

Title (en)

PROCESS FOR MANUFACTURING AN AL/AL3B48C3 COMPOSITE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES AL/ALB48C2 VERBUNDS.

Title (fr)

PROCEDE DE FABRICATION D'UN PIECE EN UN MATERIAU COMPOSITE AL/AL3B48C2

Publication

EP 3325681 A1 20180530 (FR)

Application

EP 16741604 A 20160719

Priority

- FR 1556859 A 20150720
- EP 2016067116 W 20160719

Abstract (en)

[origin: WO2017013087A1] The invention relates to a process for manufacturing a part made of an Al/Al3B48C2 composite material comprising an aluminium matrix in which particles of a mixed carbide of chemical formula Al3B48C2 are dispersed. The process comprises the following steps: a) placing a powder of chemical formula AlB2 in the cavity of a graphite crucible; b) closing the cavity with a graphite element; c) heating the crucible at a temperature at least equal to 960°C and less than or equal to 1400°C in order to obtain the formation of precipitates of the mixed carbide of chemical formula Al3B48C2 in liquid aluminium; d) cooling the crucible in order to solidify the liquid aluminium; e) removal from the crucible; by which means the part made of Al/Al3B48C2 composite material is obtained.

IPC 8 full level

C22C 32/00 (2006.01); **C22C 1/10** (2006.01); **C22C 29/00** (2006.01); **C22C 29/06** (2006.01); **C22C 29/14** (2006.01); **C23C 8/44** (2006.01)

CPC (source: EP US)

C22C 1/1036 (2013.01 - EP US); **C22C 1/1047** (2023.01 - EP); **C22C 29/062** (2013.01 - EP US); **C22C 32/0057** (2013.01 - EP US); **C22C 1/1047** (2023.01 - US)

Citation (search report)

See references of WO 2017013087A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2017013087 A1 20170126; EP 3325681 A1 20180530; EP 3325681 B1 20190501; FR 3039169 A1 20170127; FR 3039169 B1 20170721; RU 2018106104 A 20190820; US 2018209016 A1 20180726

DOCDB simple family (application)

EP 2016067116 W 20160719; EP 16741604 A 20160719; FR 1556859 A 20150720; RU 2018106104 A 20160719; US 201615745927 A 20160719