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**Compressed air —**

**Part 4:**

**Test methods for solid particle content**

*Air comprimé —*

*Partie 4: Méthodes d'essai pour la détermination de la teneur en particules solides*



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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this part of ISO 8573 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 8573-4 was prepared by Technical Committee ISO/TC 118, *Compressors, pneumatic tools and pneumatic machines*, Subcommittee SC 4, *Quality of compressed air*.

ISO 8573 consists of the following parts, under the general title *Compressed air*:

- *Part 1: Contaminants and purity classes*
- *Part 2: Test methods for aerosol oil content*
- *Part 3: Test methods for measurement of humidity*
- *Part 4: Test methods for solid particle content*
- *Part 5: Determination of oil vapour and organic solvent content*
- *Part 6: Determination of content of gaseous contaminants*
- *Part 7: Test methods for viable microbiological particle content*
- *Part 8: Test methods for mass concentration of solid particle content*
- *Part 9: Test methods for liquid water content*

Annexes A and B of this part of ISO 8573 are for information only.

# Compressed air —

## Part 4:

## Test methods for solid particle content

### 1 Scope

This part of ISO 8573 provides a guide for choosing a suitable method to determine the solid particle concentration in compressed air, expressed as the number of solid particles in respective size classes. It describes the limitations of the various methods.

This part of ISO 8573 identifies sampling techniques and measurement methods based on the counting of particles, and describes the evaluation, uncertainty considerations and reporting of the air purity parameter, solid particles.

NOTE 1 The test methods described in this part of ISO 8573 are those suitable for determining the purity classes given in ISO 8573-1.

NOTE 2 Particle content determined as mass concentration is dealt with in ISO 8573-8.

### 2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 8573. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 8573 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 1217, *Displacement compressors — Acceptance tests*.

ISO 3857-1, *Compressors, pneumatic tools and machines — Vocabulary — Part 1: General*.

ISO 5167-1, *Measurement of fluid flow by means of pressure differential devices — Part 1: Orifice plates, nozzles and Venturi tubes inserted in circular cross-section conduits running full*.

ISO 5598, *Fluid power systems and components — Vocabulary*.

### 3 Terms and definitions

For the purposes of this part of ISO 8573, the terms and definitions given in ISO 5598, ISO 3857-1 and ISO 1217 and the following apply.

#### 3.1

##### **solid particle**

discrete mass of solid matter