

Title (en)

SENSOR ELEMENT FOR DETERMINING A PHYSICAL PROPERTY OF A TEST GAS

Title (de)

SENSORELEMENT ZUR BESTIMMUNG DER PHYSIKALISCHEN EIGENSCHAFT EINES MESSGASES

Title (fr)

ELEMENT DE MESURE DESTINE A DETERMINER UNE PROPRIETE PHYSIQUE D'UN GAZ DE MESURE

Publication

EP 1733216 A1 20061220 (DE)

Application

EP 05716878 A 20050302

Priority

- EP 2005050916 W 20050302
- DE 102004013852 A 20040320

Abstract (en)

[origin: WO2005090958A1] The invention relates to a sensor element, for determining a physical property of a test gas, in particular, the concentration of a gas component in a gas mixture, in particular, the oxygen concentration in the exhaust gas from internal combustion engines, comprising a solid electrolyte body (11), an external electrode (17), exposed to the test gas arranged on the solid electrolyte body (11), an inner electrode (18) arranged in the solid electrolyte body (11) and an electrical resistance heater (25), embedded in insulation (26), arranged in the solid electrolyte body (11) with a heating surface (251), preferably with a meandering embodiment. According to the invention, heating losses from the sensor element, caused by convection and radiation to the cold test gas flow, are reduced by arranging the outer electrode (17) in a cavity (12), embodied in the solid electrolyte body (11).

IPC 8 full level

G01N 27/407 (2006.01)

CPC (source: EP US)

G01N 27/4071 (2013.01 - EP US)

Citation (search report)

See references of WO 2005090958A1

Designated contracting state (EPC)

DE ES FR IT

DOCDB simple family (publication)

WO 2005090958 A1 20050929; DE 102004013852 A1 20051201; EP 1733216 A1 20061220; JP 2007529760 A 20071025; JP 4637167 B2 20110223; US 2008035480 A1 20080214

DOCDB simple family (application)

EP 2005050916 W 20050302; DE 102004013852 A 20040320; EP 05716878 A 20050302; JP 2007504391 A 20050302; US 59302005 A 20050302