ICS 13.040.40

ONR CEN/TS 17337

Stationary source emissions — Determination of mass concentration of multiple gaseous species — Fourier transform infrared spectroscopy (CEN/TS 17337:2019)

Emissionen aus stationären Quellen — Ermittlung der Massenkonzentration von mehreren gasförmigen Stoffen — Fourier-Transform-Infrarot-Spektroskopie (CEN/TS 17337:2019)

Stationary source emissions — Determination of mass concentration of multiple gaseous species — Fourier transform infrared spectroscopy (CEN/TS 17337:2019)

Edition:

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National Foreword

This European Technical Specification CEN/TS 17337, falling within the scope of Committee 139 “Air quality”, has been published as ONR CEN/TS 17337, since the European development in this subject field is still in a state of flux and further practical experience has to be gained. The users are kindly requested to send relevant experiences and suggestions in writing to Austrian Standards International.

TECHNICAL SPECIFICATION **CEN/TS 17337**

SPÉCIFICATION TECHNIQUE

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English Version

Stationary source emissions - Determination of mass concentration of multiple gaseous species - Fourier transform infrared spectroscopy

Émissions de sources fixes - Détermination de la concentration en masse de multiples substances gazeuses - Spectroscopie infrarouge à transformée de Fourier

Emissionen aus stationären Quellen - Messung von Emissionen im Abgas mit FTIR-Geräten

This Technical Specification (CEN/TS) was approved by CEN on 1 April 2019 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (CEN/TS 17337:2019) has been prepared by Technical Committee CEN/TC 264 “Air quality”, the secretariat of which is held by DIN.

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1 Scope

This document describes a method for sampling and determining the concentration of gaseous emissions to atmosphere of multiple species from ducts and stacks by extractive Fourier transform infrared (FTIR) spectroscopy.

This method is applicable to periodic monitoring and to the calibration or control of automated measuring systems (AMS) permanently installed on a stack, for regulatory or other purposes.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 14793:2017, *Stationary source emissions - Demonstration of equivalence of an alternative method with a reference method*

EN 15259:2007, *Air quality - Measurement of stationary source emissions - Requirements for measurement sections and sites and for the measurement objective, plan and report*

EN 15267-4:2017, *Air quality - Certification of automated measuring systems - Part 4: Performance criteria and test procedures for automated measuring systems for periodic measurements of emissions from stationary sources*

EN ISO 14956, *Air quality - Evaluation of the suitability of a measurement procedure by comparison with a required measurement uncertainty (ISO 14956)*

ISO/IEC Guide 98-3:2008, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

3.1
FTIR spectrometer
interferometer that uses infrared wavelengths of the electromagnetic spectrum for measurements and normally includes a sample cell and detector

Note 1 to entry: The interferometer records an interferogram which represents the detection systems response as a function of time. The Fourier-transform function is applied to produce optical intensity as a function of frequency or wavelength.

3.2
sample cell
part of the FTIR instrument where the infrared beam is transmitted through the sample