

Title (en)
PROCESS FOR PRODUCING TI AND APPARATUS THEREFOR

Title (de)
VERFAHREN ZUR HERSTELLUNG VON TI UND VORRICHTUNG DAFÜR

Title (fr)
PROCÉDÉ DE PRODUCTION DE TITANE ET APPAREIL CORRESPONDANT

Publication
EP 1944383 A1 20080716 (EN)

Application
EP 06782859 A 20060822

Priority

- JP 2006316355 W 20060822
- JP 2005271995 A 20050920

Abstract (en)

A process for producing Ti, comprising a reduction step of reacting TiCl₄ with Ca in a CaCl₂-containing molten salt having the Ca dissolved therein to thereby form Ti particles, a separation step of separating the Ti particles formed in said molten salt from said molten salt and an electrolysis step of electrolyzing the molten salt so as to increase the Ca concentration, wherein the molten salt increased in Ca concentration in the electrolysis step is introduced into a regulating cell to thereby render the Ca concentration of the molten salt constant and thereafter the molten salt is used for the reduction of TiCl₄ in the reduction step. In the present invention, the Ca concentration of the molten salt to be fed to the corresponding reduction vessel can be inhibited from fluctuating and, at the same time, can maintain high concentration levels. Further, a large volume of the molten salt can be treated continuously. Therefore, the reduction reaction of TiCl₄ can be efficiently performed, and the process can be effectively utilized in the production of Ti by Ca reduction as a production process for realizing Ti production on an industrial scale.

IPC 8 full level
C22B 34/12 (2006.01); **C22B 5/04** (2006.01); **C25C 7/00** (2006.01)

CPC (source: EP US)
C22B 34/1272 (2013.01 - EP US); **C22B 34/129** (2013.01 - EP US); **C22B 34/1295** (2013.01 - EP US); **C25C 3/02** (2013.01 - EP US); **C25C 3/28** (2013.01 - EP US); **C25C 7/005** (2013.01 - EP US); **C25C 7/06** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 1944383 A1 20080716; **EP 1944383 A4 20091202**; AU 2006293354 A1 20070329; CA 2623212 A1 20070329; CN 101268204 A 20080917; EA 200800867 A1 20081030; JP 2007084847 A 20070405; NO 20081519 L 20080402; US 2010089204 A1 20100415; WO 2007034645 A1 20070329

DOCDB simple family (application)
EP 06782859 A 20060822; AU 2006293354 A 20060822; CA 2623212 A 20060822; CN 200680034314 A 20060822; EA 200800867 A 20060822; JP 2005271995 A 20050920; JP 2006316355 W 20060822; NO 20081519 A 20080328; US 99216206 A 20060822