

Australian Standard™

**Pressure gauges for regulators used
with compressed gas cylinders**



This Australian Standard was prepared by Committee ME-002, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 16 July 2001 and published on 12 September 2001.

The following interests are represented on Committee ME-002:

Airconditioning and Refrigeration Wholesalers Association
Australasian Institute of Engineer Surveyors
Australasian Railway Association
Australian Association of Certification Bodies
Australian Chamber of Commerce and Industry
The Australian Gas Association
Australian Industry Group
Australian Liquefied Petroleum Gas Association
Boiler and Pressure Vessel Manufacturers Association of Australia
Bureau of Steel Manufacturers of Australia
Department for Administration and Information Services, S.A.
Department of Defence, Australia
Department of Employment, Training and Industrial Relations, Qld
Department of Labour New Zealand
Fire Protection Association of Australia
Institute of Materials Engineering Australasia
Institution of Engineers Australia
International Accreditation New Zealand
New Zealand Institute of Welding
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 Standards may also be withdrawn.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 Australia web site 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 Australian Standard*, has a full listing of revisions and amendments published each month.

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.com.au, or write to the Chief Executive, Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001.

STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 4706—2001

Pressure gauges for regulators used with compressed gas cylinders

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™

**Pressure gauges for regulators used
with compressed gas cylinders**

First published as AS 4706—2001.

COPYRIGHT

© Standards Australia International

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 International Ltd
GPO Box 5420, Sydney, NSW 2001, Australia

ISBN 0 7337 4033 2

PREFACE

This Standard was prepared by the Joint Standard Australia/Standards New Zealand Committee ME-002, Gas Cylinders, to standardize the requirements concerning pressure gauges for regulators used with compressed gas cylinders. This Standard is intended to cover the area of high pressure reading gauges that may be beyond the scope of AS 1349, *Bourdon tube pressure and vacuum gauges*.

This Standard was prepared by the Australian members of the Joint Standards Australia/New Zealand Committee ME-002. 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.

Acknowledgment is made to EN 562:1995, *Gas welding equipment—Pressure gauges used in welding, cutting and allied processes* and ISO 5171:1995, *Pressure gauges used in welding, cutting and allied processes* for information within this Standard. Any such information used may be modified to accommodate the differences between European and Australian conditions.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

Statements expressed in mandatory terms in notes to figures are deemed to be requirements of this Standard.



CONTENTS

| | <i>Page</i> |
|-----------------------------------|-------------|
| 1 SCOPE..... | 3 |
| 2 REFERENCED DOCUMENTS..... | 3 |
| 3 DEFINITIONS..... | 4 |
| 4 PRESSURE..... | 4 |
| 5 MANUFACTURING REQUIREMENTS..... | 6 |
| 6 SAFETY..... | 9 |
| 7 MARKING..... | 10 |
| 8 TESTS..... | 10 |

APPENDICES

| | |
|------------------------------------|----|
| A ACCURACY TEST..... | 11 |
| B MECHANICAL RESISTANCE TESTS..... | 12 |
| C CASE VENT TEST..... | 15 |
| D FLAMMABILITY TEST..... | 16 |

STANDARDS AUSTRALIA

Australian Standard

Pressure gauges for regulators used with compressed gas cylinders

1 SCOPE

This Standard specifies the requirements for pressure gauges intended for pressure regulators for use with industrial and medical compressed gas cylinders. Standards affecting these pressure regulators may impose additional requirements other than those given in this Standard.

Pressure gauges intended for fixed delivery pressure LP Gas regulators for domestic and recreational purposes are not covered by this Standard.

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

| | |
|--------|--|
| 1722 | Pipe threads of Withworth form |
| 1722.1 | Part 1: Sealing pipe threads |
| 1722.2 | Part 2: Fastening pipe threads |
| 2472 | Valves for medical gas cylinders (including pin-indexed outlet) |
| 2473 | Valves for compressed gas cylinders (threaded outlet) |
| 3840 | Pressure regulators for use with medical gases |
| 3840.1 | Part 1: Pressure regulators and pressure regulators with flow-metering devices |
| 4267 | Pressure regulators for use with industrial compressed gas cylinders |

AS/NZS ISO

| | |
|--------|--|
| 9001 | Quality management systems—Requirements |
| ISO | |
| 497 | Guide to the choice of series of preferred numbers and of series containing more rounded values of preferred numbers |
| 4589 | Plastics —Determination of burning behaviour by oxygen index |
| 4589-2 | Part 2: Ambient-temperature test |
| 7000 | Graphical symbols for use on equipment—Index and synopsis |
| 9539 | Materials for equipment used in gas welding, cutting and allied processes |
| 10102 | Assembly tools for screws and nuts—Double-headed open-ended engineer's wrenches |

ANSI/ASME

| | |
|---------|--------------------------------------|
| B1.20.1 | Pipe threads, general purpose (inch) |
|---------|--------------------------------------|

EN

| | |
|-------|--|
| 837 | Pressure gauges |
| 837-1 | Part 1: Bourdon tube pressure gauges—Dimensions, metrology, requirements and testing |