

Title (en)  
SYSTEM FOR RECOVERY OF HEAT FROM SOLIDIFYING LARGE-SIZE METAL CASTINGS AND FOR USING IT TO HEAT CASTING MOULDS

Title (de)  
SYSTEM ZUR RÜCKGEWINNUNG VON WÄRME AUS ERSTARRENDEN GROSSEN METALLGUSSSTÜCKEN UND ZUR VERWENDUNG DAVON ZUM BEHEIZEN VON GIESSFORMEN

Title (fr)  
SYSTÈME POUR LA RÉCUPÉRATION DE LA CHALEUR PROVENANT DE LA SOLIDIFICATION DE PIÈCES COULÉES EN MÉTAL DE GRANDE TAILLE ET POUR SON UTILISATION POUR CHAUFFER DES MOULES DE COULÉE

Publication  
**EP 3162464 A1 20170503 (EN)**

Application  
**EP 15460117 A 20151216**

Priority  
PL 41461315 A 20151029

Abstract (en)  
At the input of the system, a ventilator (1) is mounted which is connected to a circulating air conduit: system - atmosphere (17), an arm of which is connected to a heat exchanger (2) and constitutes an air outlet into the atmosphere. A second arm is connected through the heat exchanger (2) to a conduit of hot mixture: air - water vapour (16), connected with the other end to an outlet of a heater (12) of the casting mould (6). A water pump (3) is connected to a tank of working medium (4), and the heat exchanger (2) is connected, through a peak load boiler (5), to the tank of working medium (4) and to a conduit of hot air (14) in which a jet pump (8) is included. The other end of the conduit (14) is connected to a pouring tank (11) of the casting mould (6). In the air and water installations, control valves (7) and a metering valve (9) are included, which are electrically connected with a multi-strand cable (19) to an electronic control module (13).

IPC 8 full level  
**B22D 30/00** (2006.01); **B22C 9/12** (2006.01); **F28D 21/00** (2006.01)

CPC (source: EP)  
**B22C 9/12** (2013.01); **B22D 30/00** (2013.01); **F28D 21/0001** (2013.01); **F28D 2021/0057** (2013.01); **F28D 2021/0078** (2013.01)

Citation (applicant)  
• PL 177383 B1 19991130 - OSOBKA SLAWOMIR [PL]  
• CN 203817349 U 20140910 - UNIV SHENYANG TECHNOLOGY  
• WO 2014105720 A1 20140703 - ABENGOA SOLAR INC [US]  
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• [A] DE 102011013670 A1 20111103 - BOSCH GMBH ROBERT [DE]  
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• [A] WO 2012069998 A1 20120531 - IND FRIGO S R L [IT], et al  
• [A] VILLAR ARTURO ET AL: "Waste heat recovery technology in continuous casting process", CLEAN TECHNOLOGIES AND ENVIRONMENTAL POLICY, SPRINGER BERLIN HEIDELBERG, BERLIN/HEIDELBERG, vol. 17, no. 2, 20 June 2014 (2014-06-20), pages 555 - 562, XP035451099, ISSN: 1618-954X, [retrieved on 20140620], DOI: 10.1007/S10098-014-0801-0

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