

Title (en)
SEALING RING AND PISTON FOR A PRESSURE DIE CASTING CYLINDER

Title (de)
DICHRING UND KOLBEN FÜR EINEN DRUCKGIESSZYLINDER

Title (fr)
BAGUE D'ETANCHEITE ET PISTON POUR UN CYLINDRE DE COULEE SOUS PRESSION

Publication
EP 1483074 B1 20070613 (DE)

Application
EP 02727355 A 20020304

Priority
EP 0202356 W 20020304

Abstract (en)
[origin: WO03074211A3] The invention relates to a plunger for a cold chamber diecasting machine in whose casting cylinder (3) the plunger (1) defines a pressure chamber (5) for the molten metal in an axially displaceable manner. The plunger (1) has a plunger base (7) and a sealing ring (17) that is fixed in the range of the pressure chamber-side plunger front in an outer annular recess (19) of the plunger base (7). The plunger base (7) axially projects beyond the sealing ring on the pressure chamber side and radially extends on the pressure chamber side across the sealing ring across a part of its radial thickness. The plunger base (7) can be cooled at least in the area of its plunger front (15). The sealing ring (17) is movably disposed with a radial and axial play in the annular recess (19). A projection (43) of the plunger base (7) that radially extends across the sealing ring (17) defines with its outer peripheral surface (46) an annular gap (47) between itself and the casting cylinder, said annular gap being cooled to solidification temperature during casting. The melt that solidifies in the annular gap (47) additionally seals the sealing ring (17) and prevents the melt from reaching the play of the sealing ring (17) or getting between the sealing ring (17) and the casting cylinder (3), thereby reducing wear of the sealing ring (17).

IPC 8 full level
B22D 17/20 (2006.01)

CPC (source: EP)
B22D 17/203 (2013.01)

Cited by
KR20190040139A; DE102009057197B3; WO2018042309A1; EP2554296A2; DE102011052446A1; WO2011064253A1; US9233417B2

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 03074211 A2 20030912; WO 03074211 A3 20040610; AT E364464 T1 20070715; AU 2002257612 A1 20030916; AU 2002358495 A1 20030916; AU 2002358495 A8 20030916; DE 50210331 D1 20070726; EP 1483074 A1 20041208; EP 1483074 B1 20070613; EP 1483075 A2 20041208; ES 2287274 T3 20071216; WO 03074214 A1 20030912

DOCDB simple family (application)
EP 0212585 W 20021111; AT 02727355 T 20020304; AU 2002257612 A 20020304; AU 2002358495 A 20021111; DE 50210331 T 20020304; EP 0202356 W 20020304; EP 02727355 A 20020304; EP 02792752 A 20021111; ES 02727355 T 20020304