Masinate ohutus. Õhu kaudu levivate kahjulike ainete emissiooni hindamine. Osa 2: Määratud saasteaine emissiooni intensiivsuse määramine asendusgaasi meetodiga

Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 2: Tracer method for assessing the emission rate of a specified pollutant

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 1093-2:2007 sisaldab Euroopa standardi EN 1093-2:2006 ingliskeelset teksti. Käesolev dokument on jõustatud 29.01.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1093-2:2007 consists of the English text of the European standard EN 1093-2:2006. This document is endorsed on 29.01.2007 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies a method to enable measurements of the emission rates of gaseous substances from a single machine, whose operation can be controlled, using tracer gas techniques. This European Standard is not applicable to machinery which are manufactured before the date of its publication as EN.	**Scope:** This European Standard specifies a method to enable measurements of the emission rates of gaseous substances from a single machine, whose operation can be controlled, using tracer gas techniques. This European Standard is not applicable to machinery which are manufactured before the date of its publication as EN.

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Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 2: Tracer gas method for the measurement of the emission rate of a given pollutant

Sécurité des machines - Evaluation de l'émission de substances dangereuses véhiculées par l'air - Partie 2: Méthode par traçage pour l'évaluation du débit d'émission d'un polluant donné

Sicherheit von Maschinen - Bewertung der Emission von luftgetragenen Gefahrstoffen - Teil 2: Tracergasverfahren zur Messung der Emissionsrate eines bestimmten luftverunreinigenden Stoffes

This European Standard was approved by CEN on 4 November 2006.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Contents

Page

Foreword 3
Introduction 4
1 Scope 5
2 Normative references 5
3 Terms and definitions 5
4 Principle 5
5 Location of the machine 5
6 Apparatus and materials 6
7 Measurement points 7
8 Procedure 8
9 Data analysis 8
10 Expression of results 9
11 Test report 10
Annex ZA (informative) **Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC** 12

Foreword

This document (EN 1093-2:2006) has been prepared by Technical Committee CEN/TC 114 “Safety of machinery”, 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 June 2007, and conflicting national standards shall be withdrawn at the latest by June 2007.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This part 2 of EN 1093 *Safety of machinery — Evaluation of the emission of airborne hazardous substances* belongs to a series of documents, the other parts of which are the following:

— Part 1: Selection of test methods;

— Part 3: Test bench method for the measurement of the emission rate of a given pollutant;

— Part 4: Capture efficiency of an exhaust system — Tracer method;

— Part 6: Separation efficiency by mass, unducted outlet;

— Part 7: Separation efficiency by mass, ducted outlet;

— Part 8: Pollutant concentration parameter, test bench method;

— Part 9: Pollutant concentration parameter, room method;

— Part 11: Decontamination index.

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

Introduction

This European Standard is a type B standard as stated in EN ISO 12100-1.

The provisions of this European Standard can be supplemented or modified by a type C standard.

NOTE For machines which are covered by the scope of a type C standard and which have been designed and built according to the provisions of that standard, the provisions of that type C standard take precedence over the provisions of this type B standard.

1 Scope

This European Standard specifies a method to enable measurements of the emission rates of gaseous substances from a single machine, whose operation can be controlled, using tracer gas techniques.

This European Standard is not applicable to machinery which is manufactured before the date of its publication as an EN.

2 Normative references

The following referenced documents are indispensable for the application 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 1093-1, *Safety of machinery — Evaluation of the emission of airborne hazardous substances — Part 1: Selection of test methods*

EN ISO 12100-1:2003, *Safety of machinery — Basic concepts, general principles for design — Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1093-1, EN ISO 12100-1:2003 and the following apply.

3.1
tracer gas technique
use of gaseous substances with an aerodynamic behaviour comparable with the gaseous hazardous substance under consideration and for which concentrations can be reliably measured

4 Principle

The principle is based on the use of a tracer gas generated at a known and constant emission rate to provide the best representation of the pollutant source. The mean tracer gas and pollutant concentrations are measured in the vicinity of the source. Assuming that the aerodynamic behaviour of the pollutant is equal to that of the tracer gas, the pollutant emission rate can be determined.

5 Location of the machine

5.1 General

The method is intended for use for a machine located either in a test room or in the field.

5.2 Test room method

The general airflow patterns in the test room should be characterised to enable more precise control of the general and local ventilation to be achieved. The machine should be placed in the centre of the room.