

Title (en)

Method and device for producing nitrogen by cryogenic distillation of air

Title (de)

Verfahren und Gerät zur Stickstoffherstellung durch Tieftemperaturdestillation von Luft

Title (fr)

Procédé et appareil de production d'azote par distillation cryogénique d'air

Publication

EP 2381197 B1 20130918 (FR)

Application

EP 11160944 A 20110404

Priority

FR 1053075 A 20100422

Abstract (en)

[origin: EP2381197A1] The method involves sending a flow of nitrogen-rich cryogenic liquid coming from an external source (7) to a top of a cryogenic distillation column (5), where the flow rate of cryogenic liquid sent to the column is less than a value if the carbon monoxide content in the air does not exceed a previously defined threshold i.e. 5 ppm. The flow rate of cryogenic liquid sent to the column is greater than the value if the carbon monoxide content of the air exceeds the threshold. The flow rate of air (1) sent to the column is reduced if the carbon monoxide content of the air exceeds the threshold. An independent claim is also included for an apparatus for producing nitrogen by cryogenic distillation.

IPC 8 full level

F25J 3/04 (2006.01)

CPC (source: EP US)

F25J 3/04254 (2013.01 - EP US); **F25J 3/044** (2013.01 - EP US); **F25J 3/04793** (2013.01 - EP US); **F25J 3/0655** (2013.01 - US); **F25J 2210/42** (2013.01 - EP US); **F25J 2215/44** (2013.01 - EP US); **F25J 2220/44** (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)

EP 2381197 A1 20111026; EP 2381197 B1 20130918; AU 2011201849 A1 20111110; AU 2011201849 B2 20140612; BR PI1101677 A2 20121016; CA 2736371 A1 20111022; CN 102235802 A 20111109; CN 102235802 B 20150304; ES 2436079 T3 20131226; FR 2959297 A1 20111028; FR 2959297 B1 20120427; JP 2011242122 A 20111201; JP 5788206 B2 20150930; US 2011259047 A1 20111027; US 9476640 B2 20161025

DOCDB simple family (application)

EP 11160944 A 20110404; AU 2011201849 A 20110421; BR PI1101677 A 20110420; CA 2736371 A 20110404; CN 201110100748 A 20110421; ES 11160944 T 20110404; FR 1053075 A 20100422; JP 2011094731 A 20110421; US 201113087702 A 20110415