

Title (en)

METHODS AND SYSTEMS FOR CO2 CONDENSATION

Title (de)

VERFAHREN UND SYSTEME ZUR CO2-KONDENSATION

Title (fr)

PROCÉDÉS ET SYSTÈMES POUR CONDENSATION DE CO2

Publication

**EP 2815194 A2 20141224 (EN)**

Application

**EP 12775386 A 20120928**

Priority

- US 201113249464 A 20110930
- US 2012057860 W 20120928

Abstract (en)

[origin: US2013081409A1] In accordance with one aspect of the present invention, methods of condensing carbon dioxide (CO<sub>2</sub>) from a CO<sub>2</sub> stream are provided. The method includes (i) compressing and cooling the CO<sub>2</sub> stream to form a partially cooled CO<sub>2</sub> stream, wherein the partially cooled CO<sub>2</sub> stream is cooled to a first temperature. The method includes (ii) cooling the partially cooled CO<sub>2</sub> stream to a second temperature by magneto-caloric cooling to form a cooled CO<sub>2</sub> stream. The method further includes (iii) condensing at least a portion of CO<sub>2</sub> in the cooled CO<sub>2</sub> stream to form a condensed CO<sub>2</sub> stream. Systems for condensing carbon dioxide (CO<sub>2</sub>) from a CO<sub>2</sub> stream are also provided

IPC 8 full level

**F25J 3/08** (2006.01); **F25B 21/00** (2006.01)

CPC (source: EP RU US)

**B01D 53/002** (2013.01 - EP US); **F25J 1/0027** (2013.01 - EP US); **F25J 1/0035** (2013.01 - EP US); **F25J 1/0225** (2013.01 - EP US); **F25J 3/08** (2013.01 - RU); **B01D 2257/504** (2013.01 - EP US); **F25J 2220/82** (2013.01 - EP US); **F25J 2230/30** (2013.01 - EP US); **F25J 2235/80** (2013.01 - EP US); **F25J 2260/80** (2013.01 - EP US); **F25J 2270/908** (2013.01 - EP US)

Citation (search report)

See references of WO 2013049532A2

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)

**US 2013081409 A1 20130404**; AU 2012315807 A1 20140410; AU 2012315807 B2 20170622; AU 2012315807 C1 20171116; BR 112014005676 A2 20170404; BR 112014005676 B1 20210720; CA 2848991 A1 20130404; CA 2848991 C 20200721; CN 104471335 A 20150325; CN 104471335 B 20171107; EP 2815194 A2 20141224; JP 2015507731 A 20150312; JP 6154813 B2 20170628; KR 101983343 B1 20190528; KR 20140089527 A 20140715; MX 2014003880 A 20140507; RU 2014110121 A 20151110; RU 2606725 C2 20170110; WO 2013049532 A2 20130404; WO 2013049532 A3 20150129

DOCDB simple family (application)

**US 201113249464 A 20110930**; AU 2012315807 A 20120928; BR 112014005676 A 20120928; CA 2848991 A 20120928; CN 201280047666 A 20120928; EP 12775386 A 20120928; JP 2014533380 A 20120928; KR 20147011592 A 20120928; MX 2014003880 A 20120928; RU 2014110121 A 20120928; US 2012057860 W 20120928