

Title (en)

Method and apparatus for manufacturing semi-solid metallic slurry

Title (de)

Verfahren und Vorrichtung zur Herstellung brennartiger Metallschmelze

Title (fr)

Procédé et dispositif de production d'un métal en phase pâteuse

Publication

EP 1445044 A2 20040811 (EN)

Application

EP 03252949 A 20030512

Priority

- KR 20020058163 A 20020925
- KR 20020063162 A 20021016
- KR 20030003250 A 20030117
- KR 20030013517 A 20030304

Abstract (en)

Provided are a method and apparatus for manufacturing a high-quality semi-solid metallic slurry containing fine, uniform spherical particles that can be readily and conveniently applied to a subsequent process, with improvements in energy efficiency and mechanical properties, cost reduction, convenience of casting, and shorter manufacturing time. The semi-solid metallic slurry manufacturing method involves applying an electromagnetic field to a space containing a slurry vessel, loading a molten metal into the slurry vessel in a state where the electromagnetic field is applied to the space, and drawing the slurry vessel out from the space. The semi-solid metallic slurry manufacturing apparatus includes at least one slurry vessel (2), at least one stirring unit (1) which includes a space (13) for the at least one slurry vessel and applies an electromagnetic field to the space, a driving unit (3) which moves the slurry vessel at least up and down to place the slurry vessel in the space, and a loading unit (4) via which a molten metal in liquid state is loaded into the slurry vessel. <IMAGE>

IPC 1-7

B22D 1/00; C22C 1/00

IPC 8 full level

B22D 1/00 (2006.01); **B22D 7/00** (2006.01); **B22D 9/00** (2006.01); **B22D 17/00** (2006.01); **B22D 17/30** (2006.01); **B22D 27/02** (2006.01);
C22C 1/00 (2006.01); **C22C 1/02** (2006.01); **C22C 21/02** (2006.01)

CPC (source: EP US)

B22D 1/00 (2013.01 - EP US); **B22D 17/007** (2013.01 - EP US); **C22C 1/12** (2023.01 - EP US); **C22C 21/02** (2013.01 - EP US)

Cited by

CN108588591A; CN111394601A; AU2006243414B2; CN104107885A; US8459330B2; WO2006117111A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

US 2004055735 A1 20040325; CN 1280044 C 20061018; CN 1485169 A 20040331; EP 1445044 A2 20040811; EP 1445044 A3 20051130;
JP 2004114153 A 20040415; JP 3549054 B2 20040804

DOCDB simple family (application)

US 44723303 A 20030529; CN 03138148 A 20030526; EP 03252949 A 20030512; JP 2003102319 A 20030404