

Title (en)
DIRECT PASSIVATION OF METAL POWDER

Title (de)
DIREKTE PASSIVIERUNG VON METALLPULVER

Title (fr)
PASSIVATION DIRECTE DE POUDRE MÉTALLIQUE

Publication
EP 2104583 A1 20090930 (EN)

Application
EP 06847931 A 20061222

Priority
US 2006048828 W 20061222

Abstract (en)
[origin: WO2008079115A1] A method of producing passivated Ti or Ti alloy particles with oxygen concentrations of less than about 900 parts per million (ppm), which includes introducing a halide vapor of Ti or the metal constituents of the alloy at sonic velocity or greater into a stream of liquid alkali or liquid alkaline earth metal or mixtures thereof forming a reaction zone in which the halide is reduced by the liquid metal present in sufficient excess of stoichiometric such that Ti or Ti alloy powder from the reduction of the halide by the liquid metal is friable. After filtration and distillation excess liquid metal is removed from the Ti or Ti alloy powder that is then maintained at elevated temperature for a time sufficient to grow the particles to average diameters calculated from BET surface area measurement greater than about one micron. After cooling the Ti or Ti alloy powder to temperature of about 800C or less, the cooled Ti or Ti alloy powder is contacted with air and/or water to passivate the particles to produce friable metal powder and to remove other reaction products. A system for accomplishing the method is also shown.

IPC 8 full level
B22F 9/28 (2006.01); **C22B 34/12** (2006.01)

CPC (source: EP)
B22F 9/28 (2013.01); **C22B 34/1272** (2013.01)

Citation (search report)
See references of WO 2008079115A1

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)
WO 2008079115 A1 20080703; AU 2006352435 A1 20080703; CN 101568398 A 20091028; EP 2104583 A1 20090930

DOCDB simple family (application)
US 2006048828 W 20061222; AU 2006352435 A 20061222; CN 200680056758 A 20061222; EP 06847931 A 20061222