Masinate ohutus. Õhu kaudu levivate ohtlike ainete emissiooni hindamine. Osa 6: Massi järgi eraldamise efektiivsus, jaotuskanaliteta väljumisava

Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 6: Separation efficiency by mass, unducted outlet

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1093-6:1999 sisaldab Euroopa standardi EN 1093-6:1998 ingliskeelset teksti. Käesolev dokument on jõustatud 23.11.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1093-6:1999 consists of the English text of the European standard EN 1093-6:1998. This document is endorsed on 23.11.1999 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: Käesolev Euroopa standard määrab kindlaks katseseadmemeetodi massi järgi eraldamise efektiivsuse mõõtmiseks jaotuskanaliteta väljumisavaga õhupuhastussüsteemide korral, mis töötavad ettemääratud tingimustel. Meetodit rakendatakse selliste süsteemide korral, mis puhastavad õhku tolmust, suitsust, aurust, udust või gaasist.	**Scope:**

ICS 13.040.40, 23.120

Võtmesõnad: efektiivsus, emissioon, eraldamismeetodid, katsestendid, mõõtmine, ohtlikud ained, seadmete ohutus, õhu saastumine, õhupuhastusseadmed

Hinnagrupp D

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Descriptors: Emission, hazardous substances, separation efficiency.

English version

Safety of machinery

Evaluation of the emission of airborne hazardous substances

Part 6: Separation efficiency by mass, unducted outlet

Sécurité des machines – Evaluation de l'émission de substances dangereuses véhiculées par l'air – Partie 6: Efficacité massique de séparation, sortie libre

Sicherheit von Maschinen – Bewertung der Emission von luftgetragenen Gefahrstoffen – Teil 6: Masse-abscheidegrad, diffuser Auslaß

This European Standard was approved by CEN on 1998-09-04.

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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.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Contents

Foreword

This European Standard 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 March 1999, and conflicting national standards shall be withdrawn at the latest by March 1999.

This European Standard 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 standard.

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

0 Introduction

This European Standard is a type B standard as stated in ENV 1070 : 1993.

This European Standard is a part of EN 1093. Part 1 of this standard presents a selection of different methods for the evaluation of the emission of airborne hazardous substances from machines.

1 Scope

This European Standard specifies a test rig method for the measurement of the separation efficiency by mass of air cleaning systems with unducted outlet, operating under defined conditions. The method shall apply to systems that clean air of aerosols (smoke, dust, fume, mist), vapour or gas.

Measurement of the separation efficiency by mass of an air cleaning system for an intended use can serve for the:

a) evaluation of the performance of an air cleaning system;

b) evaluation of the improvement of the air cleaning system;

c) comparison of air cleaning systems;

d) ranking of air cleaning systems according to their separation efficiency by mass;

e) determination of the state of the art of air cleaning systems of the same intended use with respect to their separation efficiency by mass.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 292-1 : 1991	Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology
EN 292-2 : 1991	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications
EN 292-2/A1 : 1995	Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications; Amendment A1
ENV 1070 : 1993	Safety of machinery - Terminology
prEN 1093-1	Safety of machinery - Evaluation of the emission of airborne hazardous substances - Part 1: Selection of test methods

3 Definitions

For the purposes of this European Standard the definitions of ENV 1070 : 1993 and the following definition applies:

separation efficiency by mass η_s: The separation efficiency of an air cleaning system for a specified pollutant is the ratio of the mass of pollutant retained by the air cleaning system (m_3) to the mass of pollutant entering the air cleaning system (m_1) during a given period.

The separation efficiency of an air cleaning system as a percentage is expressed as follows:

$$\eta_s = \frac{m_3}{m_1} \cdot 100 \qquad \ldots (1)$$

4 Principle

The principle of the measurement method is to operate the air cleaning system under defined conditions in a test rig and to determine the mass of the test substance in the air upstream and downstream of the air cleaning system.

NOTE: The test substance, which may be the real pollutant or a surrogate, should preferably be of low toxicity and compatible with the objectives of the method.