

Title (en)

METHOD FOR PRE-HEATING ANNEALING MATERIAL IN A HOOD-TYPE ANNEALING SYSTEM

Title (de)

VERFAHREN ZUM VORWÄRMEN VON GLÜHGUT IN EINER HAUBENGLÜHANLAGE

Title (fr)

PROCÉDÉ DE PRÉCHAUFFAGE D'UN PRODUIT À RECUIRE DANS UNE INSTALLATION DE FOUR DE RECUIT À CLOCHE

Publication

EP 2558807 B1 20141008 (DE)

Application

EP 11719752 A 20110407

Priority

- AT 5902010 A 20100414
- AT 2011000166 W 20110407

Abstract (en)

[origin: CA2796202A1] The invention relates to a method for pre-heating annealing material (4, 5) in a hood-type annealing system having annealing bases (1, 2) that accommodate the annealing material (4, 5) under a protective hood (7) in a protective-gas atmosphere, wherein the annealing material (4) to be subjected to a heat treatment in a protective hood (7) is pre-heated by means of a gaseous heat-transfer medium, which flows around the protective hoods (7) from the outside in a circuit and absorbs heat from annealing material (5) already heat-treated in a protective hood (7) and rejects heat to annealing material (4) to be pre-heated in another protective hood (7). In order to achieve advantageous use of the thermal energy, at least one further annealing base (3) having a protective hood (7) that can be heated from the outside by means of burners (15) is used to heat-treat the annealing material (4, 5, 6), and the hot exhaust gases from the heater of said protective hood (7) are mixed with the heated heat-transfer medium for pre-heating the annealing material (4).

IPC 8 full level

F27B 11/00 (2006.01); **C21D 9/667** (2006.01); **F27D 17/00** (2006.01)

CPC (source: EP KR US)

C21D 17/4 (2013.01 - EP US); **C21D 9/663** (2013.01 - EP US); **C21D 9/667** (2013.01 - EP KR US); **C21D 9/67** (2013.01 - EP US);
F27B 11/00 (2013.01 - EP KR US); **F27D 7/04** (2013.01 - EP US); **F27D 7/06** (2013.01 - EP US); **F27D 17/00** (2013.01 - KR);
F27D 17/004 (2013.01 - EP US)

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

DOCDB simple family (publication)

AT 508776 A4 20110415; AT 508776 B1 20110415; BR 112012025876 A2 20160628; CA 2796202 A1 20111020; CN 102906524 A 20130130;
CN 102906524 B 20151014; EP 2558807 A1 20130220; EP 2558807 B1 20141008; EP 2558807 B8 20150128; JP 2013525598 A 20130620;
KR 20130057427 A 20130531; MX 2012011893 A 20130211; PL 2558807 T3 20150331; RU 2012148287 A 20140520;
TW 201200600 A 20120101; US 2013040256 A1 20130214; WO 2011127501 A1 20111020; ZA 201207540 B 20140430

DOCDB simple family (application)

AT 5902010 A 20100414; AT 2011000166 W 20110407; BR 112012025876 A 20110407; CA 2796202 A 20110407;
CN 201180024302 A 20110407; EP 11719752 A 20110407; JP 2013504050 A 20110407; KR 20127027031 A 20110407;
MX 2012011893 A 20110407; PL 11719752 T 20110407; RU 2012148287 A 20110407; TW 100112723 A 20110413;
US 201113640772 A 20110407; ZA 201207540 A 20121008