

Title (en)
THERMAL FLOW SENSOR FOR DETERMINING A GAS OR THE COMPOSITION OF A GAS MIXTURE AND THE FLOW SPEED OF THE GAS OR THE GAS MIXTURE

Title (de)
THERMISCHER STRÖMUNGSSENSOR ZUR BESTIMMUNG EINES GASES ODER DER ZUSAMMENSETZUNG EINES GASGEMISCHES, SOWIE DESSEN STRÖMUNGSGESCHWINDIGKEIT

Title (fr)
CAPTEUR D'ÉCOULEMENT THERMIQUE SERVANT À DÉTERMINER UN GAZ OU LA COMPOSITION D'UN MÉLANGE GAZEUX AINSI QUE SA VITESSE D'ÉCOULEMENT

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Abstract (en)
[origin: WO2014139786A1] The invention relates to a thermal flow sensor (1) for determining a gas or the composition of a gas mixture (2) and the flow speed of the gas or the gas mixture, comprising: - a substrate (3) onto which at least one first dielectric layer (6) is applied; - at least one heating structure (8) which is applied onto the first dielectric layer (6) and which is used to heat the gas or the gas mixture (2); - at least one first temperature sensor element (9) which is applied onto the first dielectric layer (6) at a distance from the heating structure (8) and which detects the temperature of the gas or the gas mixture (2) heated on the heating structure (8); - a regulating device (11) which regulates the heating structure (8) in a first operating state such that the heating structure has a specified temperature and which regulates the heating structure (8) in a second operating state such that a power supplied to the heating structure (8) corresponds to a specified power; and - an analyzing unit (12) which ascertains at least one physical property of the present gas or the gas mixture (2) using the operating states and which determines the present gas or the composition of the gas mixture (2) and the flow speed of the gas or the gas mixture using said physical property.

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