

Title (en)  
REGENERATIVE CONDENSATION AND ADSORPTION PROCESS FOR ELIMINATING ORGANIC COMPONENTS FROM A GAS FLOW

Title (de)  
REGENERATIVER KONDENSATIONS- UND ADSORPTIONSPROZESS ZUR ENTFERNUNG ORGANISCHER KOMPONENTEN AUS EINEM GASSTROM

Title (fr)  
PROCÉDÉ RÉGÉNÉRATIF POUR ÉLIMINER, PAR CONDENSATION ET ADSORPTION, DES COMPOSANTS ORGANIQUES D'UN COURANT GAZEUX

Publication  
**EP 2136893 A1 20091230 (DE)**

Application  
**EP 08734761 A 20080326**

Priority

- EP 2008002360 W 20080326
- DE 102007016973 A 20070410

Abstract (en)  
[origin: US2008250924A1] Processes are described comprising: providing a crude gas stream having a temperature not exceeding 40° C., the crude gas stream comprising at least one organic impurity; condensing at least a portion of the at least one organic impurity from the crude gas stream at a temperature not exceeding 0° C. to form a prepurified gas stream; and subjecting (at least a portion, preferably substantially all, and more preferably the entirety, of) the prepurified gas stream to adsorption on a first adsorption medium to provide a purified gas stream; wherein the first adsorption medium is subjected to a regeneration comprising: (i) providing a circulating inert gas stream having a temperature of at least 100° C.; (ii) passing the circulating inert gas stream over the first adsorption medium to form an organic impurity-loaded inert gas stream; (iii) cooling the loaded inert gas stream to a temperature not exceeding 40° C.; (iv) condensing at least a portion of the organic impurity from the cooled, loaded inert gas stream to provide a prepurified circulating inert gas stream; subjecting (at least a portion, preferably substantially all, and more preferably the entirety, of) the prepurified circulating inert gas stream to adsorption on a second adsorption medium to provide a purified circulating inert gas stream; and recycling the purified circulating inert gas stream to the circulating inert gas stream.

IPC 8 full level  
**B01D 5/00** (2006.01); **B01D 53/00** (2006.01); **B01D 53/02** (2006.01); **C01B 7/07** (2006.01)

CPC (source: EP KR US)  
**B01D 5/00** (2013.01 - KR); **B01D 53/00** (2013.01 - KR); **B01D 53/002** (2013.01 - EP US); **B01D 53/02** (2013.01 - KR); **B01D 53/04** (2013.01 - EP US); **C01B 7/04** (2013.01 - EP US); **C01B 7/07** (2013.01 - KR); **C01B 7/0718** (2013.01 - EP US); **C01B 7/0725** (2013.01 - EP US); **B01D 2253/102** (2013.01 - EP US); **B01D 2257/2064** (2013.01 - EP US); **B01D 2257/70** (2013.01 - EP US); **B01D 2257/7027** (2013.01 - EP US); **B01D 2259/4009** (2013.01 - EP US); **Y02P 20/129** (2015.11 - EP US); **Y02P 20/151** (2015.11 - EP US); **Y02P 20/20** (2015.11 - EP US)

Citation (search report)  
See references of WO 2008122363A1

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 MT NL NO PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**DE 102007016973 A1 20081016**; CN 101652162 A 20100217; EP 2136893 A1 20091230; JP 2010523319 A 20100715; JP 5036862 B2 20120926; KR 20100015469 A 20100212; US 2008250924 A1 20081016; US 7749307 B2 20100706; WO 2008122363 A1 20081016

DOCDB simple family (application)  
**DE 102007016973 A 20070410**; CN 200880010636 A 20080326; EP 08734761 A 20080326; EP 2008002360 W 20080326; JP 2010502434 A 20080326; KR 20097021123 A 20080326; US 10045608 A 20080410