

Title (en)

ONLINE OR IN SITU MEASURING DEVICE FOR MEASURING THE CONCENTRATION OF A GAS

Title (de)

ONLINE- ODER IN-SITU-MESSEINRICHTUNG FÜR EINE KONZENTRATIONSMESSUNG EINES GASES

Title (fr)

DISPOSITIF DE MESURE EN LIGNE OU IN SITU PERMETTANT DE MESURER LA CONCENTRATION D'UN GAZ

Publication

**EP 4314777 A1 20240207 (DE)**

Application

**EP 22709227 A 20220210**

Priority

- DE 102021107229 A 20210323
- EP 2022053213 W 20220210

Abstract (en)

[origin: WO2022199928A1] The invention relates to an online or in situ measuring device (10) for measuring the concentration and/or quantitatively analyzing the concentration of a gas (22) or a gas mixture (24) using Raman spectroscopy. The measuring device (10) comprises at least one gas measuring chamber (20, 56) for the gas (22) or the gas mixture (24), said chamber having one or more optical entrances (28) and one or more optical exits (30). A high-power laser (14), in particular a laser diode (16), is provided which illuminates the gas (22) or the gas mixture (24) in the at least one gas measuring chamber (20, 56) in a focused manner in the visual spectral range and supplies Raman-scattered light (34, 62) from the focused illuminated gas (22) or gas mixture (24) to a spectral analysis unit (38) through an optical system (36) that amplifies the physical Raman scatter intensity of the Raman-scattered light (34, 62) and comprises filters and diaphragms. The invention additionally relates to a method for measuring the concentration of a gas (22) or a gas mixture (24) and to the use of the measuring device (10) and the method.

IPC 8 full level

**G01N 21/65** (2006.01)

CPC (source: EP)

**G01N 21/65** (2013.01); **G01N 21/85** (2013.01); **G01N 33/225** (2013.01); **G01N 2021/8578** (2013.01); **Y02E 60/50** (2013.01)

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

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

**DE 102021107229 A1 20220929**; EP 4314777 A1 20240207; WO 2022199928 A1 20220929

DOCDB simple family (application)

**DE 102021107229 A 20210323**; EP 2022053213 W 20220210; EP 22709227 A 20220210