INTERNATIONAL STANDARD

ISO 8573-1

Second edition
2001-02-01

Compressed air —

Part 1: Contaminants and purity classes

Air comprimé —

Partie 1: Polluants et classes de pureté

Reference number
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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 8573-1 was prepared by Technical Committee ISO/TC 118, *Compressors, pneumatic tools and pneumatic machines*, Subcommittee SC 4, *Quality of compressed air*.

This second edition cancels and replaces the first edition (ISO 8573-1:1991), which has been technically revised.

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*

The following parts are in preparation:

— *Part 7: Test methods for viable microbiological contaminant content*

— *Part 8: Contaminants and purity classes (by mass concentration of solid particles)*

— *Part 9: Test methods for liquid water content*

Introduction

This part of ISO 8573 is one in a series of standards (planned or published), with the ambition of harmonizing air contamination measurements.

The source of odours from a compressed air supply may be present due to a number of factors. The presence of an odour results in discomfort to personnel using breathing equipment. The means of detection is the human olfactory system and the person involved bases the quantification on a subjective analysis. No reliable measurement methods are available therefore each situation must be treated as an individual case and appropriate action taken to minimise the discomfort. For the time being there will be no separate part of ISO 8573 dealing with odours.

Compressed air —

Part 1:
Contaminants and purity classes

1 Scope

This part of ISO 8573 specifies purity classes of compressed air in respect of particles, water and oil regardless of the source of the compressed air.

This part of ISO 8573 identifies microbiological and gaseous contaminants.

The gaseous contaminants included in this part of ISO 8573 are carbon monoxide, carbon dioxide, sulfur dioxide, nitrogen dioxide, nitric oxide and hydrocarbons with carbon atoms in the range C_1 to C_5.

NOTE Other contaminants are taken into consideration for specific applications, e.g. air used for breathing, medical, food and beverage purposes.

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 7183, *Compressed air dryers — Specifications and testing*.

ISO 8573-2, *Compressed air for general use — Part 2: Test methods for aerosol oil content*.

ISO 8573-3, *Compressed air — Part 3: Test methods for measurement of humidity*.

ISO 8573-4, *Compressed air — Part 4: Test methods for solid particle content*.

ISO 8573-5, Compressed air — Part 5: Determination of oil vapour and organic solvent content.

3 Terms and definitions

For the purposes of this part of ISO 8573, the terms and definitions given in ISO 7183 and the following apply.

3.1
aerosol
suspension in a gaseous medium of solid particles, liquid particles or solid and liquid particles having negligible fall-velocity/settling-velocity

3.2
agglomerate
group of two or more particles combined, joined or formed into a cluster by any means