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**(54) Title (EN):** SAMPLE-BASED GAS QUALITY CONTROL BY MEANS OF RAMAN SPECTROSCOPY

**(54) Title (FR):** SURVEILLANCE DE LA QUALITÉ D'UN GAZ À BASE DE MOTIF PAR SPECTROSCOPIE RAMAN

**(54) Title (DE):** MUSTERBASIERTE GASQUALITÄTSÜBERWACHUNG MITTELS RAMAN-SPEKTROSKOPIE

**(57) Abstract:**

**(EN):** For the purpose of gas quality control, a gas sample taken from a space (10) to be controlled is examined by spectroscopy, e.g. by Raman spectroscopy. The spectroscopic examination provides a measurement spectrum that covers a wavelength range. A deviation of the measurement spectrum from at least one reference sample (160) is detected. Depending on the detected deviation a gas quality warning (QW) is produced.

**(FR):** Pour surveiller la qualité d'un gaz, un examen spectroscopique d'un échantillon de gaz, provenant d'un espace à surveiller (10), est effectué par exemple par spectroscopie Raman. L'examen spectroscopique fournit un spectre de mesure qui s'étend dans une gamme de longueurs d'onde. Un écart du spectre de mesure par rapport à au moins un motif de comparaison (160) est ensuite détecté. Un avertissement de qualité de gaz (QW) est généré en fonction de l'écart détecté.

**(DE):** Zur Gasqualitätsüberwachung erfolgt eine spektroskopische Untersuchung einer Gasprobe aus einem zu überwachenden Raum (10), z.B. durch Raman-Spektroskopie. Die spektroskopische Untersuchung liefert ein sich über einen Wellenlängenbereich erstreckendes Messspektrum. Es wird dann eine Abweichung des Messspektrums von wenigstens einem Vergleichsmuster (160) erfasst. Abhängig von der erfassten Abweichung wird eine Gasqualitätswarnung (QW) erzeugt.

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