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Second edition
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Gas cylinders — Seamless, welded and composite cylinders for compressed and liquefied gases (excluding acetylene) — Inspection at time of filling

Bouteilles à gaz — Bouteilles à gaz comprimés et liquéfiés (à l'exception de l'acétylène) sans soudure, soudées et composites — Contrôle au moment du remplissage



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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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is ISO/TC 58, *Gas cylinders*, Subcommittee SC 4, *Operational requirements for gas cylinders*.

This second edition cancels and replaces the first edition (ISO 24431:2006), which has been technically revised with the following changes.

- This edition has been restructured and includes additional provisions for the inspection before, during and after filling of composite cylinders (Types 2 to 5 inclusive).

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Introduction

This International Standard covers requirements that reflect current practice and experience.

Each transportable gas cylinder is inspected at the time of filling in order to establish that

- it has no defects which render it unsafe for filling or continued use,
- it can be identified and complies with the relevant requirements with regard to marking (e.g. within test period, labelling, colour coding and completeness of its accessories), and
- its valve functions satisfactorily.

The cylinder filling inspection is carried out exclusively by persons who have the appropriate training and competencies, so as to ensure that each cylinder is safe for continued use.

Guidance and requirements provided in this International Standard allow fillers to determine when cylinders should be rejected for filling. This International Standard is intended to be used as a basis for developing specific operating procedures for a filling operation.

CAUTION — Some of the tests specified in this International Standard involve the use of processes which could lead to a hazardous situation.

This International Standard is intended to be used under a variety of national regulatory regimes, but has been written so that it is suitable for the application of the UN Model Regulations.^[1] Attention is drawn to requirements in the relevant national regulations of the country (countries) where the cylinders are intended to be used that might override the requirements given in this International Standard. Where there is any conflict between this International Standard and any applicable regulation, the regulation always takes precedence.

In International Standards, weight is equivalent to a force, expressed in Newtons. However, in common parlance (as used in terms defined in this International Standard), the word “weight” continues to be used to mean “mass”, although this practice is deprecated (see ISO 80000-4).