Title (en)

HEAT RECOVERY IN ABSORPTION AND DESORPTION PROCESSES

Title (de)

WÄRMERÜCKGEWINNUNG BEI ABSORPTIONS- UND DESORPTIONSPROZESSEN

Title (fr)

RÉCUPÉRATION DE CHALEUR AU COURS DE PROCESSUS D'ABSORPTION ET DE DÉSORPTION

Publication

EP 2736625 A1 20140604 (DE)

Application

EP 12733595 A 20120627

Priority

- DE 102011108749 A 20110728
- EP 2012002689 W 20120627

Abstract (en)

[origin: CA2842981A1] The invention relates to a method for removing components to be separated from industrial gases by means of absorption and desorption processes that use liquid absorbents, wherein at least one absorption device (20) and one desorption device (22) are provided, at least a part of the laden solution leaving the absorption device (20) is diverted before being heated and is delivered to the head of the heat transfer section (22a), and said laden partial stream is heated by the steam rising from the lower part of the desorption device (22b) through heat exchange in the heat transfer section (22a). The remaining stream of cold, laden solution (5a) leaving the absorption device (20) is expanded by means of the relief valve (25) and via the heat exchanger (21) into a pressure relief vessel (26), such that the stream leaving the heat exchanger (21) separates into a liquid and a gaseous state, wherein the pressure in the pressure relief vessel (26) is lowered in such a way that the total energy demand in absorption and desorption processes is reduced.

IPC 8 full level

B01D 53/14 (2006.01); **C01B 3/52** (2006.01); **C10L 3/10** (2006.01)

CPC (source: EP US)

B01D 53/1425 (2013.01 - EP US); **B01D 53/1475** (2013.01 - US); **C01B 3/52** (2013.01 - EP US); **C10L 3/102** (2013.01 - EP US); B01D 53/1456 (2013.01 - EP US); B01D 2252/2021 (2013.01 - US); B01D 2252/2025 (2013.01 - US); B01D 2252/2026 (2013.01 - US); B01D 2252/20431 (2013.01 - US); B01D 2259/65 (2013.01 - EP US); C10L 2290/541 (2013.01 - EP US); Y02P 20/10 (2015.11 - EP US); Y02P 20/50 (2015.11 - EP US)

Citation (search report)

See references of WO 2013013749A1

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)

DE 102011108749 A1 20130131; AR 087306 A1 20140312; AU 2012289276 A1 20140206; CA 2842981 A1 20130131; EP 2736625 A1 20140604; TW 201315529 A 20130416; US 2015078973 A1 20150319; US 9573093 B2 20170221; WO 2013013749 A1 20130131

DOCDB simple family (application)

DE 102011108749 A 20110728; AR P120102689 A 20120725; AU 2012289276 A 20120627; CA 2842981 A 20120627; EP 12733595 A 20120627; EP 2012002689 W 20120627; TW 101124458 A 20120706; US 201214235049 A 20120627