

Title (en)
Casting method for permanent moulds

Title (de)
Giessereiverfahren für Dauerformen

Title (fr)
Procédé de coulée pour moules permanents

Publication
EP 2527060 A1 20121128 (DE)

Application
EP 11167276 A 20110524

Priority
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Abstract (en)
Casting method for permanent molds, preferably metallic or ceramic permanent molds for casting of metal, which is carried out after mold- or die casting process, in mold formed from several permanent mold segments (4), comprises closing the permanent mold segments, and filling the permanent mold with liquid metal. A partial demolding of resulting casting is done in the region with fixed edge tray by removing at least one permanent mold segment after formation of the region with fixed edge tray made of solidified metal. The exposed region of the casting surface is applied with a cooling medium. Casting method for permanent molds, preferably metallic or ceramic permanent molds for casting of metal, which is carried out after mold- or die casting process, in mold formed from several permanent mold segments (4), comprises closing the permanent mold segments, and filling the permanent mold with liquid metal. A partial demolding of the resulting casting is done in the region with fixed edge tray by removing at least one permanent mold segment after formation of the region with fixed edge tray made of solidified metal. The exposed region of the casting surface with fixed edge tray is applied with a cooling medium, where preferably water or a spray of water and air is used. The cooling medium-applying is done by flooding of the entire exposed surface of the casting with the cooling medium to accelerate the solidification of the casting process. Independent claims are also included for: (1) a casting device suitable for the casting process, comprising several casting molds forming permanent mold segments, where the casting device exhibits a mechanism for the removal of individual permanent mold segments for local premature demolding of solidified casting regions; and (2) the permanent mold for use in the casting device or with the permanent mold casting method, comprising at least two permanent mold segments forming the permanent mold. The at least one of the permanent mold segments comprises at least one integrated cooling channel associated with, preferably in the permanent mold segment for transporting the cooling medium, where the openings of the cooling channels are arranged such that the openings form fit in the closed state as long as the permanent mold segments are closed in the form fit manner and are in permanent mold forming state. The openings of cooling channels are exposed when one of the permanent mold segments is moved from the closed state.

Abstract (de)
Die Erfindung bezieht sich auf ein neuartiges Dauerformgiessereiverfahren mit welchem die Taktzeit signifikant verringert werden kann. Weiters wird ein Giessereiwerkzeug zur Durchführung des Verfahrens vorgeschlagen.

IPC 8 full level
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Citation (applicant)
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DE102014205999A1; CN113059146A; CN113976857A; CN109732064A; DE102019106643A1; US10052685B2

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