Title (en)

CO2 CAPTURE WITH CARBONIC ANHYDRASE AND TERTIARY AMINO SOLVENTS FOR ENHANCED FLUX RATIO

Title (de)

CO2-ABSCHEIDUNG MIT KOHLENSTOFFANHYDRASE UND TERTIÄREN AMINOLÖSUNGSMITTELN FÜR VERBESSERTES FLUSSVERHÄLTNIS

Title (fr)

CAPTURE DE CO2 À L'AIDE D'UNE ANHYDRASE CARBONIQUE ET DE SOLVANTS AMINO TERTIAIRES POUR UN RAPPORT DE FLUX AMÉLIORÉ

Publication

EP 2849872 A4 20160217 (EN)

Application

EP 13780585 A 20130423

Priority

- US 201261637595 P 20120424
- US 201361782250 P 20130314
- CA 2013050314 W 20130423

Abstract (en)

[origin: WO2013159228A1] Techniques for treating CO2 containing gas include contacting the gas with an aqueous absorption solution including carbonic anhydrase as well as an absorption compound, which may be a tertiary amino compound for enzymatically enhanced flux of CO2. The absorption compound may include MDEA, TEA, DEMEA, DMMEA, TIPA or DMgly, for example. The techniques may provide concentrations to enhance the enzymatic catalysis and inhibit viscosifying of the absorption solution or enzyme denaturing that would lower the overall CO2 absorption rate. The absorption may be conducted at a temperature between about 0° C and about 80 °C, for example. Processes, uses and formulations are provided for enhanced CO2 capture.

IPC 8 full level

B01D 53/62 (2006.01); **B01D 53/14** (2006.01)

CPC (source: EP)

B01D 53/1475 (2013.01); B01D 2252/20431 (2013.01); B01D 2252/602 (2013.01); B01D 2255/804 (2013.01); Y02A 50/20 (2017.12); Y02C 20/40 (2020.08)

Citation (search report)

- [X] WO 2011014957 A1 20110210 - CO2 SOLUTION INC [CA], et al
- See references of WO 2013159228A1

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)

WO 2013159228 A1 20131031; CN 104602789 A 20150506; EP 2849872 A1 20150325; EP 2849872 A4 20160217

DOCDB simple family (application)

CA 2013050314 W 20130423; CN 201380033637 A 20130423; EP 13780585 A 20130423