

Title (en)
METHOD AND INSTALLATION FOR CRYOGENIC SEPARATION OF AIR

Title (de)
VERFAHREN UND ANLAGE ZUR TIEFTEMPERATURZERLEGUNG VON LUFT

Title (fr)
PROCÉDÉ ET INSTALLATION DE SÉPARATION CRYOGÉNIQUE D'AIR

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Abstract (en)
[origin: WO2020083527A1] The invention relates to a method for a low-temperature air separation in which an air separation unit (100, 200) with a distillation column system (10) is used that has a high-pressure column (11) operated at a first pressure range and a low-pressure column (12) operated at a second pressure range below the first pressure range. A first sump liquid which has a higher content of oxygen and a lower content of nitrogen than atmospheric air and a first head gas which has a lower content of oxygen and a high content of nitrogen than atmospheric air are formed in the high-pressure column (11) using a low-temperature rectification process; a second sump liquid which has a higher content of oxygen and a lower content of nitrogen than the first sump liquid and a second head gas which has a higher content of nitrogen and a lower content of oxygen than the first sump liquid are formed in the low-pressure column (12) using a low-temperature rectification process; and the second head gas or a component thereof is drawn from the low-pressure column (12) in the form of unpurified nitrogen. A fraction of the unpurified nitrogen, in the form of a return quantity, is heated, compressed to a pressure level in the first pressure range, cooled, and fed to the high-pressure column (11) one after the other. The invention likewise relates to an air separation unit (100, 200).

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