

Title (en)

OPTICAL SENSOR FOR MEASURING TRACE COMPONENTS IN LIQUIDS AND/OR GASES

Title (de)

OPTISCHER SENSOR ZUR MESSUNG VON SPURENBESTANDTEILEN IN FLÜSSIGKEITEN UND/ODER GASEN

Title (fr)

CAPTEUR OPTIQUE POUR LA MESURE DE CONSTITUANTS À L'ÉTAT DE TRACE DANS DES LIQUIDES ET/OU DES GAZ

Publication

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Application

EP 16726280 A 20160527

Priority

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Abstract (en)

[origin: WO2016192845A1] The optical sensor serves to measure trace components in liquids and/or gases and has at least one optical resonator (2) which has at least one porous layer, the porous layers whereof serve to receive moisture particles. The resonator (2) is a ring resonator, with which at least one optical waveguide (1) is associated. Light is fed into the waveguide (1), which is partially decoupled into the ring resonator (2). Interference with the waveguide (1) arises in the ring resonator (2) because of the partially very high fineness thereof, into which waveguide a light spectrum is radiated. A comb of wave length minima can be filtered out of the transmission spectrum. If trace components are deposited in the pores of the ring resonator (2), the refractive index and the optical path length are changed, which leads to wavelength shift of the filtered wavelength minima. The amount of trace components can be determined from the wavelength shift.

IPC 8 full level

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CPC (source: EP)

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