. The present teaching provides an air-cooled engine including a piston part and a cylinder body part with a sliding surface on which the piston part is slidable. The cylinder body part includes a heat dissipation portion provided on an outer surface of the cylinder body part, and is made of an Al-containing metal. At least an inner peripheral portion of the cylinder body part, which includes the sliding surface, is made of an Al alloy with an Si content of 16% by mass or more. The sliding surface is configured such that a plurality of substantially parallel linear grooves are formed therein and Si primary crystal grains having an average crystal grain diameter of 8 μm or more and 50 pm or less are exposed thereon so as to be contactable with the piston part. An Al contact portion where an Al alloy base material has contact with the piston part, which is formed between the plurality of linear grooves, is exposed on the sliding surface at a location between two adjacent Si primary crystal grains. Al contained in the cylinder body part is physically continuous from the Al contact portion to the heat dissipation portion.

IPC 8 full level

F02F 1/00 (2006.01); **C22C 21/02** (2006.01); **C22F 1/00** (2006.01); **C22F 1/043** (2006.01); **F02F 1/20** (2006.01)

CPC (source: EP)

C22C 21/02 (2013.01); **C22F 1/043** (2013.01); **F01P 1/02** (2013.01); C22F 1/00 (2013.01); F01P 2001/023 (2013.01); F02F 1/06 (2013.01); F02F 1/20 (2013.01)

Citation (search report)

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Designated contracting state (EPC)

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Designated extension state (EPC)

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