

Title (en)

APPARATUS AND PROCESS FOR THE SEPARATION OF AIR BY CRYOGENIC DISTILLATION

Title (de)

VORRICHTUNG UND VERFAHREN ZUR LUFTTRENNUNG DURCH KRYOGENE DESTILLATION

Title (fr)

APPAREIL ET PROCÉDÉ DE SÉPARATION D'AIR PAR DISTILLATION CRYOGÉNIQUE

Publication

**EP 4163576 A1 20230412 (EN)**

Application

**EP 22199455 A 20221004**

Priority

- US 202117495456 A 20211006
- EP 22192944 A 20220830

Abstract (en)

An air separation process having a first booster air compressor comprising a first outlet stream and a second booster air compressor comprising a second outlet stream, wherein the first booster air compressor and the second booster air compressor are in parallel, and the second booster air compressor is driven by a nitrogen turboexpander, the first outlet stream and the second outlet stream being at least partially condensed by heat exchange with a vaporizing oxygen stream.

IPC 8 full level

**F25J 3/04** (2006.01)

CPC (source: EP)

**F25J 3/0409** (2013.01); **F25J 3/04103** (2013.01); **F25J 3/04206** (2013.01); **F25J 3/04218** (2013.01); **F25J 3/04309** (2013.01); **F25J 3/04381** (2013.01); **F25J 3/04387** (2013.01); **F25J 3/04412** (2013.01); **F25J 3/04957** (2013.01); **F25J 2230/24** (2013.01); **F25J 2240/10** (2013.01); **F25J 2250/40** (2013.01); **F25J 2250/50** (2013.01)

Citation (search report)

- [XYI] US 2020355429 A1 20201112 - ZHAO BOWEI [CN], et al
- [XAY] US 2016231053 A1 20160811 - ASSE ALEXIS [FR], et al
- [Y] US 4817394 A 19890404 - ERICKSON DONALD C [US]
- [Y] US 4133662 A 19790109 - WAGNER NORBERT
- [Y] CN 112414003 A 20210226 - AIR LIQUIDE

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 ME MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**EP 4163576 A1 20230412**; CN 115930551 A 20230407

DOCDB simple family (application)

**EP 22199455 A 20221004**; CN 202211229835 A 20221008