

Title (en)

METHOD FOR SEPARATING AIR BY CRYOGENIC DISTILLATION

Title (de)

VERFAHREN ZUR TRENNUNG VON LUFT DURCH KRYOGENE DESTILLATION

Title (fr)

PROCEDE DE SEPARATION D'AIR PAR DISTILLATION CRYOGENIQUE

Publication

**EP 3695180 B1 20240605 (FR)**

Application

**EP 18773240 A 20180830**

Priority

- FR 1701070 A 20171013
- FR 2018052130 W 20180830

Abstract (en)

[origin: WO2019073132A1] In a method for separating air by cryogenic distillation, a flow of gas, which is air or a gas coming from the system of columns, is expanded in a single-wheel cryogenic expansion turbine having an inlet temperature less than -100°C, a gas, which is air or a gas coming from the system of columns, is compressed in a first single-wheel booster compressor (B1) with an inlet temperature greater than -50°C, the air is compressed in a second single-wheel booster compressor (B2) with an inlet temperature less than -100°C, the compressed air in at least the first booster compressor cools in the heat exchanger, the work generated by the expansion turbine (T) is used for the cryogenic compression step in the first booster compressor and for the compression step in the second booster compressor, and the wheel of the first booster compressor, the wheel of the second booster compressor and the wheel of the turbine are mounted on the same axis of rotation.

IPC 8 full level

**F25J 3/04** (2006.01)

CPC (source: EP US)

**F25J 3/04024** (2013.01 - EP US); **F25J 3/0403** (2013.01 - EP); **F25J 3/04054** (2013.01 - EP US); **F25J 3/0406** (2013.01 - EP US); **F25J 3/0409** (2013.01 - EP US); **F25J 3/04175** (2013.01 - EP); **F25J 3/04296** (2013.01 - EP); **F25J 3/04309** (2013.01 - EP US); **F25J 3/04351** (2013.01 - US); **F25J 3/04381** (2013.01 - EP US); **F25J 3/04393** (2013.01 - EP US); **F25J 3/04412** (2013.01 - EP US); **F25J 2230/20** (2013.01 - EP US); **F25J 2240/04** (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)

**WO 2019073132 A1 20190418**; CN 111183328 A 20200519; CN 111183328 B 20221108; EP 3695180 A1 20200819; EP 3695180 B1 20240605; FR 3072451 A1 20190419; FR 3072451 B1 20220121; US 2020333069 A1 20201022

DOCDB simple family (application)

**FR 2018052130 W 20180830**; CN 201880064817 A 20180830; EP 18773240 A 20180830; FR 1701070 A 20171013; US 201816755821 A 20180830