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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 13277.4-2015

**Compressed air -- Part 4: Test methods for solid particle
content**

压缩空气 第4部分：固体颗粒测量方法

(English Translation)

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Foreword

GB/T 13277 "Compressed air" is divided into 9 parts.

- Part 1. Pollutant Purification Level;
- Part 2. Suspended oil content measurement method;
- Part 3. Humidity measurement method;
- Part 4. Solid particle measurement methods;
- Part 5. Methods for the measurement of oil vapor and organic solvents;
- Part 6. Measurement of gaseous pollutant content;
- Part 7. Measurement of active microbial content;
- Part 8. Solid particle mass concentration measurement method;
- Part 9. Methods for the measurement of liquid water content.

This part is part 4 of GB/T 13277.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part uses the re-drafting method to modify ISO 8573-4.:2001 "Compressed air Part 4. Solid particle measurement method" (English Version).

Taking into account our national conditions, this part of the use of ISO 8573-4.:2001, made some changes. The technical differences have been incorporated into the text and in the margins of the terms to which they relate. These technical differences and their originals are given in Appendix C for a list of references.

For ease of use, this section also makes the following editorial changes.

- a) the word "international standard" is replaced by the words "this part";
- b) Replace the comma as a decimal point with a decimal point "."
- c) Replace "bar" with "MPa" for pressure units;
- d) Deleting ISO 8573-4.:2001 Preface.

This part is made by the China Machinery Industry Federation.

This part is headed by the National Standardization Technical Committee of Compressors (SAC/TC145).

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Compressed air

Part 4. Solid particle measurement methods

1 Scope

This part of GB/T 13277 specifies the method of measuring the concentration of particles of different sizes in compressed air, including the selection of methods, Technology, measurement methods, results assessment, uncertainty analysis and test reports.

This part applies to the counting of solid particles in compressed air.

Note 1: The method described in this section is suitable for determining the grade 0 to 5 particles defined in GB/T 13277.1 "Compressed Air Part 1. Pollutant Purification Class" concentration.

Note 2: ISO 8573-8 "Compressed air Part 8. Solid particle mass concentration measurement method" The method described is suitable for determining GB/T 13277.1 "compression Air Part 1. Pollutant Purification Level "defined by the 6 to 7 particle concentration.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 3853 Volumetric Compressor Acceptance Test (GB/T 3853-1998, eqvISO 1217..1996) GB/T 4975 Volumetric Compressor Terminology (GB/T 4975-1995, eqvISO 3857-1. 1977, ISO 3857-2.

1977)

GB/T 17446 fluid transmission system and component vocabulary (GB/T 17446-2012, ISO 5598.:2008, IDT) ISO 8573-7 Compressed air - Part 7. Measurement of active microbial content (Compressedair-Part 7. Test methodsforviablemicrobiologicalparticlecontent)

3 Terms and definitions

GB/T 17446, GB/T 4975 and GB/T 3853 and the following terms and definitions apply to this document.

Solid particles

Tiny individual solid matter.

Microbial particles microbiological factors Solid particles formed by living microbes.

Aerodynamic particle diameter in air without air, at normal temperature, pressure and relative water vapor pressure, with the same specific speed (in the absence of air in the weight Force acceleration), the density of 1g/cm³ of the ball is equivalent to the particle diameter.

4 Units

The units used in this section are units commonly used by the International System of Units (SI).