

Title (en)
High efficiency induction heating system

Title (de)
Hocheffizientes Induktionsheizsystem

Title (fr)
Système de chauffage par induction à haute efficacité

Publication
EP 1883277 A1 20080130 (EN)

Application
EP 07119279 A 20001110

Priority
• EP 00980336 A 20001110
• US 16530499 P 19991112
• US 55030500 A 20000414

Abstract (en)
An induction melting system (78) uses a crucible (50) formed from a material that has a high electrical resistivity or high magnetic permeability and one or more inductor coils (52) formed from a wound cable consisting of multiple individually insulated copper conductors to form an induction furnace that, along with its associated power supply, provides a compact design. The system components are air-cooled; no water-cooling is required. The induction melting system is particular useful for separating metal from scrap (79), casting molds directly from the induction furnace, and providing a continuous supply of molten metal. The induction system may also be in the form of a tunnel or enclosed furnace for heating a workpiece.

IPC 8 full level
H05B 6/22 (2006.01); **B22D 18/04** (2006.01); **C21D 1/00** (2006.01); **C22B 1/00** (2006.01); **C22B 9/02** (2006.01); **C22B 9/16** (2006.01); **F27B 9/06** (2006.01); **F27B 14/06** (2006.01); **F27D 11/06** (2006.01); **H05B 6/24** (2006.01); **H05B 6/28** (2006.01)

CPC (source: EP)
H05B 6/24 (2013.01)

Citation (applicant)
• GB 1068017 A 19670510 - WIENER SCHWACHSTROMWERKE G M B
• DE 2038442 B1 19720427 - DEUTSCHE EDELSTAHLWERKE AG
• US 1904664 A 19330418 - HEINRICH NEUHAUSS
• GB 2043221 A 19801001 - DOERENTRUPER SAND & THONWERK

Citation (search report)
• [X] DE 2038442 B1 19720427 - DEUTSCHE EDELSTAHLWERKE AG
• [X] GB 1068017 A 19670510 - WIENER SCHWACHSTROMWERKE G M B
• [X] US 1904664 A 19330418 - HEINRICH NEUHAUSS
• [X] GB 2043221 A 19801001 - DOERENTRUPER SAND & THONWERK
• [A] US 3401227 A 19680910 - DUNLEVY BARRY O, et al
• [A] EP 0391067 A2 19901010 - LEYBOLD AG [DE]
• [A] US 1904665 A 19330418 - FITCH NORTHRUP EDWIN
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AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

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