NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 13277.1-2023

Compressed air - Part 1: Contaminants and purity classes

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020 "Directives for standardization - Part 1.Rules for the structure and drafting of standardizing documents".

This document is Part 1 of GB/T 13277 "Compressed air". GB/T 13277 has published the following parts.

- Part 1.Contaminants and purity classes;
- Part 2.Test methods for oil aerosol content;
- Part 3.Test methods for measurement of humidity;
- Part 4.Test methods for solid particle content;
- Part 5.Test methods for oil vapour and organic solvent content;
- Part 6.Test methods for gaseous contaminant content;
- Part 7.Test method for viable microbiological contaminant content.

This document replaces GB/T 13277.1-2008 "Compressed air - Part 1.Contaminants and purity classes". Compared with GB/T 13277.1-2008, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

a) ADD the terms and definitions of "lubricant/coolant" and "microbiological

contaminants" (see 3.1, 3.2 of this document);

b) MODIFY the particle class index in compressed air (see Table 1 of this document, Table 2 of the 2008 edition);

c) MODIFY the liquid water class index in compressed air (see Table 2 of this document, Table 4 of the 2008 edition);

d) MODIFY the total oil content class index in compressed air (see Table 3 of this document, Table 5 of the 2008 edition).

This document has modified and adopted ISO 8573-1.2010 "Compressed air - Part 1. Contaminants and purity classes".

The technical differences between this document and ISO 8573-1.2010 and their reasons are as follows.

- REPLACE ISO 7183 with the normative reference GB/T 10893.1 (see Clause 3), to adapt to the technical conditions of China and increase operability;

Compressed air - Part 1.Contaminants and purity classes

1 Scope

This document specifies the purity classes of particles, water and oil in compressed air and the description methods of viable microbiological and gaseous contaminants.

This document applies to the purity classes and description methods of contaminants in compressed air.

NOTE. The purity classes of contaminants specified in this document are independent of the location where the air is specified or measured in the compressed air system. This document describes the basic information of contaminants in the compressed air system and specifies the compressed air purity class requirements and their measurement methods together with other parts of GB/T 13277.Annex A gives the guidance for the application of this document.

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.

GB/T 10893.1 Compressed air dryers - Part 1.Specifications and testing (GB/T 10893.1-2012, ISO 7183.2007, MOD)

GB/T 13277.2 Compressed air - Part 2.Test methods for oil aerosol content (GB/T 13277.2-2015, ISO 8573-2.2007, MOD)

GB/T 13277.3 Compressed air - Part 3.Test methods for measurement of humidity (GB/T 13277.3-2015, ISO 8573-3.1999, MOD)

GB/T 13277.4 Compressed air - Part 4.Test methods for solid particle content (GB/T 13277.4-2015, ISO 8573-4.2001, MOD)

GB/T 13277.5 Compressed air - Part 5.Test methods for oil vapour and organic solvent content (GB/T 13277.5-2019, ISO 8573-5.2001, MOD)

GB/T 13277.6 Compressed air - Part 6.Test methods for gaseous contaminant content (GB/T 13277.6-2021, ISO 8573-6.2003, MOD)

GB/T 13277.7 Compressed air - Part 7.Test method for viable microbiological contaminant content (GB/T 13277.7-2021, ISO 8573-7.2003, MOD)

JB/T 7664 Compressed air treatment - Vocabulary

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