

Title (en)

METHOD AND APPARATUS FOR PRODUCING A PISTON TOP WITH A COOLING CHAMBER

Title (de)

VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG EINES KOLBENBODEN MIT EINER KÜHLKAMMER

Title (fr)

PROCÉDÉ ET APPAREIL DE PRODUCTION D'UNE PARTIE SUPÉRIEURE DE PISTON AYANT UNE CHAMBRE DE REFROIDISSEMENT

Publication

**EP 3406367 A1 20181128 (EN)**

Application

**EP 17172656 A 20170524**

Priority

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Abstract (en)

The invention relates to a method and apparatus for producing a piston top with a cooling chamber, wherein the establishment of a wide opening angle in the final forming step allows the wear upon the tool used for the coining step to be significantly reduced.

IPC 8 full level

**B21K 1/18** (2006.01)

CPC (source: EP)

**B21K 1/185** (2013.01)

Citation (applicant)

- US 7918022 B2 20110405 - HUANG YUEJUN [US]
- US 4843698 A 19890704 - RIPBERGER EMIL [DE], et al

Citation (search report)

- [X] US 2539903 A 19510130 - GRUETJEN FREDERICK A
- [A] DE 102011078145 A1 20121227 - MAHLE INT GMBH [DE]

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US11780009B2

Designated contracting state (EPC)

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Designated extension state (EPC)

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