

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

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Application

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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).

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