

Title (en)
PHOTOACOUSTIC DETECTION METHOD FOR MEASURING CONCENTRATION OF A NON-HYDROCARBON COMPONENT OF A METHANE-CONTAINING GAS MIXTURE

Title (de)
PHOTOAKUSTISCHES NACHWEISVERFAHREN ZUR MESSUNG DER KONZENTRATION EINES NICHT-KOHLLENWASSERSTOFF-BESTANDTEILS EINES METHANHALTIGEN GASGEMISCHS

Title (fr)
PROCEDE DE DETECTION PHOTO-ACOUSTIQUE POUR MESURER LA CONCENTRATION D'UN COMPOSANT NON HYDROCARBONE D'UN MELANGE GAZEUX CONTENANT DU METHANE

Publication
EP 1511987 A1 20050309 (EN)

Application
EP 03755237 A 20030526

Priority
• HU 0300038 W 20030526
• HU P0201751 A 20020524

Abstract (en)
[origin: WO03100393A1] The present invention relates to a photoacoustic detection method for measuring concentration of a non-hydrocarbon component of a methane-containing gas mixture. The essence of the method is that the photoacoustic absorption spectrum for the gas mixture is recorded over a suitably chosen wavelength range while the gas mixture is continuously flowing through the measuring apparatus, and then for determining the concentration of the non-hydrocarbon component the thus obtained spectrum is used in combination with a photoacoustic signal generated by a reference cell (3) filled with a gas having predefined properties. The methane-containing gas mixture and the non-hydrocarbon component are preferably chosen to be natural gas to be sent out to gas lines and water vapour, respectively. The invention hence allows high-precision detection, even under industrial conditions, of water vapour content present in concentrations as low as about 0.5 ppm in natural gas.

IPC 1-7
G01N 21/17

CPC (source: EP)
G01N 21/1702 (2013.01); **G01N 33/0047** (2013.01); **G01N 2021/1704** (2013.01)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC

DOCDB simple family (publication)
WO 03100393 A1 20031204; AU 2003232375 A1 20031212; AU 2003232375 A8 20031212; DE 10392663 T5 20050901; EG 23784 A 20070813; EP 1511987 A1 20050309; HU 0201751 D0 20020828; HU 225660 B1 20070529; HU P0201751 A2 20031229; MA 27505 A1 20050901; RU 2004137093 A 20050720; RU 2336518 C2 20081020; TN SN04232 A1 20070312

DOCDB simple family (application)
HU 0300038 W 20030526; AU 2003232375 A 20030526; DE 10392663 T 20030526; EG NA2004000128 A 20041124; EP 03755237 A 20030526; HU P0201751 A 20020524; MA 27960 A 20041123; RU 2004137093 A 20030526; TN SN04232 A 20041123