

Title (en)

Part of a diecasting die and corresponding diecasting device

Title (de)

Druckgussformteil einer Druckgussform sowie entsprechende Druckgusseinrichtung

Title (fr)

Pièce d'un moule de coulée sous pression et dispositif de coulée sous pression correspondant

Publication

EP 2388087 A1 20111123 (DE)

Application

EP 10163117 A 20100518

Priority

EP 10163117 A 20100518

Abstract (en)

The part (8, 9, 10, 11, 12) of a die casting mold (5, 6, 7) useful in a die casting device (1), comprises a first component (13, 15, 17, 19, 21) having a pressure zone, a second component (14, 16, 18, 20, 22), and a heat exchanging chamber flow-throughable by a liquid, provided for tempering the pressure zone and formed by the components, where the first component has a heat transmission surface belonging to a wall of the heat exchanging chamber and thermally arranged to the pressure zone and the pressure zone limits an area of a sprue area. The part (8, 9, 10, 11, 12) of a die casting mold (5, 6, 7) useful in a die casting device (1), comprises a first component (13, 15, 17, 19, 21) having a pressure zone, a second component (14, 16, 18, 20, 22), and a heat exchanging chamber flow-throughable by a liquid, provided for tempering the pressure zone and formed by the components, where the first component has a heat transmission surface belonging to a wall of the heat exchanging chamber and thermally arranged to the pressure zone and the pressure zone limits an area of a sprue area. The second component has a liquid conductive projection extending into the heat exchanging chamber and/or a liquid conductive recess openly formed towards the first component. The liquid conductive recess forms a portion of the heat exchanging chamber and/or the liquid conductive projection and/or the conductive recess form a flow contour surface adapted to the progression of the heat transmission surface. The shape of the heat exchanging chamber is adapted to the progression of a flowing channel arranged to the sprue area. The liquid conductive recess forms the complete heat exchanging chamber. The liquid conductive recess is formed in the second component in a trough-like manner. The first component is formed in a cover-like manner or a flat-like manner. A recess of the first component area-wisely forms the heat exchanging chamber. The heat exchanging chamber is fluidly connected with a liquid connection formed as liquid conductor, which is provided in the first and/or the second components in an area-wise manner. The first component or the second component has a reception, in which the second component or the first component is completely insertable in an area-wise manner.

Abstract (de)

Die Erfindung betrifft ein Druckgussformteil (8,9,10,11,12) einer Druckgussform (5,6,7), mit mindestens einem eine Druckzone (24,25,40,60) aufweisenden ersten Bauteil (13,15,17,19,21), mindestens einem zweiten Bauteil (14,16,18,20,22) und mindestens einer von den Bauteilen (13,14,15,16,17,18,19,20,21,22) gebildeten, von einem Fluid durchströmbareren Wärmetauschkammer (27,36,43,51, 55,62) zur Temperierung der Druckzone (24,25,40,60), wobei das erste Bauteil (13,15,17,19,21) eine mindestens einer Wandung der Wärmetauschkammer (27,36,43,51,55,62) angehörende, der Druckzone (24,25,40,60) thermisch zugeordnete Wärmeübertragungsfläche (34,41,61) aufweist und die Druckzone (24,25,40,60) zumindest einen Bereich des Angussbereichs (38) begrenzt. Dabei ist vorgesehen, dass das zweite Bauteil (14,16,18,20,22) mindestens einen in die Wärmetauschkammer (27,36,43,51,55,62) hineinragenden Fluidleitvorsprung (64) und/oder eine zum ersten Bauteil (13,15,17,19,21) hin offen ausgebildete Fluidleitvertiefung (26,49) aufweist, wobei die Fluidleitvertiefung (26,49) mindestens einen Anteil der Wärmetauschkammer (27,36,43,51,62) bildet und/oder der Fluidleitvorsprung (64) und/oder die Fluidleitvertiefung (26,49) eine, insbesondere an den Verlauf der Wärmeübertragungsfläche (34,41,61) angepasste Strömungskonturfläche (65) des zweiten Bauteils (14,16,18,20,22) bilden/bildet, und wobei die Form der Wärmetauschkammer (27,36,43,51,55,62) an den Verlauf von mindestens einem dem Angussbereich (38) zugeordneten Strömungskanal (39) angepasst ist. Die Erfindung betrifft weiterhin eine Druckgusseinrichtung (1).

IPC 8 full level

B22D 17/22 (2006.01)

CPC (source: EP US)

B22D 17/20 (2013.01 - US); **B22D 17/2218** (2013.01 - EP US); **B22D 17/2272** (2013.01 - EP US); **B22D 17/229** (2013.01 - EP US)

Citation (applicant)

DE 3502895 A1 19850814 - DBM INDUSTRIES LTD [CA]

Citation (search report)

- [X] DE 102006008359 A1 20070823 - DIREKT FORM GMBH [DE]
- [X] DE 102007054723 A1 20090520 - CL SCHUTZRECHTSVERWALTUNGS GMBH [DE]
- [X] JP 2007061867 A 20070315 - ASAHI IRRYO CO LTD

Cited by

DE102016010907A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

EP 2388087 A1 20111123; CN 103209786 A 20130717; CN 103209786 B 20160330; EP 2571644 A1 20130327; EP 2571644 B1 20160817; ES 2603609 T3 20170228; US 2013248135 A1 20130926; US 9370821 B2 20160621; WO 2011144447 A1 20111124

DOCDB simple family (application)

EP 10163117 A 20100518; CN 201180024617 A 20110504; EP 11716961 A 20110504; EP 2011057122 W 20110504; ES 11716961 T 20110504; US 201113698329 A 20110504