

Title (en)

OPTICAL PARTICLE SENSOR, IN PARTICULAR EXHAUST GAS SENSOR

Title (de)

OPTISCHER PARTIKELSENSOR, INSBESONDERE ABGASSENSOR

Title (fr)

CAPTEUR OPTIQUE DE PARTICULES, EN PARTICULIER CAPTEUR DE GAZ D'ÉCHAPPEMENT

Publication

EP 3874253 A1 20210908 (DE)

Application

EP 19773078 A 20190920

Priority

- DE 102018218734 A 20181031
- EP 2019075369 W 20190920

Abstract (en)

[origin: WO2020088843A1] The invention relates to a particle sensor for detecting particles in the flow of a measurement gas, in particular in order to detect soot particles in the exhaust gas channel of a burner or an internal combustion engine, comprising means for generating or supplying laser light (10), means for focusing the laser light (10), and means for detecting or transferring thermal radiation, wherein the particle sensor (16) has at least one optical entrance (40) which separates a region (16.1) exposed to the measurement gas from a region (16.2) which faces away from the measurement gas and is not exposed to the measurement gas, and the means for generating or supplying laser light (10) and/or the means for detecting or transferring thermal radiation is arranged in the region (16.2) facing away from the measurement gas. The invention is characterized in that the particle sensor (16) removes a sub-flow (321) from the flow of measurement gas and supplies same to the laser focus (22), and additionally the optical entrance (40) is fluidically shielded from the sub-flow (321).

IPC 8 full level

G01N 15/02 (2006.01); **G01N 15/14** (2006.01); **G01N 21/71** (2006.01); **G01N 21/85** (2006.01)

CPC (source: EP KR US)

G01M 15/108 (2013.01 - US); **G01N 1/2252** (2013.01 - KR); **G01N 15/0205** (2013.01 - EP KR US); **G01N 15/1459** (2013.01 - EP KR); **G01N 21/71** (2013.01 - EP KR); **G01N 2015/0046** (2013.01 - EP KR US); **G01N 2015/1027** (2024.01 - EP KR); **G01N 2021/8578** (2013.01 - EP KR)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

DE 102018218734 A1 20200430; CN 113039426 A 20210625; EP 3874253 A1 20210908; JP 2022506195 A 20220117; JP 7137009 B2 20220913; KR 20210083268 A 20210706; US 11761854 B2 20230919; US 2021372886 A1 20211202; WO 2020088843 A1 20200507

DOCDB simple family (application)

DE 102018218734 A 20181031; CN 201980072413 A 20190920; EP 19773078 A 20190920; EP 2019075369 W 20190920; JP 2021523403 A 20190920; KR 20217012491 A 20190920; US 201917285270 A 20190920