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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 25749.4-2010

Safety of machinery -- Evaluation of the emission of airborne hazardous substances -- Part 4: Tracer method for the measurement of the capture efficiency of an exhaust system

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Foreword

GB/T 25749 "assessment of emissions of harmful substances airborne machinery safety" by the following nine components.

Selection of test methods. --- Part 1

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This part of GB /Part 4 T 25749 of.

This part identical with ISO 29042-4.2009 "Safety of machinery - Assessment airborne emissions of harmful substances - Part 4. Measurement

Capture efficiency of an exhaust system tracer method "(in English).

This section is equivalent translation ISO 29042-4.2009. For ease of use, this section made the following editorial changes.

--- Deleted the ISO foreword, preface rewritten;

--- Delete the contents of the introduction on ISO /TC199 scope of work;

--- Chapter 1 column item from a) start making;

--- The Lead Normative documents according to GB/T 1.1-2009 modified and ISO 29042-4.2009 references country

Corresponding to international standards to national standards.

This part of the National Safety Standardization Technical Committee (SAC/TC208) and focal points.

This section is drafted. Mechanical Science Research Institute, Shanghai China test product Standard Detection Technology Co., Limited LiuGong

Division, Nanjing Forestry University Institute of Engineering electromechanical meter.

Introduction

Machinery safety standard is structured as follows.

--- A class standard (basic safety standards) give basic concepts apply to all mechanical, design principles and general characteristics.

--- B class standard (generic safety standards), it relates to a mechanical safety feature or use a wide range of safety devices in class.

* B1 class, specific security features (e.g., safety distance, surface temperature, noise) standard;

* B2 class, the safety device (such as a hand control devices, interlocking devices, pressure sensitive devices, guards).

--- C class standards (machine safety standards), for a particular machine or group of machines shall specify detailed safety standard requirements.

According to GB/T 15706.1, this section is a Class B standards.

Class C standard may supplement or modify the terms of this section.

For Class C in accordance with the standard design and construction of the machine, if the C class standards in terms of Class A or Class B standards are inconsistent, priority

Using C standard.

Safety of machinery airborne

Part 4 Assessment emissions of harmful substances.

Measurement system to capture exhaust efficiency tracer method

1 Scope

This section GB/T 25749 specifies the measurement of the exhaust system installed on the machine capture efficiency. The method is based on tracer technology

Surgery, and can in all types of test environment (test stand, indoor and outdoor, see GB/T 25749.1) in operation.

This technique works only if the aerodynamic properties of the tracer gas and real pollutants having comparable circumstances apply (see 7.1.1).

Measuring the exhaust system can be used to capture efficiency.

a) evaluate machine performance exhaust system;

b) improved exhaust system assessment;

c) design is similar machine exhaust system;

d) in accordance with the capture efficiency of the exhaust system of classification;

e) determining the exhaust system to achieve a given air flow to capture the required level of efficiency;

f) technology to determine the machine according to the capture efficiency of the exhaust system.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein

Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 15706.1-2007 Safety of machinery - Basic concepts, general principles for design - Part 1. Basic terminology, methodology (ISO

12100-1.2003, IDT)

3 Terms and Definitions

GB/T 15706.1-2007 and as defined in the following terms and definitions apply to this document.

3.1

Capture efficiency captureefficiency

etaC

< Exhaust System> Exhaust System collected directly given this contaminant mass flow of pollutants emitted by machines and uncontrolled mass flow

The ratio between the amount.

3.2

Tracer technique tracertechnique

Use the aerodynamic characteristics of hazardous substances considered similar and gaseous substance technology concentration can be measured reliably.

Principle 4

Principle of measurement method comprising.