

Australian Standard™

**Steel cylinders for compressed gases—
Welded two-piece construction—0.1 kg
to 150 kg**

This Australian Standard was prepared by Committee ME-002, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 8 December 2004. This Standard was published on 4 January 2005.

The following are represented on Committee ME-002:

Air Conditioning and Refrigeration Wholesalers Association
Australasian Institute of Engineer Surveyors
Australian Chamber of Commerce and Industry
The Australian Gas Association
Australian Liquefied Petroleum Gas Association
Certification Bodies (Australia)
Department for Administrative and Information Services, S.A.
Fire Protection Association of Australia
Institute of Materials Engineering Australasia Ltd
Pressure Equipment Associated Incorporated
Victorian WorkCover Authority
Welding Technology Institute of Australia
WorkCover New South Wales

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 5420, Sydney, NSW 2001.

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 2469—2005

Steel cylinders for compressed gases—Welded two-piece construction—0.1 kg to
150 kg

RECONFIRMATION NOTICE

Technical Committee ME-002 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

Certain documents referenced in the publication may have been amended since the original date of publication. Users are advised to ensure that they are using the latest versions of such documents as appropriate, unless advised otherwise in this Reconfirmation Notice.

Approved for reconfirmation in accordance with Standards Australia procedures for reconfirmation on 21 July 2016.

The following are represented on Technical Committee ME-002:

Australasian Fire and Emergency Service Authorities Council
Australia New Zealand Industrial Gas Association
Australian Chamber of Commerce and Industry
Engineers Australia
Environmental Protection Authority New Zealand
Fire Protection Association Australia
Gas Energy Australia
Gas Technical Regulators Committee
International Accreditation New Zealand
National Association of Testing Authorities Australia
SafeWork NSW
The Australian Gas Association
Welding Technology Institute of Australia
Worksafe New Zealand
WorkSafe Victoria

NOTES

Australian Standard™

**Steel cylinders for compressed gases—
Welded two-piece construction—0.1 kg
to 150 kg**

Originated as part of AS B15—1950.
Previous edition AS 2469—1998.
Fourth edition 2005.

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia, GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 6431 2

PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee ME-002, Gas Cylinders to supersede AS 2469—1998, *Steel cylinders for compressed gases—Welded two-piece construction—0.1 kg to 35 kg*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian, rather than an Australian/New Zealand Standard.

This Standard is one of a suite of three Standards for welded and brazed cylinders for compressed gases, the other Standards being as follows:

AS

- 2470 Steel cylinders for compressed gases—Welded three-piece construction with longitudinal joint—11 kg to 150 kg
- 3577 Steel cylinders for compressed gases—Welded—150 kg to 500 kg

This Standard provides for gas cylinders produced in large quantities. Users of this Standard should note that a competent person or body will require either quality control procedures to be employed at the point of manufacture in Australia, or, for cylinders manufactured overseas, sampling and testing at the point of entry into Australia. It should also be noted that before a gas cylinder can be first filled in Australia it must be stamped with a Certificated Gas Cylinder Test Station registered mark in accordance with the relevant Standard in the AS 2030 series.

The construction requirements now allow two piece welded cylinders to be made with capacities up to 150 kg water capacity. This brings this Standard into alignment with ISO 4706, *Refillable welded steel gas cylinders*.

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.

CONTENTS

	<i>Page</i>
1 SCOPE.....	4
2 REFERENCED DOCUMENTS.....	4
3 DEFINITIONS.....	4
4 MATERIAL.....	4
5 DESIGN AND CONSTRUCTION	7
6 WELDING AND INSPECTION.....	10
7 HEAT TREATMENT	13
8 MECHANICAL TESTS.....	13
9 PRESSURE TESTS	14
10 TYPE TESTS.....	15
11 SURFACE COATINGS.....	17
12 RECORD AND TEST CERTIFICATE(S).....	17
13 STAMPING	18
14 PREPARATION FOR DESPATCH.....	19
 APPENDICES	
A PNEUMATIC TEST.....	20
B SUGGESTED MINIMUM INFORMATION TO BE SUPPLIED BY THE PURCHASER.....	22
C LIST OF REFERENCED DOCUMENTS	23
D RESISTANCE SPOT WELDING FOR NON-PRESSURE-RETAINING ATTACHMENTS	25
E LOCATIONS OF TEST SPECIMENS	26
F SUGGESTED FORM OF MANUFACTURER’S RECORD AND TEST CERTIFICATE	27

STANDARDS AUSTRALIA

Australian Standard

Steel cylinders for compressed gases—Welded two-piece construction—0.1 kg to 150 kg**1 SCOPE**

This Standard specifies requirements for welded carbon and stainless steel cylinders with no longitudinal joint and one circumferential joint, of water capacity not less than 0.1 kg nor more than 150 kg, which have test pressures from 1750 kPa to 7000 kPa and are intended for the storage and transport of compressed gases in accordance with AS 2030.1. Requirements for pneumatic testing are given in Appendix A.

NOTES:

- 1 A gas cylinder manufactured by welding but which includes any brazing of, or on, the pressure-retaining portions is for the purpose of this Standard considered to be a brazed gas cylinder.
- 2 Other Australian Standards for brazed and welded gas cylinders are AS 2468, AS 2470, and AS 3577.
- 3 Appendix B lists the suggested minimum information that should be supplied by the purchaser when ordering gas cylinders to this Standard.

2 REFERENCED DOCUMENTS

A list of documents referred to in this Standard is given in Appendix C.

3 DEFINITIONS

For the purpose of this Standard, the definitions given in AS 2030.1 and those below apply.

3.1 Attachment

Any fitting attached to the pressure-retaining sections of the cylinder by welding, including bosses, pads, valve protection rings, and footrings.

3.2 Inspection Body

A body responsible for inspection, which may cover any one or more of the following:

- (a) Design verification.
- (b) Fabrication inspection.
- (c) In-service inspection.

3.3 Inspector

A person, acceptable to the competent person or body, who ensures and certifies that all the inspections specified herein have been carried out and that the cylinders comply with all the requirements of this Standard.

4 MATERIAL**4.1 Steelmaking process**

The steel shall be made by the open hearth, basic oxygen, or an electric process, and shall be continuously cast. Production by the use of ingots is acceptable provided the steel is fully killed. Rimmed steels shall not be used for arc welded components.