

Title (en)

PROCESS FOR MAKING TITANIUM METAL FROM TITANIUM ORE.

Title (de)

VERFAHREN ZUR GEWINNUNG VON TITANMETALL AUS TITANERZ.

Title (fr)

PROCEDE DE PRODUCTION DE TITANE METALLIQUE A PARTIR DE MINERAL DE TITANE.

Publication

EP 0151111 A4 19851212 (EN)

Application

EP 83902384 A 19830627

Priority

US 8300969 W 19830627

Abstract (en)

[origin: WO8500160A1] Process for the preparation of titanium metal from an ore comprising titanium oxides which process comprises the steps of fluorinating the ore to convert the titanium oxides to titanium fluorides and then reducing the titanium fluorides to the metal. Such reduction may be carried out by contacting the titanium fluorides as a molten salt mixture with a molten alloy of zinc and aluminum at conditions whereby titanium is converted into a titanium-zinc alloy and the aluminum is converted into fluorides of aluminum. The titanium-zinc alloy is separated from the fluorides of aluminum and the zinc is distilled from the alloy to leave behind titanium sponge. The ore may be an ilmenite ore and the fluorination may be carried out by contacting said ilmenite ore with a fluosilicate salt such as sodium fluosilicate.

IPC 1-7

C01G 23/047

IPC 8 full level

C01G 23/02 (2006.01); **C22B 34/12** (2006.01)

CPC (source: EP)

C22B 34/1222 (2013.01); **C22B 34/1277** (2013.01)

Citation (search report)

- [E] US 4468248 A 19840828 - MEGY JOSEPH A [US]
- [E] US 4390365 A 19830628 - HARD ROBERT A, et al
- [X] US 4359449 A 19821116 - HARD ROBERT A, et al
- [A] US 2753256 A 19560703 - MARCUS OLSON CARL
- [A] FR 1065717 A 19540528 - FULMER RES INST LTD
- See references of WO 8500160A1

Designated contracting state (EPC)

AT BE CH DE FR GB LI LU NL SE

DOCDB simple family (publication)

WO 8500160 A1 19850117; EP 0151111 A1 19850814; EP 0151111 A4 19851212; JP S60501816 A 19851024

DOCDB simple family (application)

US 8300969 W 19830627; EP 83902384 A 19830627; JP 50246183 A 19830627