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STANDARDS Australia

Gas cylinders

Part 5: Filling, inspection and testing of refillable cylinders



AS 2030.5:2026

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- Australasian Fire and Emergency Service Authorities Council
- Australasian Institute of Dangerous Goods Consultants
- Australia New Zealand Industrial Gas Association
- Australian Chamber of Commerce and Industry
- Australian Gas Association
- Australian Refrigeration Council
- Engineers Australia
- Fire Protection Association of Australia
- Gas Energy Australia
- Gas Technical Regulators Committee
- Materials Australia
- National Transport Commission
- SafeWork NSW Agency
- SafeWork SA
- Victorian WorkCover Authority (WorkSafe Victoria)
- Weld Australia

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- International Accreditation New Zealand
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Part 5: Filling, inspection and testing of refillable cylinders

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This page explains the meaning of the language and structure of this Standard.

Refer to Standards Australia's Standardisation Guide 006 for more details about drafting rules.

Australian and Australian/New Zealand Standards are voluntary unless they are referenced in legislation or called up in contracts.

Requirements

To conform to a Standard, all requirements in the Standard need to be met.

A requirement is any statement in the Standard which uses the word "shall".

Recommendations, permissions and possibilities

The following words are commonly used in Standards, but statements using them do not have to be followed to conform to the Standard:

(a) "should" means that something is recommended.

(b) "may" means that something is permitted.

(c) "can" means that something is possible.

Structure of Standards

A Standard always has the following parts:

(i) The Preface states who developed the Standard, what the Standard is aiming to do, and how it relates to other documents.

(ii) The Scope states what the Standard is about, what it covers and what it does not cover.

(iii) The Normative references clause lists other documents that are referenced in the Standard as part of requirements.

(iv) The Terms and definitions clause defines important terms to help with understanding the Standard.

A Standard may also include other parts, such as the following:

(1) A normative appendix sets additional requirements that need to be conformed to.

(2) An informative appendix provides additional information or guidance. They usually do not contain requirements. If an informative appendix does contain requirements, the Standard will explain when those requirements apply.

(3) A Bibliography lists documents referenced in the Standard but not as part of requirements.

Many Standards include notes. Notes provide recommendations and/or guidance only. They never contain requirements.

Preface

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee ME-002, Gas Cylinders, to supersede AS 2030.5:2009.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this document is to specify requirements for the filling, inspection and testing of gas refillable cylinders (water capacity not exceeding 150 L), bundles of cylinders (total water capacity not exceeding 3 000 L), pressure drums (water capacity exceeding 150 L but not exceeding 3 000 L) and tubes (water capacity exceeding 150 L but not exceeding 3 000 L) for the storage and transport of compressed and liquefied gases.

The major changes in this edition are the following:

(a) The adoption of terms and testing definitions to fully harmonize with the terminology of gas cylinders in the *Australian Code for the Transportation of Dangerous Goods by Road and Rail* (ADG Code), which in turn takes its definitions from the *UN Model Regulations on the Transportation of Dangerous Goods*.

(b) Water capacity is expressed in litres instead of kilograms.

(c) References to ISO Standards, developed by the TC58 (SC3 and SC4) Committee, have been introduced.

(d) Definitions have been updated and practices that are no longer applicable have been removed.

(e) Changes to gas traffic which are based on AS/NZS ISO 11621.

(f) Intervals between retesting and/or periodic inspection (including retest requirements for composite cylinders Type I to IV/V) have been refined, and references to ISO Standards have been included.

(g) Reintroduction of AS 2030.1:1999, Clause 10.9 — consideration for allowing gas cylinders for static buffer use and frequent refilling.

The terms “normative” and “informative” have been used in this document to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

Statements expressed in mandatory terms in notes to tables are deemed to be requirements of this document.

Conformance with an Australian Standard does not of itself confer immunity from legal obligations.

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Australian Standard®

Gas cylinders

Part 5: Filling, inspection and testing of refillable cylinders

1 Scope and application

1.1 Scope

This document specifies requirements for the filling, inspection and testing of refillable gas cylinders (water capacity not exceeding 150 L), bundles of cylinders (total water capacity not exceeding 3 000 L), pressure drums (water capacity exceeding 150 L but not exceeding 3 000 L) and tubes (water capacity exceeding 150 L but not exceeding 3 000 L) for the storage and transport of compressed and liquefied gases.

This document does not apply to the following:

(a) Acetylene cylinders.

(b) Closed cryogenic receptacles.

(c) Pressure receptacles forming part of aircraft equipment and used solely in aircraft other than as a reference made in a direction pursuant to the *Civil Aviation Regulations*.

(d) Tanks or vessels constructed to a pressure vessel standard (e.g. AS 1210, ASME).

(e) Non-refillable cylinders.

(f) Aerosol containers and gas cartridges.

(g) Salvage pressure receptacles.

(h) Metal hydride storage systems.

The requirements for gas cylinders in fire extinguisher systems and fire extinguishers apply only where suitable requirements are not specified in another Australian Standard.

NOTE 1 AS 2030.1 sets out requirements for the design, verification and manufacturing of pressure receptacles.

NOTE 2 AS 2030.2 sets out requirements for compressed dissolved acetylene.

NOTE 3 AS 2030.4 sets out requirements for closed cryogenic receptacles (formerly referred to as welded cylinders - insulated).

1.2 Application

In this document, the following provisions apply:

(a) Where a cylinder or tube is an element within a bundle of cylinders, multiple-element gas container (MEGC) or tube trailer, the requirements that apply to a cylinder or tube shall also apply to the assembled bundle of cylinders, MEGC or tube trailer.

(b) The term “pressure receptacle” is used as a collective term that includes cylinders, bundles of cylinders, pressure drums, and tubes. While the term “pressure receptacle” also includes closed cryogenic receptacles, metal hydride storage systems and salvage pressure receptacles, they are not in the scope of this document.

(c) Unlike in previous editions, the terms “gas cylinder” and “welded gas cylinder” are not used as either generic or collective terms. Care shall be taken when reading an Australian Standard

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published prior to this document that includes the term “gas cylinder” or “welded gas cylinder”, to understand if the term is being used as either a generic or collective term.

(d) The term “dry gas”, which was used in previous editions, is not used and the requirements for the dry gas traffic mark (five-pointed star) are not applicable. Gas traffic related clauses in this edition are based on AS/NZS ISO 11621.

2 Normative references

The following documents are referred to in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 2030.1, *Gas cylinders, Part 1: General requirements*

AS 2030.2, *The verification, filling, inspection, testing and maintenance of cylinders for storage and transport of compressed gases, Part 2: Cylinders for dissolved acetylene*

AS 2030.4, *The verification, filling, inspection, testing and maintenance of cylinders for storage and transport of compressed gases, Part 4: Welded cylinders — Insulated*

AS 2337.1, *Gas cylinder test stations, Part 1: General requirements, inspections, and tests — Gas cylinders*

AS 2337.3, *Gas cylinder test stations, Part 3: Transportable gas cylinders — Periodic inspection and testing of composite gas cylinders (ISO 11623:2015, MOD)*

AS 2473.1, *Valves for compressed gas cylinders, Part 1: Specifications, type testing, and manufacturing tests and inspections*

AS 2473.2, *Valves for compressed gas cylinders, Part 2: Outlet connections (threaded) and stem (inlet) threads*

AS 2473.3, *Valves for compressed gas cylinders, Part 3: Outlet connections for medical gases (including pin-indexed yoke connections)*

AS 2613, *Safety devices for gas cylinders*

AS 3840.1, *Pressure regulators for use with medical gases, Part 1: Pressure regulators and pressure regulators with flow-metering devices*

AS 3848.2, *Filling of portable gas cylinders, Part 2: Filling of portable cylinders for self-contained underwater breathing apparatus (SCUBA) and non-underwater self-contained breathing apparatus (SCBA) — Safe procedures*

AS 4267, *Pressure regulators for use with industrial compressed gas cylinders*

AS 4484, *Gas cylinders for industrial, scientific, medical and refrigerant use — Labelling and colour coding*

AS/NZS 1596, *The storage and handling of LP Gas*

AS/NZS ISO 11114-1, *Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents, Part 1: Metallic materials*

AS/NZS ISO 11621, *Gas cylinders — Procedures for change of gas service*

ISO 7289, *Gas welding equipment — Quick-action couplings with shut-off valves for welding, cutting and allied processes*

ISO 11117, *Gas cylinders — Valve protection caps and guards — Design, construction and tests*

ISO 11623, *Gas cylinders — Composite cylinders and tubes — Periodic inspection and testing*

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