

Title (en)

Process and apparatus for the recovery of valuable materials

Title (de)

Verfahren und Vorrichtung zur Wertstoffgewinnung

Title (fr)

Procédé et appareil d'obtention de matériaux de valeur

Publication

**EP 0653496 B1 19990310 (DE)**

Application

**EP 94250266 A 19941101**

Priority

DE 4339226 A 19931115

Abstract (en)

[origin: EP0653496A1] The invention relates to a process for recovery of valuable material by reduction of oxygen-bonded metals in metallurgical vessels, and a melt furnace plant having a partition projecting into the vessel from the furnace ceiling dividing the furnace into two parts, having a device for supplying thermal (heat) energy, material feed and melt discharge apparatuses and a connection to a gas purification unit, for carrying out the process. The process is characterised according to the invention in that a solid or liquid charge in the first reaction zone is subjected to thermal energy until, in the case of a solid charge, a melt bath forms, or in the case of a liquid charge a melt bath is maintained, in which liquid slag floats on a metallic melt bath, in that the melt bath is fed to a second reaction zone in which the slag comes into intimate contact with a reducing agent, and in that thermal energy preventing solidification is additionally supplied to the melt in the reduction zone. <IMAGE>

IPC 1-7

**C22B 5/10**

IPC 8 full level

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CPC (source: EP US)

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**F27B 3/205** (2013.01 - EP US)

Cited by

CN105420498A; BE1009996A3; US6314123B1; WO9920802A1; WO9728287A1; WO9610097A1

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**EP 0653496 A1 19950517**; **EP 0653496 B1 19990310**; BR 9404454 A 19950620; CA 2135830 A1 19950516; CN 1037530 C 19980225;  
CN 1111287 A 19951108; DE 4339226 A1 19950518; DE 59407914 D1 19990415; NO 304030 B1 19981012; NO 944267 D0 19941109;  
NO 944267 L 19950516; US 5500870 A 19960319; ZA 949068 B 19950720

DOCDB simple family (application)

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DE 59407914 T 19941101; NO 944267 A 19941109; US 33977794 A 19941115; ZA 949068 A 19941115