

Title (en)

INDIRECT-INJECTION METHOD FOR MANAGING THE SUPPLY OF CRYOGENIC LIQUID TO A TRUCK FOR TRANSPORTING HEAT-SENSITIVE MATERIALS

Title (de)

INDIREKTES INJEKTIONSVERFAHREN ZUR HANDHABUNG DER ZUFUHR EINER KRYOGENEN FLÜSSIGKEIT ZU EINEM LASTWAGEN FÜR DEN TRANSPORT VON WÄREMEEMPFLINDLICHEN MATERIALIEN

Title (fr)

MÉTHODE DE GESTION DE L'ALIMENTATION EN LIQUIDE CRYOGÉNIQUE D'UN CAMION DE TRANSPORT DE PRODUITS THERMOSENSIBLES FONCTIONNANT EN INJECTION INDIRECTE

Publication

EP 2652419 A1 20131023 (FR)

Application

EP 11785732 A 20111019

Priority

- FR 1060612 A 20101216
- FR 2011052444 W 20111019

Abstract (en)

[origin: WO2012080600A1] The invention relates to a method for managing the supply of cryogenic liquid to a truck (20) for transporting heat-sensitive materials, said truck implementing a method using said cryogenic liquid to transfer negative calories to the materials. Said method is a so-called indirect-injection method in which the liquid is fed into a heat-exchanger system located inside the truck, where said liquid evaporates. The transfer of cold to the materials is achieved by means of an exchange between the atmosphere surrounding the materials and the cold walls of the heat-exchanger system, characterized in that the heat-exchanger system is supplied with cryogenic liquid by implementing the following measures: an upstream two-position valve (1), generally closed, is placed upstream from the heat-exchanger system; a proportional analog valve (10), generally open, is placed downstream from the heat-exchanger system; and a downstream two-position valve (11), generally open, is placed downstream from the analog valve.

IPC 8 full level

F25B 19/00 (2006.01); **F25B 41/04** (2006.01); **F25D 3/10** (2006.01)

CPC (source: EP US)

F17D 3/00 (2013.01 - US); **F25B 41/20** (2021.01 - EP US); **F25B 41/24** (2021.01 - EP US); **F25D 3/105** (2013.01 - EP US); **F25B 19/005** (2013.01 - EP US); **F25B 2500/221** (2013.01 - EP US); **Y10T 137/0318** (2015.04 - EP US); **Y10T 137/87917** (2015.04 - EP US)

Citation (search report)

See references of WO 2012080600A1

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)

WO 2012080600 A1 20120621; AU 2011343089 A1 20130502; AU 2011343089 B2 20150723; CA 2812613 A1 20120621; EP 2652419 A1 20131023; FR 2969061 A1 20120622; FR 2969061 B1 20130104; JP 2014500473 A 20140109; US 2013269785 A1 20131017

DOCDB simple family (application)

FR 2011052444 W 20111019; AU 2011343089 A 20111019; CA 2812613 A 20111019; EP 11785732 A 20111019; FR 1060612 A 20101216; JP 2013543850 A 20111019; US 201113994227 A 20111019