

Title (en)
RE-CALIBRATION OF AB NDIR GAS SENSORS

Title (de)
REKALIBRIERUNG VON AB-NDIR-GASSENSOREN

Title (fr)
RÉÉTALONNAGE DE CAPTEURS DE GAZ NON DISPERSIF À ABSORPTION DANS L'INFRAROUGE (NDIR) SOLlicitÉS PAR ABSORPTION

Publication
EP 2715291 A2 20140409 (EN)

Application
EP 12794011 A 20120525

Priority

- US 201113149738 A 20110531
- US 201213348568 A 20120111
- US 201213420323 A 20120314
- US 2012039539 W 20120525

Abstract (en)
[origin: WO2012166585A2] Absorption-biased NDIR gas sensors can be recalibrated by adjusting a calibration curve obtained from a gamma ratio ("G") that has been normalized by the gamma ratio when no sample gas is present in the sample chamber ("Go"), G being the ratio of a signal channel output ("Vs") of the NDIR gas sensor divided by a reference channel output ("VR") of the NDIR gas sensor. An AB NDIR gas sensor uses an identical spectral narrow band pass filter for wavelength selection for both a signal channel having a signal channel pathlength and a reference channel having a reference channel pathlength and an absorption bias is applied to the signal channel by making the signal channel path length longer than the reference channel pathlength. Recalibration can be achieved by adjusting Go based upon a reversed calibration curve algorithm that uses a concentration of sample gas determined by a master NDIR gas sensor. Alternatively, the NDIR gas sensor can be self-recalibrating by using a stored standard gamma ratio and a measured standard gamma ratio and a self-calibration algorithm to correct the calibration curve.

IPC 8 full level
G01J 3/28 (2006.01); **G01J 3/42** (2006.01); **G01N 21/27** (2006.01); **G01N 21/35** (2014.01); **G01N 21/61** (2006.01)

CPC (source: EP)
G01J 3/28 (2013.01); **G01J 3/42** (2013.01); **G01N 21/274** (2013.01); **G01N 21/3504** (2013.01); **G01N 21/61** (2013.01); **G01N 2201/0662** (2013.01); **G01N 2201/12746** (2013.01)

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 2012166585 A2 20121206; **WO 2012166585 A3 20140508**; AU 2012262488 A1 20140116; CA 2837588 A1 20121206; EP 2715291 A2 20140409; EP 2715291 A4 20151021

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