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Utsläpp och utomhusluft – Bestämning av masskoncentrationen av kolmonoxid (CO) – Referensmetod: Icke-dispersiv infraröd spektroskopi

Stationary source emissions – Determination of the mass concentration of carbon monoxide – Standard reference method: non-dispersive infrared spectrometry

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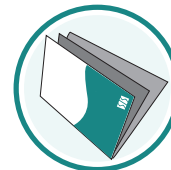
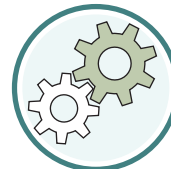
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Denna standard ersätter SS-EN 15058:2006, utgåva 1.

The European Standard EN 15058:2017 has the status of a Swedish Standard. This document contains the official English version of EN 15058:2017.

This standard supersedes the Swedish Standard SS-EN 15058:2006, edition 1.

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EUROPEAN STANDARD

EN 15058

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2017

ICS 13.040.40

Supersedes EN 15058:2006

English Version

Stationary source emissions - Determination of the mass concentration of carbon monoxide - Standard reference method: non-dispersive infrared spectrometry

Émissions de sources fixes - Détermination de la concentration massique de monoxyde de carbone - Méthode de référence normalisée : spectrométrie infrarouge non dispersive

Emissionen aus stationären Quellen - Bestimmung der Massenkonzentration von Kohlenmonoxid - Standardreferenzverfahren: Nicht-dispersive Infrarotspektrometrie

This European Standard was approved by CEN on 26 September 2016.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
European foreword.....	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Symbols and abbreviations	13
4.1 Symbols.....	13
4.2 Abbreviated terms	14
5 Principle	14
5.1 General.....	14
5.2 Measuring principle	14
6 Description of the measuring system	15
6.1 General.....	15
6.2 Sampling and sample gas conditioning system.....	16
6.2.1 Sampling probe	16
6.2.2 Filter.....	16
6.2.3 Sample gas line.....	16
6.2.4 Sample gas conditioning system.....	16
6.2.5 Sample gas pump.....	17
6.2.6 Secondary filter.....	17
6.2.7 Flow controller and flow meter	17
6.3 Analyser equipment.....	17
6.3.1 General.....	17
6.3.2 Pressure and temperature effects	18
6.3.3 Sampling pump for the analyser.....	18
6.3.4 Interferences due to infrared absorbing gases	18
7 Performance characteristics of the SRM	18
8 Suitability of the measuring system for the measurement task	20
9 Field operation	20
9.1 Measurement planning	20
9.2 Sampling strategy.....	21
9.2.1 General.....	21
9.2.2 Measurement section and measurement plane.....	21
9.2.3 Minimum number and location of measurement points.....	21
9.2.4 Measurement ports and working platform	21
9.3 Choice of the measuring system	21
9.4 Setting of the measuring system on site	22
9.4.1 General.....	22
9.4.2 Preliminary zero and span check, and adjustments	22
9.4.3 Zero and span checks after measurement	23

10	Ongoing quality control	23
10.1	Introduction	23
10.2	Frequency of checks	23
11	Expression of results	24
12	Equivalence of an alternative method	25
13	Measurement report	25
Annex A (informative) Validation of the method in the field		26
A.1	General	26
A.2	Characteristics of installations	26
A.3	Repeatability and reproducibility in the field	27
A.3.1	General	27
A.3.2	Repeatability	28
A.3.3	Reproducibility	29
Annex B (informative) Schematics of non-dispersive infrared spectrometer		31
Annex C (informative) Calculation of the uncertainty associated with a concentration expressed on dry gas and at an oxygen reference concentration		33
C.1	Uncertainty associated with a concentration expressed on dry gas	33
C.2	Uncertainty associated with a concentration expressed at a oxygen reference concentration	35
Annex D (informative) Example of assessment of compliance of non-dispersive infrared method for CO with requirements on emission measurements		37
D.1	General	37
D.2	Elements required for the uncertainty determinations	37
D.2.1	Model equation	37
D.2.2	Combined uncertainty	38
D.2.3	Expanded uncertainty	38
D.2.4	Determination of uncertainty contributions in case of rectangular distributions	39
D.2.5	Determination of uncertainty contributions by use of sensitivity coefficients	39
D.3	Example of an uncertainty calculation	40
D.3.1	Site specific conditions	40
D.3.2	Performance characteristics	41
D.3.3	Determination of the uncertainty contributions	42
D.3.4	Result of uncertainty calculation	45
D.3.4.1	Standard uncertainties	45
D.3.4.2	Combined uncertainty	46
D.3.4.3	Expanded uncertainty	46
D.3.4.4	Evaluation of the compliance with the required measurement quality	46
Annex E (informative) Example of correction of data from drift effect		47

SS-EN 15058:2017 (E)

Annex F (informative) Significant technical changes.....	49
Bibliography	50

European foreword

This document (EN 15058:2017) has been prepared by Technical Committee CEN/TC 264 "Air quality", the secretariat of which is held by DIN.

This document supersedes EN 15058:2006.

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 July 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.

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

Annex F provides details of significant technical changes between this document and the previous edition.

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SS-EN 15058:2017 (E)

1 Scope

This European Standard specifies the standard reference method (SRM) based on the infrared (IR) absorption principle. It includes the sampling and the gas conditioning system, and allows the determination of the carbon monoxide CO in flue gases emitted to the atmosphere from ducts and stacks.

This European Standard specifies the characteristics to be determined and the performance criteria to be fulfilled by portable automated measuring systems (P-AMS) using the IR measurement method. It applies for periodic monitoring and for the calibration or control of automated measuring systems (AMS) permanently installed on a stack, for regulatory or other purposes.

This European Standard specifies criteria for demonstration of equivalence of an alternative method (AM) to the SRM by application of EN 14793:2017.

This European Standard has been validated during field tests on waste incineration, co-incineration and large combustion plants and on a recognized test bench. It has been validated for CO concentrations with sampling periods of 30 min in the range of 0 mg/m³ to 400 mg/m³ for large combustion plants and 0 mg/m³ to 740 mg/m³ for waste and co-incineration. Directive 2010/75/EU lays down emission values which are expressed in mg/m³, on dry basis at a specified value of oxygen and at standard conditions (273 K and 101,3 kPa).

NOTE The characteristics of installations, the conditions during field tests and the values of repeatability and reproducibility in the field are given in Annex A.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 emission – 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 14956:2002, *Air quality - Evaluation of the suitability of a measurement procedure by comparison with a required measurement uncertainty (ISO 14956:2002)*

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.

3.1

standard reference method

SRM

reference method prescribed by European or national legislation

[SOURCE: EN 15259:2007]

3.2 reference method RM

measurement method taken as a reference by convention, which gives the accepted reference value of the measurand

Note 1 to entry: A reference method is fully described.

Note 2 to entry: A reference method can be a manual or an automated method.

Note 3 to entry: Alternative methods can be used if equivalence to the reference method has been demonstrated.

[SOURCE: EN 15259:2007]

3.3 measurement method

method described in a written procedure containing all the means and procedures required to sample and analyse, namely field of application, principle and/or reactions, definitions, equipment, procedures, presentation of results, other requirements and measurement report

[SOURCE: EN 14793:2017]

3.4 alternative method AM

measurement method which complies with the criteria given by this European Standard with respect to the reference method

Note 1 to entry: An alternative method can consist of a simplification of the reference method.

[SOURCE: EN 14793:2016]

3.5 measuring system

set of one or more measuring instruments and often other devices, including any reagent and supply, assembled and adapted to give information used to generate measured quantity values within specified intervals for quantities of specified kinds

[SOURCE: JCGM 200:2012]

3.6 automated measuring system AMS

entirety of all measuring instruments and additional devices for obtaining a result of measurement

Note 1 to entry: Apart from the actual measuring device (the analyser), an AMS includes facilities for taking samples (e.g. probe, sample gas lines, flow meters and regulator, delivery pump) and for sample conditioning (e.g. dust filter, pre-separator for interferences, cooler, converter). This definition also includes testing and adjusting devices that are required for functional checks and, if applicable, for commissioning.

Note 2 to entry: The term “automated measuring system” (AMS) is typically used in Europe. The term “continuous emission monitoring system” (CEMS) is also typically used in the UK and USA.

[SOURCE: EN 15267-4:2017]