

Title (en)
Method of die casting a piston.

Title (de)
Giessverfahren für Kolben.

Title (fr)
Procédé pour couler un piston.

Publication
EP 0127366 A1 19841205 (EN)

Application
EP 84303241 A 19840514

Priority
US 49961183 A 19830531

Abstract (en)
A method of die casting an automobile engine piston includes the steps of moving one (24) of two halves (20, 24) to form a mould cavity (28) having the shape of a piston, introducing molten metal (31) into the cavity (28) through gates, cooling the metal for an interval of time sufficient for the metal to solidify in the gates, and thrusting a plunger (14) into the cavity (28) to displace the molten metal to form an opening in the piston and to compress the displaced metal to intensify mechanical properties of the metal surrounding the opening. The plunger (14) is moved from a first position outside the cavity (28) until pressure within the displaced metal stops the plunger in a second position in the cavity. The plunger is retained in the cavity for a predetermined time and is then retracted to the first position.

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• [X] US 3068539 A 19621218 - WILCOXON RALPH E
• [AD] US 3268960 A 19660830 - MORTON GLENN R
• [A] US 2057074 A 19361013 - WESSELER WILLIAM J

Cited by
DE102008054718B4; CN103949491A; CN104338917A; US11859705B2; US9868150B2; US11077655B2; US10487934B2; WO2015042437A1; DE102008054718A1; US11400613B2; US10155412B2; US10953688B2; US9610650B2; US11014162B2; US10151377B2; US10690227B2; US11198181B2; US11839927B2; US10174780B2; US10883528B2; US10968527B2; US11680629B2; US9783877B2; US10471652B2; US10941847B2; US11920668B2; US9328813B2; US9791032B2; US11123797B2; US11773475B2; US11155907B2; US11185921B2; US11591906B2; US11905578B2

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