

Title (en)
CONTROL SYSTEM FOR THE SOLIDIFICATION PROCESS IN LARGE-SIZE CASTINGS AND PROCESS CONTROL OF SOLIDIFICATION IN LARGE-SIZE CASTINGS

Title (de)
KONTROLLSYSTEM FÜR DEN ERSTARRUNGSPROZESS IN GROSSFORMATIGEN GUSSSTÜCKEN UND PROZESSKONTROLLE DER ERSTARRUNG IN GROSSFORMATIGEN GUSSSTÜCKEN

Title (fr)
SYSTÈME DE CONTRÔLE POUR LE PROCESSUS DE SOLIDIFICATION DANS LES PIÈCES MOULÉES DE GRANDE TAILLE ET CONTRÔLE DE PROCESSUS DE SOLIDIFICATION DANS LES PIÈCES MOULÉES DE GRANDE TAILLE

Publication
EP 4316689 A1 20240207 (EN)

Application
EP 22205687 A 20221106

Priority
PL 44197322 A 20220808

Abstract (en)
The object of the invention is a system for controlling the solidification process in large-sized castings, and a method for controlling the solidification process in large-sized castings, characterised in that it consists of any number of active cooling segments made of at least two steel plates with a shape matching the casting and known heat capacity, permanently connected to a tube coil (4), whose inlet (13) and outlet (14) nozzles extend outside the casting mould, the inlet nozzle being connected by a flexible hose (5) with a proper cross-section to a compressed air supply module (6), provided with a supply collector (7) connected to a pneumatic network, a proportional air flow regulator (8), and an injector (9), which is connected to a proportional water flow regulator (10), connected to the water mains, while the outlet nozzle is provided with a cooling medium temperature sensor (11), and the proportional air flow regulator, the proportional water flow regulator, and the cooling medium temperature sensor are connected to an automatic solidification process control console (12).

IPC 8 full level
B22C 9/06 (2006.01); **B22D 27/04** (2006.01)

CPC (source: EP)
B22C 9/065 (2013.01); **B22D 27/04** (2013.01)

Citation (search report)

- [I] KR 20220071798 A 20220531 - JINYANG MACHINERY CO LTD [KR]
- [A] KR 102181439 B1 20201123 - KOREA INST IND TECH [KR]
- [A] KR 20130087995 A 20130807 - YU KI CHEOL [KR]

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4316689 A1 20240207; PL 441973 A1 20230710

DOCDB simple family (application)
EP 22205687 A 20221106; PL 44197322 A 20220808