

Title (en)
CARBON DIOXIDE RECOVERY

Title (de)
KOHLENDIOXIDWIEDERHERSTELLUNG

Title (fr)
RÉCUPÉRATION DE DIOXYDE DE CARBONE

Publication
EP 2427255 A4 20130102 (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 (CO₂) from a CO₂ containing gas stream containing water vapor and additional impurities, for example, nitrogen, oxygen, sulfur oxides, nitrogen oxides, and mercury. The CO₂ is captured by subjecting the CO₂ 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 CO₂ is optionally removed by pressure swing adsorption, temperature swing adsorption, membrane separation, or absorption prior to CO₂ 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)
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Citation (search report)
• [X1] US 4472178 A 19840918 - KUMAR RAVI [US], et al
• [X1] US 4249915 A 19810210 - KRATZ WILBUR C [US], et al
• [A] US 4784672 A 19881115 - SIRCAR SHIVAJI [US]
• See references of WO 2009126607A2

Citation (examination)
• JP 2000024445 A 20000125 - NIPPON OXYGEN CO LTD
• US 3841058 A 19741015 - TEMPLEMAN J

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

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