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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 13277.6-2021

Compressed air - Part 6: Test methods for gaseous contaminant content

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Table of Contents

foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents"

drafted:

This document is part 6 of GB/T 13277 "Compressed Air": GB/T 13277 has published the following parts:

--- Part 1: Pollutant purification levels;

--- Part 2: Measurement method of suspended oil content;

--- Part 3: Humidity measurement methods;

--- Part 4: Solid particle measurement methods;

--- Part 5: Measurement methods for oil vapors and organic solvents;

--- Part 6: Measurement methods for the content of gaseous pollutants;

--- Part 7: Measurement of active microbial content:

This document is revised and adopted ISO 8573-6:2003 "Compressed Air Part 6: Measurement of Gaseous Pollutant Content":

The technical differences between this document and ISO 8573-6:2003 and their reasons are as follows:

--- Replaced ISO 8573-1 (see 3:1) with the normatively cited GB/T 13277:1, and the degree of consistency between the two documents was revised

To adapt to the technical conditions of our country and increase the operability;

--- Replaced ISO 1219-1 (see 3:2) with the normatively cited GB/T 786:1, and the degree of consistency between the two documents is

equivalent:

The following editorial changes have been made to this document:

--- Change the description and content of the scope of Chapter 1 to comply with the provisions of GB/T 1:1-2020;

--- Deleted ISO 2602 and ISO 2854 not quoted in the text;

--- Change the "reference condition" in Chapter 7 to "standard state" to be consistent with other parts of GB/T 13277;

--- Change the order of the appendices in the order in which they are located in the main text:

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

There are various pollutants in the compressed air compressed by the compressor, mainly including particles, water, oil, gaseous pollutants and active microorganisms:

etc: These pollutants will have various adverse effects in different gas usage occasions: In order to adapt to the development of compressed air purification equipment,

In order to meet the needs of air equipment, the development of compressed air quality measurement methods and standards has become an important task in the field of compressed air purification:

GB/T 13277 aims to establish a measurement method that is generally applicable to various pollutants in compressed air, and is intended to be composed of nine parts:

--- Part 1: Pollutant purification levels: The purpose is to explain various pollutants in compressed air, and to propose various pollutants

description method:

--- Part 2: Measurement method for suspended oil content: The purpose is to provide an operational and reliable measurement of suspended oil content in compressed air:

high-quality measurement method:

--- Part 3: Humidity measurement methods: The purpose is to provide an operable and reliable method for the measurement of gaseous water content in compressed air:

Measurement methods:

--- Part 4: Solid particle measurement method: The purpose is to provide an operable,

A highly reliable measurement method:

--- Part 5: Measurement methods for oil vapors and organic solvents: The purpose is to measure the concentration of pollutants such as oil vapor in compressed air

Provides an actionable, reliable measurement method:

--- Part 6: Method for measuring the content of gaseous pollutants: The purpose is to reduce gaseous pollution such as carbon monoxide and carbon dioxide in compressed air

The measurement of the concentration of the substance provides an operational and reliable measurement method:

--- Part 7: Measurement of active microbial content: The purpose is to provide a reliable method for the measurement of active microbial content in compressed air:

Operational, reliable measurement method:

--- Part 8: Method for measuring the mass concentration of solid particles: The purpose is to improve the measurement of solid particle mass concentration in compressed air:

Provides an operational and reliable measurement method:

--- Part 9: Method for measuring liquid water content: The purpose is to provide operational, reliable measurement of liquid water content in compressed air:

high-quality measurement method:

compressed air

Part 6: Method for measuring the content of gaseous pollutants

1 Scope

This document specifies the selection guidelines and applicable methods, sampling techniques, measurement methods, standards for the measurement of gaseous pollutants in compressed air:

Accuracy status, evaluation of test results, uncertainty and test report:

This document is applicable to carbon monoxide, carbon dioxide, sulfur dioxide, nitrogen monoxide, nitrogen dioxide, C1~C5 range (large

Refer to GB/T 13277:5) for the measurement of gaseous pollutants such as hydrocarbons at or equal to C6:

The measurement methods given in this document are also applicable to other gases:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to

this document:

GB/T 786:1 Graphical symbols and circuit diagrams of fluid transmission systems and components - Part 1: Graphical symbols (GB/T 786:1-

2021, ISO 1219-1:2012, IDT)

GB/T 13277:1 Compressed Air Part 1: Pollutant Purification Level (GB/T 13277:1-2008, ISO 8573-1:2001,

MOD)

3 Terms and definitions, units and symbols

3:1 Terms and Definitions

The terms and definitions defined in GB/T 13277:1 apply to this document:

3:2 Units and symbols

The symbols specified in GB/T 786:1 apply to this document: See Table 1 for the description of units and symbols used in this document:

Table 1 Preferred units and symbols used in this document

Unit/Symbol Description

MPa gauge pressure, 1MPa=1000000Pa

mL/m3 volume fraction, expressed as milliliters per cubic meter

μg/g mass fraction, expressed as micrograms per gram

1/102(m3/m3) volume fraction

MPa(a) absolute pressure