Title (en)

MEASURING AN EXTENDED RANGE OF AIR FUEL RATIO.

Title (de)

MESSEN EINER AUSGEDEHNTEN SPANNE EINES LUFT/BRENNSTOFFVERHÄLTNISSES.

Title (fr)

MESURE D'UNE PLAGE ETENDUE DE RAPPORTS AIR/CARBURANT.

Publication

**EP 0150182 A4 19851219 (EN)**

Application

**EP 83903021 A 19830718**

Priority

US 8301098 W 19830718

Abstract (en)

[origin: WO8500659A1] A method of using selected portions of an exhaust gas sensor (110) having a substantially enclosed volume, v, between two electrochemical cells (111, 121). One electrochemical cell (111) is exposed to an exhaust gas and another electrochemical cell (121) is exposed to a reference atmosphere. An air/fuel ratio rich of stoichiometry uses electrochemical cell (121) as an oxygen pump, electrochemical cell (111) as a voltage generator, and the reference atmosphere as a source of oxygen. An air/fuel ratio lean of stoichiometry uses electrochemical cell (121, or 111) as an oxygen pump, electrochemical cell (111, or 121) as a voltage generator, and the ambient adjacent the oxygen pump as a sink oxygen. An air/fuel ratio at stoichiometry uses electrochemical cell (121) as a voltage generator.

IPC 1-7

**G01N 27/58**

IPC 8 full level

**G01N 27/27** (2006.01); **G01N 27/409** (2006.01); **G01N 27/413** (2006.01); **G01N 27/417** (2006.01)

CPC (source: EP)

**G01N 27/417** (2013.01)

Citation (search report)

- [X] GB 2097541 A 19821103 - FORD MOTOR CO
- [A] EP 0057899 A2 19820818 - HITACHI LTD [JP]
- [A] US 3699032 A 19721017 - RAPP ROBERT ANTHONY
- [A] US 3650934 A 19720321 - HICKAM WILLIAM M, et al
- [X] ANALYTICAL CHEMISTRY, vol. 49, no. 12, October 1977, pages 1813-1817, US; D.M. HAALAND: "Internal-reference solid-electrolyte oxygen sensor"
- See references of WO 8500659A1

Designated contracting state (EPC)

DE GB NL

DOCDB simple family (publication)

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DOCDB simple family (application)

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