

Title (en)
ENERGIZATION HEATING DEVICE AND HOT PRESS FORMING DEVICE HAVING IT AND CONDUCTION HEATING METHOD

Title (de)
ERREGUNGSHEIZVORRICHTUNG UND HEISSPRESSFORMVORRICHTUNG DAMIT SOWIE LEITUNGSHEIZVERFAHREN

Title (fr)
DISPOSITIF DE CHAUFFAGE PAR EXCITATION, DISPOSITIF DE PRESSAGE À CHAUD COMPORTANT UN TEL DISPOSITIF DE CHAUFFAGE, ET PROCÉDÉ DE CHAUFFAGE PAR CONDUCTION

Publication
EP 2236226 B1 20180425 (EN)

Application
EP 08859822 A 20080926

Priority
• JP 2008067475 W 20080926
• JP 2007322507 A 20071213

Abstract (en)
[origin: EP2236226A1] To provide a conduction heating apparatus which is capable of preventing distortion of a work due to conduction heating as much as possible, and stably supplying a conduction heated work to the downstream step of conduction heating, and a hot press forming apparatus having the conduction heating apparatus, and a hot press forming method. The conduction heating apparatus 3 that performs conduction heating while clamping a work W to be hot press-formed by a clamping mechanism (30, 31, and the like) to apply tension to the work W, in which the clamping mechanism (30, 31, and the like) has a stationary clamping member 30 and a movable clamping member 31, a lifting up/down cylinder 32 for the stationary clamping member 30 and the movable clamping member 31, and tensioning cylinders 33a and 33b that drive the movable clamping member 31 along the planar direction of the work W, and in conduction heating, the stationary clamping member 30 clamps one side of the work W and hold it, and the movable clamping member 31 moves while holding the other side of the work W according to thermal deformation of the work W, which applies tension to the work W corresponding to the thermal deformation of the work W.

IPC 8 full level
B21D 24/00 (2006.01); **B21D 25/04** (2006.01); **B21D 43/00** (2006.01); **B30B 15/30** (2006.01)

CPC (source: EP US)
C21D 1/40 (2013.01 - EP US); **C21D 1/673** (2013.01 - EP US); **H05B 3/0004** (2013.01 - EP US)

Cited by
CN106466931A; CN103801613A; CN104471086A; EP3316661A1; CN110560571A; US10271384B2; WO2014010712A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)
EP 2236226 A1 20101006; **EP 2236226 A4 20120919**; **EP 2236226 B1 20180425**; CN 101896294 A 20101124; JP 2009142854 A 20090702; JP 4802180 B2 20111026; US 2010269559 A1 20101028; WO 2009075134 A1 20090618

DOCDB simple family (application)
EP 08859822 A 20080926; CN 200880120754 A 20080926; JP 2007322507 A 20071213; JP 2008067475 W 20080926; US 80812608 A 20080926