

Title (en)

METHOD FOR ADDING BORON TO METAL ALLOYS

Title (de)

VERFAHREN ZUM ZUSATZ VON BOR ZU METALLLEGIERUNGEN

Title (fr)

PROCEDE D'ADJONCTION DE BORE A DES ALLIAGES DE METAUX

Publication

EP 1877588 A2 20080116 (EN)

Application

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- US 2006014835 W 20060419
- US 13262105 A 20050519
- US 40518806 A 20060417
- US 67256605 P 20050419
- US 73278405 P 20051102

Abstract (en)

[origin: US2006231171A1] A method to grain refine and deoxidize a precious metal alloy or a master alloy includes the steps of (a) forming a precursor melt consisting essentially of constituents of the precious metal alloy or master alloy and inevitable impurities; (b) dispersing a compound selected from the group consisting of boron containing metal hydrides, boron containing metal fluorides and mixtures thereof throughout the precursor melt; and (c) solidifying the boron containing precious melt alloy or master alloy. One suitable compound is solid sodium borohydride (sodium tetrahydroborate). To minimize evaporation of the boron on contact with the precursor alloy melt, the sodium borohydride may be wrapped in a metal foil formed from constituents of the precious metal alloy or master alloy. The cast precious metal alloy or master alloy has been found to have a reduced number of hard spots and reduced silicon contamination when compared to conventional casting methods.

IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

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