

Title (en)
PROCESS FOR THE SEPARATION OF AIR BY CRYOGENIC DISTILLATION

Title (de)
VERFAHREN ZUR TRENNUNG VON LUFT DURCH KRYOGENE DESTILLATION

Title (fr)
PROCESSUS DE SÉPARATION D'AIR PAR DISTILLATION CRYOGÉNIQUE

Publication
EP 2176610 A1 20100421 (EN)

Application
EP 07785309 A 20070810

Priority
CN 2007002404 W 20070810

Abstract (en)
[origin: WO2009021350A1] A process for the production of at least one liquid product (53, 71) and at least one gaseous product (55, 61) by cryogenic distillation is disclosed , according to the first mode, at least part of the feed air is removed from an intermediate point of the heat exchange line (19) , compressed at a cryogenic temperature in a cold compressor (37) and sent to the heat exchange line (19) to be further cooled and sent to the column system (65, 67) and part of the feed air is sent to a first expander (39) and according to the second mode, all of the feed air is compressed to a high pressure at least 20 bars higher than the highest column pressure of the column system (65, 67) in a second compressor (11, 17) , cooled in the heat exchange line (19) and sent in part to a column system (65, 67), another part of the high pressure air being sent to the second expander (29) .

IPC 8 full level
F25J 3/04 (2006.01)

CPC (source: EP US)
F25J 3/04054 (2013.01 - EP US); **F25J 3/0409** (2013.01 - EP US); **F25J 3/04175** (2013.01 - EP US); **F25J 3/04187** (2013.01 - EP US); **F25J 3/0429** (2013.01 - EP US); **F25J 3/04296** (2013.01 - EP US); **F25J 3/04393** (2013.01 - EP US); **F25J 3/04412** (2013.01 - EP US); **F25J 3/04812** (2013.01 - EP US); **F25J 2215/40** (2013.01 - EP); **F25J 2245/40** (2013.01 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
WO 2009021350 A1 20090219; BR PI0721931 A2 20140318; CA 2695817 A1 20090219; CN 101779092 A 20100714; EP 2176610 A1 20100421; EP 2176610 A4 20180321; EP 2176610 B1 20190424; JP 2010536003 A 20101125; JP 4908634 B2 20120404; US 2011197630 A1 20110818

DOCDB simple family (application)
CN 2007002404 W 20070810; BR PI0721931 A 20070810; CA 2695817 A 20070810; CN 200780100211 A 20070810; EP 07785309 A 20070810; JP 2010519320 A 20070810; US 67192711 A 20110504