Australian/New Zealand Standard™

LP Gas fuel vessels for automotive use





AS/NZS 3509:2003

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME-001, Pressure Equipment and ME-002, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 27 June 2003 and on behalf of the Council of Standards New Zealand on 8 July 2003. It was published on 5 August 2003.

The following are represented on Committee ME-001 & ME-002:

A.C.T. WorkCover

Australasian Institute of Engineer Surveyors

Australian Aluminium Council

Australian Building Codes Board

Australian Chamber of Commerce and Industry

Australian Industry Group

Australian Institute for the Certification of Inspectionn Personnel

Australian Institute of Energy

Australian Institute of Petroleum

Australian Liquefied Petroleum Gas Association

Bureau of Steel Manufacturers of Australia

Department for Administrative and Information Services, S.A.

Department of Consumer & Employment Protection, WorkSafe Division, W.A.

Department of Infrastructure, Energy and Resources, Tas.

Department of Labour, New Zealand

Electricity Engineers Association, New Zealand

Electricity Supply Association of Australia

Institute of Materials Engineering Australasia Limited

Institution of Engineers Australia

Institution of Professional Engineers, New Zealand

Insurance Council of Australia Ltd

Land Transport Safety Authority, New Zealand

National Association of Testing Authorities, Australia

New Zealand Engineering Federation

New Zealand Heavy Engineering Research Association

New Zealand Institute of Welding

New Zealand Petrochemical Users Group

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 Standards may also be withdrawn.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 joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at www.standards.com.au or Standards New Zealand web site at www.standards.com.au or Standards New Zealand web site at www.standards.com.au or Standards new Zealand web site at www.standards.com.au or Standards new Zealand web site at www.standards.com.au or Standards new Zealand web site at www.standards.com.au or Standards new Zealand web site at www.standards.com.au or Standards new Zealand web site at www.standards.com.au or Standards new Zealand web site at www.standards.com.au or Standards new Zealand web site at www.standards.com.au or standards.

Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia International or Standards New Zealand at the address shown on the back cover.

AS/NZS 3509:2003

Australian/New Zealand Standard™

LP Gas fuel vessels for automotive use

Originated as AS 1210 Intpl—1972. Previous edition AS/NZS 3509:1996. Third edition 2003.

COPYRIGHT

© Standards Australia/Standards New Zealand

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.

Jointly published by Standards Australia International Ltd, GPO Box 5420, Sydney, NSW 2001 and Standards New Zealand, Private Bag 2439, Wellington 6020

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committees ME-001, Pressure Equipment and ME-002, Gas Cylinders, to supersede AS/NZS 3509:1996, *LP Gas fuel vessels for automotive use*.

The Standard is for vessels with welded attachments intended to be used as parts of installations complying with AS/NZS 1425, *LP Gas fuel systems for vehicle engines*, or NZS 5422.1, *Code of practice for the use of LPG and CNG fuels in internal combustion engines*, Part 1: *LPG fuel*. Certain features, e.g. attachments, require reference to AS/NZS 1425 or NZS 5422.1 and manufacturers should be familiar with these Standards.

The design and manufacture of fuel vessels has strong links with both the gas cylinder industry and the pressure vessels industry, and the Standard has adopted successful practices from both these fields.

The main changes from the 1996 edition are the following:

- (a) Allowance for torispherical ends subject to meeting the requirements of shape (Clause 2.1.2(c)), thickness and pulsation testing (Clause 5.6).
- (b) Review of Section 5.
- (c) Updating of referenced documents and materials.
- (d) Editorial and style changes and clarification.

Duplex stainless steels are not included in this edition at the time of publication. Duplex stainless steels are being evaluated by the Committee and may be included when this investigation is complete.

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

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.

CONTENTS

		Page
SECTION	ON 1 SCOPE AND GENERAL	
1.1	SCOPE	4
1.2	OBJECTIVE	
1.3	APPLICATION	4
1.4	REFERENCED DOCUMENTS	5
1.5	DEFINITIONS	6
1.6	DESIGNATION	7
1.7	NEW DESIGNS, MATERIALS AND MANUFACTURING METHODS	7
SECTION	ON 2 GENERAL REQUIREMENTS	
2.1	DESIGN AND CONSTRUCTION	8
2.2	MATERIAL	17
2.3	WELDING	17
2.4	INSPECTION AND TESTING	18
2.5	MARKING	
2.6	RECORD AND TEST CERTIFICATES	24
2.7	DISPATCH	24
SECTION	ON 3 WELDED CARBON STEEL LP GAS FUEL VESSELS	
3.1	CYLINDRICAL SECTIONS AND ENDS	25
3.2	ATTACHMENTS	25
3.3	HEAT TREATMENT	26
3.4	SURFACE COATING AND COLOUR	26
SECTION	ON 4 WELDED STAINLESS STEEL LP GAS FUEL VESSELS	
4.1	CYLINDRICAL SECTION AND ENDS	27
4.2	ATTACHMENTS	27
4.3	INTERGRANULAR CORROSION TEST	27
SECTION	ON 5 TYPE TESTS	
5.1	GENERAL	29
5.2	WITNESSING OF TYPE TESTS	29
5.3	TESTING SCHEDULE	29
5.4	HYDROSTATIC STRETCH TEST	30
5.5	HOOP STRESS TEST	
5.6	PULSATION TEST	
5.7	NON-CIRCULAR INSERTED PAD TEST	31
APPEN	IDICES	
A	INFORMATION ON TESTS AND FITTINGS FOR CONTAINER	
	SUBASSEMBLIES TO BE SUPPLIED TO AN INSTALLER	32
P	LOCATION OF TEST SPECIMENS CUT FROM VESSEL	33



The is a new provider i arenade and chare publication at the limit below	This is a free preview.	Purchase the	entire publication	at the link below:
--	-------------------------	--------------	--------------------	--------------------

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation