Stationary source emissions - Quality assurance and quality control procedures for automated dust arrestment plant monitors

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NATIONAL FOREWORD

See Eesti standard EVS-EN 17389:2020 sisaldab Euroopa standardi EN 17389:2020 ingliskeelset teksti.	This Estonian standard EVS-EN 17389:2020 consists of the English text of the European standard EN 17389:2020.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.05.2020.	Date of Availability of the European standard is 06.05.2020.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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Stationary source emissions - Quality assurance and quality control procedures for automated dust arrestment plant monitors

Émissions de sources fixes - Procédures d'assurance qualité et de contrôle qualité applicables aux analyseurs automatiques pour la surveillance des systèmes de dépoussiérage

Emissionen aus stationären Quellen - Verfahren zur Qualitätssicherung und Qualitätslenkung von automatischen Geräten zur Überwachung von Staubabscheidern

This European Standard was approved by CEN on 6 April 2020.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (EN 17389:2020) has been prepared by Technical Committee CEN/TC 264 “Air quality”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2020, and conflicting national standards shall be withdrawn at the latest by November 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The type of monitoring of dust emissions at industrial plants depends on the monitoring objectives. In general, three monitoring objectives can be distinguished:

— Monitoring of plants with emission limit values (ELV), which require quantitative measurements with permanently installed automated measuring systems (AMS) providing measured values with a maximum permissible measurement uncertainty specified by legislation, in order to determine exceedances of the ELV and number of exceedances for specified time periods forms the first level of monitoring. Large combustion plants and waste incineration plants are examples of plants under this monitoring objective. The measurements are performed with AMS, which are performance tested and certified according to EN 15267-1, EN 15267-2 and EN 15267-3. The quality assurance measures for these AMS are laid down in EN 14181 and EN 13284-2.

— Monitoring of plants with ELV, which require qualitative measurements in order to demonstrate that the dust emissions are below the specified ELV and the dust arrestment plant works properly form the second level of monitoring. Foundries are typical examples of plants under this monitoring objective. The measurements are performed with filter dust monitors, which can be calibrated in mass concentration units (e.g. mg/m^3) but have a larger measurement uncertainty than quantitative measurements. Filter dust monitors are performance tested and certified according to EN 15859. The quality assurance measures for these instruments are laid down in this document.

— Monitoring of dust arrestment plants with indicative measurements in order to indicate a possible problem with the dust arrestment plant by monitoring a change in the emissions level or a change in the magnitude of the dust pulses created by the cleaning process forms the third level of monitoring. The measurements are performed with filter leakage monitors which are performance tested and certified according to EN 15859. The quality assurance measures for these instruments are laid down in this document.

This document provides supporting information on the quality assurance and quality control procedures related to automated dust arrestment plant monitors, which cover both *filter dust monitors* and *filter leakage monitors*.

For the purposes of this document, the term *instrument* is used to encompass both types of automated dust arrestment plant monitors. The terms *filter dust monitor* and *filter leakage monitor* are only used where it is necessary to distinguish between the two types.

This document includes provisions for the selection, installation, configuration, ongoing quality assurance and annual surveillance test of automated dust arrestment plant monitors.

This document supports requirements for filter leakage monitors and filter dust monitors specified e.g. in national legislation or in a number of industrial sector BREF Documents.

1 Scope

This document specifies the quality assurance and quality control procedures related to automated dust arrestment plant monitors.

This document applies to two types of instruments commonly used for dust arrestment plant control purposes:

— filter dust monitors that are configured in mass concentration units (e.g. mg/m^3) and are used for dust arrestment control purposes;

— filter leakage monitors that indicate a change in the emission levels or a change in the magnitude of the dust pulses created by the cleaning process of the dust arrestment plant.

This document applies to instruments certified according to the requirements of EN 15859.

This document provides information on the configuration, ongoing quality assurance (with automatic internal zero point and reference point checks) and annual surveillance tests of instruments. This ensures that the instrument is providing information to demonstrate that the dust arrestment plant is working correctly and controlling dust pollution to the required levels.

The configuration of the alarm levels of filter dust monitors is performed by parallel measurements with the standard reference method in EN 13284-1.

This document specifies the set-up of filter leakage monitors used to monitor a change in response caused by deterioration in the operation of the dust arrestment plant.

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 13284-1, *Stationary source emissions - Determination of low range mass concentration of dust - Part 1: Manual gravimetric method*

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

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 https://www.iso.org/obp

3.1
dust
particles, of any shape, structure or density, dispersed in the gas phase at the sampling point conditions which may be collected by filtration under specified conditions after representative sampling of the gas to be analysed

Note 1 to entry: Adapted from EN 13284-1:2017, 3.1.