

Title (en)  
PROCESS AND APPARATUS FOR THE LOW-TEMPERATURE FRACTIONATION OF AIR

Title (de)  
VERFAHREN UND VORRICHTUNG ZUR TIEFTEMPERATURZERLEGUNG VON LUFT

Title (fr)  
PROCÉDÉ ET DISPOSITIF DE FRACTIONNEMENT DE L'AIR À BASSE TEMPÉRATURE

Publication  
**EP 3132216 A1 20170222 (DE)**

Application  
**EP 15718770 A 20150415**

Priority  
• EP 14001373 A 20140415  
• EP 2015000790 W 20150415

Abstract (en)  
[origin: WO2015158431A1] The process and the apparatus serve for the low-temperature fractionation of air in a distillation column system, which has at least one separating column. Feed air is compressed in a main air compressor. Compressed feed air is cooled in a main heat exchanger. Cooled feed air is introduced into the distillation column system. At least one product stream is drawn off from the distillation column system, heated in the main heat exchanger and drawn off as a gaseous end product. At least one process parameter is set by a basic controller. The control of the process parameter is set by a combination of an ALC control and an MPC controller. This involves the ALC control outputting a first target value to the MPC controller. The MPC controller calculates from the first target value a setpoint value or a change to a setpoint value for a primary setpoint value output by the ALC control. The setpoint value determined by the MPC controller or a secondary setpoint value, which is calculated from the primary setpoint value output by the ALC control and the change to the setpoint value, is transmitted to the basic controller.

IPC 8 full level  
**F25J 3/04** (2006.01); **G05B 13/04** (2006.01)

CPC (source: CN EP KR US)  
**F25J 3/0257** (2013.01 - KR); **F25J 3/0285** (2013.01 - KR); **F25J 3/04054** (2013.01 - KR US); **F25J 3/044** (2013.01 - US); **F25J 3/04848** (2013.01 - CN EP KR US); **G05B 13/04** (2013.01 - KR); **F25J 2210/40** (2013.01 - KR); **F25J 2215/34** (2013.01 - KR); **F25J 2215/36** (2013.01 - KR); **F25J 2215/42** (2013.01 - KR); **F25J 2215/50** (2013.01 - KR); **F25J 2215/58** (2013.01 - KR)

Citation (search report)  
See references of WO 2015158431A1

Citation (examination)  
ZUHUA XU ET AL: "Automatic load change system of cryogenic air separation process", SEPARATION AND PURIFICATION TECHNOLOGY, ELSEVIER SCIENCE, AMSTERDAM, NL, vol. 81, no. 3, 20 August 2011 (2011-08-20), pages 451 - 465, XP028391041, ISSN: 1383-5866, [retrieved on 20110826], DOI: 10.1016/J.SEP PUR.2011.08.024

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Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2015158431 A1 20151022**; CN 106461322 A 20170222; EA 033274 B1 20190930; EA 201692074 A1 20170228; EP 3132216 A1 20170222; KR 102440188 B1 20220902; KR 20160145133 A 20161219; US 10161676 B2 20181225; US 2017038140 A1 20170209

DOCDB simple family (application)  
**EP 2015000790 W 20150415**; CN 201580020055 A 20150415; EA 201692074 A 20150415; EP 15718770 A 20150415; KR 20167031764 A 20150415; US 201515303145 A 20150415