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BS EN 14792:2017



BSI Standards Publication

Stationary source emissions — Determination of mass concentration of nitrogen oxides — Standard reference method: Chemiluminescence

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This British Standard is the UK implementation of EN 14792:2017. It supersedes BS EN 14792:2005 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EH/2/1, Stationary source emission.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Stationary source emissions - Determination of mass concentration of nitrogen oxides - Standard reference method: chemiluminescence

Emissions de sources fixes - Détermination de la concentration massique des oxydes d'azote - Méthode de référence normalisée : chimiluminescence

Emissionen aus stationären Quellen - Bestimmung der Massenkonzentration von Stickstoffoxiden - Standardreferenzverfahren: Chemilumineszenz

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

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European foreword

This document (EN 14792:2017) has been prepared by Technical Committee CEN/TC 264 "Air quality", the secretariat of which is held by DIN.

This document supersedes EN 14792:2005.

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of an identical text or by endorsement, at the latest by July 2017, and conflicting national standards shall be withdrawn at the latest by July 2017.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 H provides details of significant technical changes between this document and the previous edition.

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

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1 Scope

This European Standard specifies the standard reference method (SRM) based on the chemiluminescence principle for the determination of the nitrogen oxides (NO_x) in flue gases emitted to the atmosphere from ducts and stacks. It includes the sampling and the gas conditioning system, as well as the analyser.

This European Standard specifies the characteristics to be determined and the performance criteria to be fulfilled by portable automated measuring systems (P-AMS) based on this 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 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 installations and on a recognized test-bench. It has been validated for sampling periods of 30 min in the range of 0 mg/m³ to 1 300 mg/m³ of NO_x for large combustion plants and 0 mg/m³ to 400 mg/m³ of NO_x for waste incineration, according to emission limit values (ELV) laid down in the Directive 2010/75/EU.

The ELV for NO_x (NO + NO₂) in EU Directives is expressed in mg/m³ of NO₂ on a dry basis, at a specified value for 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)*