

Title (en)

PISTON UPPER PART OF AN ASSEMBLED OR WELDED PISTON WITH EXTENDED COOLING SPACES

Title (de)

KOLBENOBERTEIL EINES GEBAUTEN ODER GESCHWEIßTEN KOLBENS MIT ERWEITERTEN KÜHLRÄUMEN

Title (fr)

PARTIE SUPÉRIEURE D'UN PISTON ASSEMBLÉ OU SOUDÉ COMPRENANT DES CHAMBRES DE REFROIDISSEMENT ÉLARGIES

Publication

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Application

**EP 11703395 A 20110204**

Priority

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Abstract (en)

[origin: WO2011131266A1] The invention relates to a piston of an internal combustion engine, configured as a preferably assembled or welded liquid-cooled piston which consists of a piston lower part and a piston upper part (1) which has a combustion-chamber recess (7). These piston components are supported via joining lands (2, 3) which are spaced apart radially from one another and together form a dividing plane (4), and are joined together preferably with a material-to-material fit, preferably by means of a welded joint, or preferably frictionally, preferably by means of a screw connection. In order to receive piston rings, the piston upper part (1) comprises a ring area (10) and includes an annular cooling channel (11) which extends as far as into the piston lower part and is connected to an inner cooling space (16) via connecting channels (15). The cooling channel is adjoined by recesses (12) which are oriented in the direction of a piston head (6), are configured as a blind hole and are designed such that they are widened conically starting from the cooling channel (11) as far as a recess bottom (14) of the respective recess (12). The recess bottom (14) can be of pronounced undulating (enlarged surface) or finely undulating configuration. The piston can also be configured as a single-piece piston with a piston upper part (1) and a piston lower part without a dividing plane (4).

IPC 8 full level

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Citation (examination)

- US 2882106 A 19590414 - SIEGFRIED MEURER
- DE 2919638 A1 19801120 - SCHMIDT GMBH KARL
- DE 102006024098 A1 20071220 - KS KOLBENSCHMIDT GMBH [DE]

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