

Title (en)  
DEVICE AND METHOD FOR TREATING GAS EFFLUENTS IN A CHAMBER CONTAINING INTEGRATED HEATING/COOLING ELEMENTS IN THE FORM OF THIN PLATES

Title (de)  
ANLAGE UND VERFAHREN ZUR BEHANDLUNG VON ABGASEN

Title (fr)  
DISPOSITIF ET PROCEDE POUR LE TRAITEMENT D'EFFLUENTS GAZEUX

Publication  
**EP 1351754 A2 20031015 (FR)**

Application  
**EP 02710940 A 20020103**

Priority  
• FR 0200018 W 20020103  
• FR 0100068 A 20010104

Abstract (en)  
[origin: WO02053266A2] The invention concerns a method and a device for purifying air and for recuperating polluting gases with selective adsorption, desorption and condensation/adsorption cycles. The invention is characterised in that the air loaded with single or multiple pollutants enters (6) a chamber (19) and passes through one or several adsorbent materials (2) located between two heat-regulated elements slightly spaced apart (1) for fast, homogeneous and perfectly controlled heating/cooling of said adsorbents. When the detector (9) indicates that the adsorbents are saturated, the air inlets and outlets are isolated. The heating elements quickly raise the temperature of the adsorbents up to a set temperature, a carrier gas (8) passes through the adsorbents in counter-current and transfers the polluting gases towards the integrated condensation unit using the condensation products whereof a highly cooled part (4) is used for condensation (3) and the other is conveyed to the storage unit (10). If necessary, the residual gaseous pollutants are conveyed to a secondary small adsorber (5) which will restore said gases into the main adsorber in adsorption mode.

IPC 1-7  
**B01D 53/04**

IPC 8 full level  
**B01D 53/04** (2006.01)

CPC (source: EP)  
**B01D 53/0438** (2013.01); **B01D 53/0462** (2013.01); **B01D 53/0423** (2013.01); **B01D 53/0454** (2013.01); **B01D 53/261** (2013.01); **B01D 2253/102** (2013.01); **B01D 2253/108** (2013.01); **B01D 2257/708** (2013.01); **B01D 2257/80** (2013.01); **B01D 2258/06** (2013.01); **B01D 2259/40009** (2013.01); **B01D 2259/40081** (2013.01); **B01D 2259/40086** (2013.01); **B01D 2259/402** (2013.01); **B01D 2259/4146** (2013.01)

Citation (search report)  
See references of WO 02053266A2

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**WO 02053266 A2 20020711**; **WO 02053266 A3 20020822**; **WO 02053266 A9 20030220**; AU 2002229848 A1 20020716;  
EP 1351754 A2 20031015; FR 2818919 A1 20020705; FR 2818919 B1 20040206

DOCDB simple family (application)  
**FR 0200018 W 20020103**; AU 2002229848 A 20020103; EP 02710940 A 20020103; FR 0100068 A 20010104