INTERNATIONAL STANDARD

ISO 8573-6

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Compressed air —

Part 6: Test methods for gaseous contaminant content

Air comprimé —

Partie 6: Méthodes d'essai pour la détermination de la teneur en polluants gazeux

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 2.

The main task of technical committees is to prepare International Standards. 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 document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 8573-6 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: 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*

— *Part 8: Test methods for solid particle content by mass concentration*

— *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. It is also intended to be used for reference when stating purity classes according to ISO 8573-1.

In this part of ISO 8573, *gaseous contamination of compressed air* means that a sample of compressed air could contain small quantities of carbon monoxide (CO), carbon dioxide (CO_2), sulphur dioxide (SO_2), hydrocarbons and oxides of nitrogen (NO_x) — the latter being a mixture of nitric oxide (NO) and nitrogen dioxide (NO_2), without a specified ratio between the two components. It is possible to obtain separate concentration values for NO and NO_2 using either the laboratory equipment recommended here or on-site equipment, while under the recommended laboratory analytical procedure, hydrocarbons are the sum of a variety of species assuming a ratio of $C_1H_{1,85}$.

Compressed air —

Part 6:
Test methods for gaseous contaminant content

1 Scope

This part of ISO 8573 provides a selection of suitable test methods from those available for the measurement of contamination gases in compressed air. It specifies sampling technique, measurement and evaluation, uncertainty considerations and reporting for the applicable gaseous contaminants carbon monoxide, carbon dioxide, sulphur dioxide, nitric oxide, nitrogen dioxide and hydrocarbons in the range C_1 to C_5 (see ISO 8573-5 for C_6 and above). The methods given are also suitable for other gases.

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.

ISO 1219-1, *Fluid power systems and components — Graphic symbols and circuit diagrams — Part 1: Graphic symbols*

ISO 2602, *Statistical interpretation of test results — Estimation of the mean — Confidence interval*

ISO 2854, *Statistical interpretation of data — Techniques of estimation and tests relating to means and variances*

ISO 8573-1, *Compressed air — Part 1: Contaminants and purity classes*

3 Terms, definitions, units and symbols

For the purposes of this document, the terms and definitions given in ISO 8573-1, and the symbols given in ISO 1219-1 apply. See Table 1 for an explanation of the units and other symbols used.