

Title (en)

Continuous method for deep-freezing of individual products and installation for implementing the method

Title (de)

Kontinuierliches Verfahren zum individuellen Einfrieren von Produkten, und Anlage zur Umsetzung dieses Verfahrens

Title (fr)

Procédé continu pour la surgélation individuelle de produits et installation pour la mise en oeuvre du procédé

Publication

EP 2138783 A3 20100714 (FR)

Application

EP 09370011 A 20090619

Priority

FR 0803628 A 20080627

Abstract (en)

[origin: EP2138783A2] The installation (1) has a fixed bed type deep freezing section (3) including a plating unit to plate a layer of food products (P) against a support (31) under effort of refrigerant air flow (34) at speed to obtain total freezing at a core of the products, where the plating unit is formed of a ventilation unit (32) and a refrigeration unit (33). An upper conveyor (35) sends the products towards the section (3) and a fluidized bed type deep freezing section (2), where the refrigerant air flow of the speed is raised so as to plate the products against a lower surface of a belt of the conveyor.

IPC 8 full level

F25D 13/06 (2006.01)

CPC (source: EP)

F25D 13/067 (2013.01)

Citation (search report)

- [A] US 3864931 A 19750211 - GUTTINGER MANFRED
- [A] CH 220296 A 19420331 - SULZER AG [CH]
- [A] EP 0224289 A1 19870603 - GRASSO KONINKL MASCHF [NL]
- [A] JP H1075753 A 19980324 - TOYO SEISAKUSHO KK
- [A] DATABASE WPI Week 199604, Derwent World Patents Index; AN 1996-038768, XP002586067

Cited by

CN105241155A; IT201800005877A1; NL2033335B1; WO2024085751A1

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 MK MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2138783 A2 20091230; EP 2138783 A3 20100714; EP 2138783 B1 20160706; ES 2589153 T3 20161110; FR 2933173 A1 20100101; PL 2138783 T3 20161230; PT 2138783 T 20160901

DOCDB simple family (application)

EP 09370011 A 20090619; ES 09370011 T 20090619; FR 0803628 A 20080627; PL 09370011 T 20090619; PT 09370011 T 20090619