

Title (en)

Method and apparatus for assisting removal of sand moldings from castings

Title (de)

Verfahren und Vorrichtung zur Entfernung der Sandformen von Gussstücken

Title (fr)

Procédé et appareil pour aider à la séparation d'un moule au sable et de la pièce de fonderie au sable qui y est coulée

Publication

EP 1563930 A1 20050817 (EN)

Application

EP 05008776 A 20010523

Priority

- EP 01939335 A 20010523
- US 62710900 A 20000727
- US 66535400 A 20000919
- US 85225601 A 20010509

Abstract (en)

The present invention generally comprises a method for enhancing the breakdown and removal of a sand mold from a casting formed within the mold to speed up the exposure of the casting to heat treatment temperatures and enhance the breakdown and reclamation of sand from the sand molds. According to the present invention, the method of dislodging a mold from a casting can include placing one or more explosive charges or organic or thermally degradable materials at one or more selected locations within exterior walls of the mold. An additional embodiment includes a method of dislodging a mold from a casting formed within the casting by stimulating the mold with a high energy pulsation. <IMAGE>

IPC 1-7

B22D 29/00

IPC 8 full level

B22D 29/00 (2006.01); **B22D 29/04** (2006.01)

CPC (source: EP KR)

B22D 29/00 (2013.01 - EP KR); **B22D 29/003** (2013.01 - EP); **B22D 29/006** (2013.01 - EP); **B22D 29/007** (2013.01 - EP)

Citation (search report)

- [X] GB 2248569 A 19920415 - COPPER PEEL JONES PROD [GB]
- [Y] DE 1030974 B 19580529 - AMAG HILPERT PEGNITZHUETTE A G
- [Y] US 3743692 A 19730703 - VINTON C, et al
- [Y] US 4089702 A 19780516 - ENOKSSON BERTIL PETRUS, et al
- [Y] US 4374538 A 19830222 - RICE WARREN A
- [X] US 4802525 A 19890207 - HEINE GEROLD [DE], et al
- [X] US 5778963 A 19980714 - PARILLE DONALD R [US], et al
- [A] DE 1962182 A1 19700827 - WAKAMATSU SHARYO K K

Cited by

EP2301692A1

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

WO 02094479 A1 20021128; AT E301017 T1 20050815; AU 2001264864 B2 20051027; CA 2422646 A1 20021128; CA 2422646 C 20080129; CN 1232371 C 20051221; CN 1325207 C 20070711; CN 1437515 A 20030820; CN 1666831 A 20050914; DE 60112446 D1 20050908; DE 60112446 T2 20060330; EP 1303373 A1 20030423; EP 1303373 B1 20050803; EP 1563930 A1 20050817; HK 1057020 A1 20040312; HK 1080785 A1 20060504; JP 2004520174 A 20040708; JP 4795624 B2 20111019; KR 100768604 B1 20071018; KR 20030036135 A 20030509; MX PA02007261 A 20030630

DOCDB simple family (application)

US 0116686 W 20010523; AT 01939335 T 20010523; AU 2001264864 A 20010523; CA 2422646 A 20010523; CN 01811600 A 20010523; CN 200510065186 A 20010523; DE 60112446 T 20010523; EP 01939335 A 20010523; EP 05008776 A 20010523; HK 03109329 A 20031223; HK 06100944 A 20060120; JP 2002591184 A 20010523; KR 20027009532 A 20010523; MX PA02007261 A 20010523