

Title (en)

METHOD FOR PRODUCING TI OR TI ALLOY THROUGH REDUCTION BY Ca

Title (de)

VERFAHREN ZUR HERSTELLUNG VON TI ODER TI-LEGIERUNG DURCH REDUKTION MIT CA

Title (fr)

PROCEDE DE PRODUCTION DE TI OU D'ALLIAGE DE TI PAR REDUCTION PAR CA

Publication

**EP 1683877 A4 20080625 (EN)**

Application

**EP 04792090 A 20041006**

Priority

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- JP 2003352661 A 20031010
- JP 2004044552 A 20040220
- JP 2004074445 A 20040316

Abstract (en)

[origin: EP1683877A1] A method for producing Ti or Ti alloys through reduction by Ca, including: a reduction step of holding a molten salt, containing CaCl<sub>2</sub> and having Ca dissolved therein, in a reactor vessel 1, and reacting a metallic chloride containing TiCl<sub>4</sub> with Ca in said salt to generate particles of Ti or Ti alloys in said salt; and a separation step of separating particles of Ti or Ti alloys, generated in said salt, from said salt. An electrolysis step 8, in which CaCl<sub>2</sub> discharged outside the reactor vessel 1 is electrolyzed into Ca and Cl<sub>2</sub>, and the generated Ca is used for the generation reaction of Ti or Ti alloys in the reactor vessel 1, is preferably added. In the electrolysis step 8, an alloy electrode made of a molten Ca alloy, if applied for a cathode, is effective in enhancing the electricity efficiency, and also can be effectively utilized as a carrier medium of Ca for raising a Ca concentration of molten salt. By this method, high-purity Ti metals can be efficiently and economically produced.

IPC 8 full level

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Citation (search report)

- [DX] US 4820339 A 19890411 - BIENVENU GERARD-PIERRE [FR], et al
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- [A] US 2002194953 A1 20021226 - ROSENBERG HARRY [US], et al
- See references of WO 2005035806A1

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