

Title (en)

HEAT TREATMENT OF METAL CASTINGS AND IN-FURNACE SAND RECLAMATION

Title (de)

WÄRMEBEHANDLUNG VON GIESSSTÜCKEN UND SANDRÜCKGEWINNUNG IM OFEN

Title (fr)

TRAITEMENT THERMIQUE DE PIÈCES COULÉES EN MÉTAL ET RÉCUPÉRATION DU SABLE DANS LE FOUR

Publication

EP 0612276 B1 19980415 (EN)

Application

EP 93904665 A 19930127

Priority

- US 9300722 W 19930127
- US 93019392 A 19920813

Abstract (en)

[origin: WO9404297A1] The method and apparatus for reclaiming substantially pure sand from a heat treating furnace (19); wherein a casting with sand core and/or sand mold, comprising sand bound by a combustible binder, attached thereto is introduced into the heat treating furnace (19); or, wherein portions of sand core and/or sand mold that are not attached to a casting are introduced into the heat treating furnace (19). Wherein, the reclaiming within the furnace (19) is carried out, in part, by a fluidizer (40) that promotes binder combustion by one or more processes of agitating, heating, and oxygenating. Wherein the characteristics of the reclaimed sand (25) are selectively controlled by controlling the dwell time of the sand (25) within the heat treating furnace (19).

IPC 1-7

B22D 17/22; **B22D 29/00**; **B22C 5/08**

IPC 8 full level

B22F 3/02 (2006.01); **B22C 5/00** (2006.01); **B22C 5/04** (2006.01); **B22C 5/08** (2006.01); **B22D 17/20** (2006.01); **B22D 29/00** (2006.01); **B22D 31/00** (2006.01); **B22F 3/00** (2006.01); **B22F 3/16** (2006.01); **B22F 3/24** (2006.01); **B22F 5/08** (2006.01); **C21D 1/53** (2006.01); **C21D 7/04** (2006.01); **C21D 7/06** (2006.01); **C22C 33/02** (2006.01); **C22C 38/00** (2006.01)

CPC (source: EP)

B22C 5/085 (2013.01); **B22D 29/003** (2013.01); **B22D 31/002** (2013.01); **B22F 3/16** (2013.01); **B22F 5/08** (2013.01); **C21D 1/53** (2013.01); **C21D 7/04** (2013.01); **C21D 7/06** (2013.01); **B22F 2003/166** (2013.01)

Cited by

DE102014110826A1; CN113333434A; RU2635598C2; DE10352180A1; DE10352180B4; WO2015032427A1; DE102007008149A1; DE202008018001U1; EP2329900A2; US9737927B2; WO2016016035A1; US9890439B2; EP3597329A1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IE IT LI LU NL PT SE

DOCDB simple family (publication)

WO 9404297 A1 19940303; AT E165030 T1 19980515; AU 3594693 A 19940315; AU 677774 B2 19970508; BR 9305607 A 19950613; CA 2121047 A1 19940303; CA 2121047 C 19980106; CN 1090066 C 20020904; CN 1097662 A 19950125; DE 69318000 D1 19980520; DE 69318000 T2 19981224; DE 69318000 T3 20050721; EP 0612276 A1 19940831; EP 0612276 A4 19950823; EP 0612276 B1 19980415; EP 0612276 B2 20041117; ES 2114039 T3 19980516; ES 2114039 T5 20050601; JP 2849213 B2 19990120; JP H07506299 A 19950713; JP H11129055 A 19990518; KR 100263975 B1 20000901; MX 9302659 A 19940228; TW 213490 B 19930921

DOCDB simple family (application)

US 9300722 W 19930127; AT 93904665 T 19930127; AU 3594693 A 19930127; BR 9305607 A 19930127; CA 2121047 A 19930127; CN 94102666 A 19940127; DE 69318000 T 19930127; EP 93904665 A 19930127; ES 93904665 T 19930127; JP 24886698 A 19980902; JP 50622094 A 19930127; KR 19940701185 A 19940412; MX 9302659 A 19930506; TW 82100801 A 19930206