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Respiratory protective devices — Methods of test and test equipment —

Part 6: Mechanical resistance/strength of components and connections

Appareils de protection respiratoire — Méthodes d'essai et équipement d'essai —

Partie 6: Résistance mécanique — Résistance des composants et des connexions

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 94, *Personal safety — Personal protective equipment*, Subcommittee SC 15, *Respiratory protective devices*.

This second edition cancels and replaces the first edition (ISO 16900-6:2015), which has been technically revised. The main changes compared to the previous edition are as follows:

— changes have been made to the text and drawings in 6.7, 6.8, and 6.10;

— a new subclause regarding chemical resistance of materials has been added.

A list of all parts in the ISO 16900 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

This document is intended as a supplement to the respiratory protective devices (RPD) performance standards. Test methods are specified for complete devices or parts of devices. If deviations from the test method given in this document are necessary, these deviations will be specified in the performance standards.

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Respiratory protective devices — Methods of test and test equipment —

Part 6: Mechanical resistance/strength of components and connections

1 Scope

This document specifies the method of test for the mechanical resistance and strength of components of respiratory protective devices.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 16900-5, *Respiratory protective devices — Methods of test and test equipment — Part 5: Breathing machine, metabolic simulator, RPD headforms and torso, tools and verification tools*

ISO 16972, *Respiratory protective devices — Vocabulary and graphical symbols*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16972 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
ready for assembly state
components with seals, plugs or other environmental protective means, if applicable, still in place

3.2
ready for use state
state of the complete, but not necessarily fully assembled RPD, which allows the immediate start of the donning procedure as described by the manufacturer

4 Prerequisites

The performance standard shall indicate the conditions of the test. This includes the following:

— test method(s) to be used (reference taken from Table 1);

— number of specimens;

— status of samples or specimen for testing, e.g. preconditioned, as received, ready for use state;

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