

Title (en)  
CARBON DIOXIDE RECOVERY

Title (de)  
KOHLENDIOXIDWIEDERHERSTELLUNG

Title (fr)  
RÉCUPÉRATION DE DIOXYDE DE CARBONE

Publication  
**EP 2427255 A2 20120314 (EN)**

Application  
**EP 09730698 A 20090407**

Priority  
• US 2009039744 W 20090407  
• US 12325908 P 20080406

Abstract (en)  
[origin: WO2009126607A2] Disclosed herein is a method and system for separating carbon dioxide (CO<sub>2</sub>) from a CO<sub>2</sub> containing gas stream containing water vapor and additional impurities, for example, nitrogen, oxygen, sulfur oxides, nitrogen oxides, and mercury. The CO<sub>2</sub> is captured by subjecting the CO<sub>2</sub> gas feed stream to a temperature swing adsorption step. The temperature swing adsorption step comprises an adsorption step for producing a substantially dry carbon dioxide-depleted stream, and an adsorbent regeneration step comprising heating the adsorbent bed to produce a substantially water vapor-free carbon dioxide stream. Moisture from the gas stream containing CO<sub>2</sub> is optionally removed by pressure swing adsorption, temperature swing adsorption, membrane separation, or absorption prior to CO<sub>2</sub> capture.

IPC 8 full level  
**B01D 53/047** (2006.01); **B01D 53/62** (2006.01); **C01B 3/56** (2006.01); **C01B 32/50** (2017.01)

CPC (source: EP KR)  
**B01D 53/0462** (2013.01 - EP); **B01D 53/047** (2013.01 - KR); **B01D 53/62** (2013.01 - KR); **C01B 3/32** (2013.01 - EP); **C01B 3/36** (2013.01 - EP); **C01B 3/52** (2013.01 - EP); **C01B 3/56** (2013.01 - EP KR); **C01B 32/50** (2017.07 - EP KR); **B01D 53/047** (2013.01 - EP); **B01D 2253/108** (2013.01 - EP); **B01D 2256/22** (2013.01 - EP); **B01D 2257/302** (2013.01 - EP); **B01D 2257/404** (2013.01 - EP); **B01D 2257/504** (2013.01 - EP); **B01D 2257/602** (2013.01 - EP); **B01D 2257/702** (2013.01 - EP); **B01D 2257/80** (2013.01 - EP); **B01D 2259/403** (2013.01 - EP); **B01D 2259/4061** (2013.01 - EP); **B01D 2259/4146** (2013.01 - EP); **C01B 2203/025** (2013.01 - EP); **C01B 2203/0415** (2013.01 - EP); **C01B 2203/042** (2013.01 - EP); **C01B 2203/0475** (2013.01 - EP); **C01B 2203/86** (2013.01 - EP); **Y02C 20/40** (2020.08 - EP); **Y02P 20/151** (2015.11 - EP); **Y02P 30/00** (2015.11 - EP)

Designated contracting state (EPC)  
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 SE SI SK TR

DOCDB simple family (publication)  
**WO 2009126607 A2 20091015**; **WO 2009126607 A3 20100121**; **WO 2009126607 A4 20100311**; AU 2009233890 A1 20091015; AU 2009233890 B2 20141030; BR PI0911793 A2 20170502; CA 2726383 A1 20091015; CA 2726383 C 20150825; CN 102083512 A 20110601; EP 2427255 A2 20120314; EP 2427255 A4 20130102; JP 2012522627 A 20120927; KR 101312914 B1 20130930; KR 20110000656 A 20110104; MX 2010011017 A 20110121; ZA 201007593 B 20130925

DOCDB simple family (application)  
**US 2009039744 W 20090407**; AU 2009233890 A 20090407; BR PI0911793 A 20090407; CA 2726383 A 20090407; CN 200980115622 A 20090407; EP 09730698 A 20090407; JP 2011503251 A 20090407; KR 20107022891 A 20090407; MX 2010011017 A 20090407; ZA 201007593 A 20101025