

Title (en)

PRODUCTION OF HELIUM FROM A STREAM OF NATURAL GAS

Title (de)

HERSTELLUNG VON HELIUM AUS EINEM ERDGASSTROM

Title (fr)

PRODUCTION D'HÉLIUM À PARTIR D'UN COURANT DE GAZ NATUREL

Publication

**EP 3322949 A1 20180523 (FR)**

Application

**EP 16750950 A 20160712**

Priority

- FR 1556739 A 20150716
- FR 2016051786 W 20160712

Abstract (en)

[origin: WO2017009573A1] The invention relates to a method for producing a helium gas stream (27) from a source gas stream (1) comprising at least helium, methane and nitrogen, comprising at least the following steps: step a): introducing said source gas stream (1) into a double column nitrogen rejection unit (6), said double column comprising a high-pressure distillation column (5), a low-pressure distillation column (7) and a condenser (8) linking the high-pressure column (5) with the low-pressure column (7); step b): extracting at the outlet of said condenser (8) at least a part (12) of a mixture (11) produced at the head of the high-pressure column (5); step c): reducing the pressure of said mixture from step b) to an intermediate pressure of between 8 and 20 bar absolute; step d): separating the mixture (14) from step c) in a first phase separation chamber (15) into a liquid phase (16) and a helium-enriched gas phase (17); step e): at least partially condensing said helium-enriched gaseous phase (17) in a heat exchanger (24); and step f): separating the stream (25) coming from step e) in a second phase separation chamber (26) into a liquid phase (28) and a gas phase (27) containing more than 50% by volume of helium.

IPC 8 full level

**F25J 3/02** (2006.01)

CPC (source: EP RU US)

**F25J 3/0209** (2013.01 - EP RU US); **F25J 3/0233** (2013.01 - EP RU US); **F25J 3/0238** (2013.01 - EP RU US); **F25J 3/0257** (2013.01 - EP RU US); **F25J 3/029** (2013.01 - EP RU US); **F25J 2200/06** (2013.01 - EP US); **F25J 2205/02** (2013.01 - EP US); **F25J 2205/04** (2013.01 - EP US); **F25J 2235/60** (2013.01 - EP US); **F25J 2290/34** (2013.01 - EP US)

Citation (search report)

See references of WO 2017009573A1

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2017009573 A1 20170119**; EP 3322949 A1 20180523; EP 3322949 B1 20220223; FR 3038973 A1 20170120; FR 3038973 B1 20190927; PL 3322949 T3 20220725; RU 2018103764 A 20190731; RU 2018103764 A3 20191029; RU 2717666 C2 20200324; US 2018209725 A1 20180726

DOCDB simple family (application)

**FR 2016051786 W 20160712**; EP 16750950 A 20160712; FR 1556739 A 20150716; PL 16750950 T 20160712; RU 2018103764 A 20160712; US 201615744987 A 20160712