AS 2030.1—2009

Australian Standard®

Gas cylinders

Part 1: General requirements

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The following are represented on Committee ME-002:

- Australasian Institute of Engineer Surveyors
- Australia New Zealand Industrial Gas Association
- Australian Chamber of Commerce and Industry
- Australian Gas Association
- Australian Industry Group
- Australian Steel Association
- Department of the Premier and Cabinet, SafeWork SA
- Fire Protection Association of Australia
- International Association for Natural Gas Vehicles
- LPG Australia
- Materials Australia
- Pressure Equipment Association
- Victorian WorkCover Authority
- Welding Technology Institute of Australia
- WorkCover New South Wales

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Part 1: General requirements

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PREFACE

This Standard was prepared by the Australian members of Joint Australia/New Zealand Standards Committee ME-002, Gas Cylinders, to supersede (in part) AS 2030.1—1999, *The verification, filling, inspection, testing and maintenance of cylinders for the storage and transport of compressed gases*, Part 1: *Cylinders for compressed gases other than acetylene.* After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

This edition introduces the following changes:

(a) The main title of the AS 2030 series has been changed and simplified to more accurately reflect the scope of the Standard.

(b) To clarify the application of the AS 2030 series, the scope of the previous edition of AS 2030.1 has been divided between this Standard (AS 2030.1) and a new Standard, AS 2030.5. This edition of AS 2030.1 essentially contains Clauses 1 to 4 and 10 from the previous edition.

AS 2030.1 applies to all gas cylinders, containing requirements for design, manufacture and inspection (including conformity assessment), requirements to be met prior to the first fill and other issues applicable to all cylinders.

AS 2030.5 applies to refillable cylinders (except for acetylene, which remains in AS 2030.2), and contains additional requirements for filling, inspection (periodic and non-periodic) and other issues related to refillable cylinders.

(c) Many terms have been re-defined to harmonize with the terminology of the *Australian Code for the Transport of Dangerous Goods by Road and Rail* (ADG Code), which in turn takes its definitions from UN *Model Regulations on the Transport of Dangerous Goods*.

Of necessity, some terms have definitions that are not the same as the ADG Code.

Of these the most significant are the following:

(i) This Standard retains the generic term ‘gas cylinder’. The corresponding ADG Code term ‘transportable pressure receptacle’ is generally equivalent to a gas cylinder as defined in this Standard, except that a transportable pressure receptacle may include certain items which are built to a general pressure vessel code, whereas such items are specifically excluded from the scope of this Standard.

(ii) This Standard also retains the generic term ‘welded gas cylinder’, rather than the ADG Code term ‘pressure drum’, because ‘pressure drum’ may include general pressure vessels.

Appendix C provides a comparison of the definitions used in this Standard, AS 2030.1—1999 and the ADG Code.

Note that some gases formerly classified as compressed (permanent) are now classified as high pressure liquefied gases.

(d) Clause 4 from the previous edition has been expanded and clarified to address in more detail cylinder design and manufacture, manufacturing and inspection, filling for the first time in Australia, and periodic inspection. Requirements for inspection bodies now are given, as well as guidance on assessing the competence of design verifiers.

(e) Requirements for certified gas cylinder test stations (set out in AS 2337.1) have been clarified and some associated terminology has been updated to reflect current issues.

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

IT SHOULD BE NOTED THAT COMPLIANCE WITH THIS STANDARD MAY NOT NECESSARILY FULFILL ALL LEGAL OBLIGATIONS.

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FOREWORD

This revision of AS 2030 continues a tradition of more than 75 years, since the original release of AS CB4—1931, of setting out technical requirements for the design, type testing, verification, manufacturing, inspection, documentation and filling of gas cylinders.

The Standard reflects the considerable body of experience accumulated over the years by the compressed gas industry and codified by the Australian members of Standards Australia Committee ME-002, Gas Cylinders. Together with its many subordinate standards, especially AS 2337.1—2004, *Gas cylinder test stations,* Part 1: *General requirements, inspection and tests—Gas cylinders*, AS 2030 has specified and documented a voluntary technical working model for gas cylinders in Australia.

Over this period, the regulatory environment for gas cylinders has evolved considerably, as has the relationship between regulations and this Standard. The most significant current regulations are probably the *National Standard for Plant* [NOHSC:1010(1994)], the *Australian Code for the Transport of Dangerous Goods by Road and Rail* (ADG Code), and the local regulations which implement these in the various states and territories.

These regulations and codes may refer to AS 2030 for technical specifications and details. Despite these references, AS 2030 remains a technical standard limited to setting out specifications, test methods and in general providing a technical model for gas cylinders requirements.

The regulations and codes specify requirements which may be covered partially or not at all in AS 2030. Conversely, not all the AS 2030 requirements may lead to action by the regulatory authorities. This applies particularly to the requirements for the manufacture and manufacturing inspection of gas cylinders outside Australia.

Hence, users of AS 2030 should be fully aware that implementation of this Standard's specifications and guidelines is totally outside its jurisdiction, and they need to refer to the relevant regulations and codes to determine their responsibilities and obligations.

It cannot be emphasized too strongly that compliance with this Standard may not necessarily fulfil all legal obligations.

STANDARDS AUSTRALIA

Australian Standard
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1 SCOPE

This Standard specifies requirements for the design, verification and manufacture of all gas cylinders for the storage and transport of compressed, dissolved and liquefied gases, of water capacity ranging from 0.1 kg to 3000 kg.

AS 2030.2 sets out additional requirements for compressed dissolved acetylene.

NOTE: Designation AS 2030.3 is currently not in use.

AS 2030.4 sets out additional requirements for closed cryogenic receptacles (formerly called insulated welded cylinders).

AS 2030.5 sets out additional requirements for the filling, inspection and testing of refillable gas cylinders, except cylinders for dissolved acetylene and closed cryogenic receptacles.

This Standard does not apply to:

(a) Cylinders 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.

(b) Aerosol containers and gas cartridges.

(c) Non-refillable cylinders.

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

NOTES:

1 The term ‘cylinder’ is used interchangeably with ‘gas cylinder’ in this Standard.

2 Whilst this Standard is written for application to gas cylinders, some of its requirements are referenced by Standards related to pressure vessels (e.g. automotive fuel vessels for LP Gas).

2 REFERENCED DOCUMENTS

A list with titles of the documents referred to in this Standard is given in Appendix A.

3 DEFINITIONS

For the purpose of this Standard and all parts of AS 2030, the definitions below apply.

3.1 Aerosol container

Non-refillable container meeting the requirements of AS 2278 or an equivalent foreign Standard.

3.2 Bundle

An assembly of cylinders, each of water capacity less than 150 kg, fastened together and interconnected by a manifold and intended to be transported as a single unit.

NOTES:

1 Such assemblies were previously referred to as a ‘manifold pack’.

2 Limits to the water capacity for the transport of a bundle may apply under the ADG Code.

