

Title (en)

SOLID ELECTROLYTE SENSOR FOR DETERMINING THE CONCENTRATION OF A GAS COMPONENT IN A GAS MIXTURE

Title (de)

FESTELEKTROLYTSENSOR ZUR BESTIMMUNG DER KONZENTRATION EINER GASKOMPONENTE IN EINEM GASGEMISCH

Title (fr)

CAPTEUR A ELECTROLYTE SOLIDE CONCU POUR DETERMINER LA CONCENTRATION D'UN COMPOSANT GAZEUX DANS UN MELANGE GAZEUX

Publication

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Application

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Priority

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Abstract (en)

[origin: WO03046541A1] The invention relates to a sensor for determining the concentration of a gas component in a gas mixture. The inventive sensor comprises at least one pump cell with an outer pump electrode that is exposed to the gas mixture, an inner pump electrode disposed in a measuring gas chamber (21), a Nernst cell (14) with a Nernst electrode (15) disposed in the measuring gas chamber (21), and a reference electrode (16) disposed in a reference gas channel (22). The pump cell and the Nernst cell are configured in a system of superimposed solid electrolyte layers (19), composed of a top layer which comprises the pump electrodes, a center layer (18) which comprises the measuring gas chamber (21) and the reference gas channel (22) and a bottom layer which comprises a heating element (24) and two connection lines (30, 31). For the purpose of signal noise rejection of the sensor output signal, the feeders (32, 33) of the Nernst cell are disposed side by side in one plane and symmetric to at least one of the two connection lines (31) of the heating element (24).

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