

Title (en)

METHOD AND APPARATUS FOR CRYOGENICALLY SEPARATING A MIXTURE OF NITROGEN AND CARBON MONOXIDE

Title (de)

VERFAHREN UND ANLAGE ZUR KRYOGENEN TRENNUNG EINER MISCHUNG AUS WASSERSTOFF UND KOHLENMONOXID

Title (fr)

PROCÉDÉ ET APPAREIL DE SÉPARATION CRYOGÉNIQUE D'UN MÉLANGE D'AZOTE ET DE MONOXYDE DE CARBONE

Publication

EP 2504646 B1 20190102 (FR)

Application

EP 10792965 A 20101104

Priority

- FR 0958305 A 20091124
- FR 2010052368 W 20101104

Abstract (en)

[origin: WO2011067492A2] In a method for separating a feed gas, containing nitrogen and carbon monoxide as main components, in a distillation column (15): the feed gas is cooled in a heat exchanger (3); at least a portion of the feed gas, or at least a portion of a gas derived from the feed gas, is sent to a reboiler (5) of the distillation column so as to condense the gas while producing a liquid, and optionally a gas; at least a portion of the liquid is sent to the column; a nitrogen gas-rich flow is extracted from the column; a carbon monoxide-rich flow is extracted from the column, heated in the heat exchanger, and compressed so as to provide a carbon monoxide-rich material at production pressure; the feed gas is sent, after cooling, into a first phase separator (51); the liquid is released from the first phase separator (51); the released liquid is sent into a second phase separator; and at least a portion of the liquid from the second phase separator is vaporized so as to obtain the gas to be sent to the tank reboiler.

IPC 8 full level

C01B 32/40 (2017.01); **F25J 3/02** (2006.01)

CPC (source: EP US)

F25J 3/0223 (2013.01 - EP US); **F25J 3/0252** (2013.01 - EP US); **F25J 3/0257** (2013.01 - EP US); **F25J 3/0261** (2013.01 - EP US); **F25J 2200/40** (2013.01 - EP US); **F25J 2200/74** (2013.01 - EP US); **F25J 2205/04** (2013.01 - EP US); **F25J 2210/42** (2013.01 - EP US); **F25J 2270/02** (2013.01 - EP US); **F25J 2270/04** (2013.01 - EP US); **F25J 2270/24** (2013.01 - EP US); **F25J 2270/904** (2013.01 - EP US); **F25J 2290/34** (2013.01 - US); **F25J 2290/80** (2013.01 - EP US)

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

DOCDB simple family (publication)

FR 2953004 A1 20110527; **FR 2953004 B1 20131220**; CN 102893110 A 20130123; CN 102893110 B 20141126; EP 2504646 A2 20121003; EP 2504646 B1 20190102; JP 2013511697 A 20130404; US 2012279254 A1 20121108; US 9625209 B2 20170418; WO 2011067492 A2 20110609; WO 2011067492 A3 20140320

DOCDB simple family (application)

FR 0958305 A 20091124; CN 201080053291 A 20101104; EP 10792965 A 20101104; FR 2010052368 W 20101104; JP 2012540471 A 20101104; US 201013511812 A 20101104