AS 2337.1—1987
UDC 621.642.02:620.16
NEXT TIME
66.075.5:621.642.02:620.16

see also SAMP48-1988

Australian Standard®
2337.1—1987

GAS CYLINDER TEST STATIONS
Part 1—GENERAL REQUIREMENTS, INSPECTIONS, AND TESTS—GAS CYLINDERS

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

E

This Australian standard was prepared by Committee ME/2, Gas Cylinders. It was approved on behalf of the Council of the Standards Association of Australia on 22 December 1986 and published on 2 March 1987.

The following interests are represented on Committee ME/2:

Aluminium Development Council
Australasian Steamship Owners Federation
Australian Chamber of Commerce
Australian Gas Association
Australian Liquefied Petroleum Gas Ltd
Australian Underwater Federation
Australian Welding Institute
Board of Fire Commissioners, N.S.W.
Bureau of Steel Manufacturers of Australia
Confederation of Australian Industry
Department of Defence
Department of Employment and Industrial Affairs, Qld
Department of Industrial Relations, N.S.W.
Department of Labour and Industry, Tas.
Department of Labour, S.A.
Department of Labour, Vic.
Department of Mines and Energy, N.T.
Department of Mines, Qld
Department of Occupational Health, Safety and Welfare, W.A.
Department of Territories
Fire Protection Industry Association of Australia Ltd
Insurance Council of Australia Ltd
Railways of Australia Committee

Review of Australian Standards. *To keep abreast of progress in industry, Australian standards are subject to periodic review and are kept up-to-date by the issue of amendments or new editions as necessary. It is important therefore that standards users ensure that they are in possession of the latest edition, and any amendments thereto.*

Full details of all SAA publications will be found in the Catalogue of SAA Publications; this information is supplemented each month by SAA's journal 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn standards.

Suggestions for improvements to Australian standards, addressed to the head office of the Association, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian standard should be made without delay in order that the matter may be investigated and appropriate action taken.

This standard was issued in draft form for comment as DR 83028.

HISTORY BLOCK AS 2337.1

First published in part as AS CB22--1966.
AS B257 first published 1967.
Second edition AS CB22--1969.
AS CB22--1969 and AS B257--1967 revised,
amalgamated and redesignated as
AS 2337--1980
Revised and redesignated as AS 2337.1--1987.

PREFACE

This standard was prepared by the Association's Committee on Gas Cylinders as a revision of AS CB22—1969, which it accordingly supersedes. It incorporates further experience gained in the application of that standard through the SAA Approved Gas Cylinder Test Stations Scheme.

There are no fundamental changes in this revision, but most clauses have been added to or reworded for clarity. Requirements for equipment and procedures are given in greater detail. The test report has more mandatory items, and existing test stations may need to modify their report. The listing of approved test stations is in a Supplement to the standard for ease of updating. New appendices have been added to illustrate a typical test report, and the surface defect AS B257, Hydrostatic Stretch Testing of Compressed Gas Cylinders, in revised form, has been incorporated into the standard as an appendix; accordingly AS B257 is now withdrawn.

The SAA Approved Gas Cylinder Test Station Scheme now covers over 85 test stations. This standard applies to test stations equipped to inspect, test, and certify cylinders covered by Part 1 of AS 2030, SAA Gas Cylinders Code.

Approval of test stations under the SAA Approved Gas Cylinder Test Station Scheme is the subject of joint agreement between SAA and the relevant co-operating Statutory Authority (usually a State Department of Labour and Industry or equivalent Department). Approved test stations that fail to observe the requirements of this standard can and have had the approval withdrawn or suspended.

Enquiries on the application of this standard and registration of test stations under the Association's approval scheme should be directed to the Association's head office.

This standard requires reference to the relevant specifications for gas cylinders and to the following standards:

AS 1349 Bourdon Tube Pressure and Vacuum Gauges
AS 2030 SAA Gas Cylinders Code
AS B620 Valve Fittings for Compressed Gas Cylinders

STANDARDS ASSOCIATION OF AUSTRALIA
Incorporated by Royal Charter

AMENDMENT NO. 1
to
AS 2337.1—1987
GAS CYLINDER TEST STATIONS,
Part 1—GENERAL REQUIREMENTS, INSPECTIONS AND TEST—GAS CYLINDERS

CORRECTION

The 1987 edition of AS 2337.1 is corrected as follows; the amendments should be inserted in the appropriate place.

SUMMARY: This amendment applies to Figure E3.

Published on 2 November 1987.

AUSTRALIAN STANDARD

GAS CYLINDER TEST STATIONS
Part 1
GENERAL REQUIREMENTS, INSPECTIONS, AND TESTS—GAS CYLINDERS

AS 2337.1—1987

for history block see attached sheet.

First published (as AS CB 22) 1966
Revised 1969
AS 2337 first published 1980
AS 2337.1 separately published 1987

PUBLISHED BY THE STANDARDS ASSOCIATION OF AUSTRALIA
STANDARDS HOUSE, 80 ARTHUR ST, NORTH SYDNEY, N.S.W.
ISBN 0 7262 4554 2

PREFACE

This standard was prepared by the Association's Committee on Gas Cylinders, to supersede AS 2337—1980, Gas Cylinder Test Stations.

AS 2337—1980 did not specifically provide for LP gas fuel vessels nor take into account the design approval of cylinders and vessels that is required by inspecting authorities. This standard has been structured to separate general requirements and visual inspection requirements from tests, as a large number of test stations do not carry out tests. The requirements for tests are provided as separate sections.

The changes from AS 2337—1980 are as follows:

(a) This standard has been written to enable appropriate reference in another standard (AS 2337.2) to be prepared for LP gas fuel vessels.

(b) Design approval issued by the relevant Inspecting Authority is referred to in Clause 9.3.

(c) A new definition of a cut in seamless aluminium cylinders is given in Table 1. In the absence of any other more appropriate defined defect, external rub or wear marks on seamless aluminium cylinders are assessed as cuts. The relatively soft nature of the aluminium commonly used for seamless aluminium cylinders often results in score marks that are argued to be insignificant, but which are assessed as cuts. The Commonwealth Industrial Gases Ltd conducted destructive testing of deliberately damaged and also service-damaged cylinders to investigate the effect of such damage, and recommended in a report to the committee that the definition for a cut be revised along the lines given in Table 1.

(d) There are circumstances where an owner wishes to have a cylinder inspected and tested, and that cylinder passes the technical requirements, but because the cylinder is not to an acceptable specification or the subject of approval of the relevant Statutory Authority the test station is prohibited from applying the registered test station mark. In such circumstances, it has been limited practice to mark only the date of test, and perhaps some other mark to identify the test station. This has allowed an owner/filler to continue to use a cylinder that came into service before the acceptance of cylinder specifications was formalized through AS 2030.1, SAA Gas Cylinder Code, Part 1—Cylinders for Compressed Gases Other than Acetylene, for a cylinder for offshore use to be filled.

The practice causes no problems where confined to owner/fillers or cylinders for offshore use, but can be misleading where the owner or a subsequent owner is unaware of the limitations resulting from omission of a registered mark.

(e) An advisory note on permission to destroy a condemned cylinder is added (see Clause 8.3).

(f) The date of stamping when the test station mark is first applied is clarified in Clause 9.2.3.

(g) An error in the permissible stretch is corrected.

(h) The definitions, illustrations and limits of defects are now combined into Table 1 for ease of reference.

(j) A proof pressure test is added as an Appendix. This method is applicable to the normal range of industrial gas cylinders, but is not intended to apply to life support gas cylinders or cylinders with a known or suspected defect. The test provides for simultaneous test of a number of similar cylinders, and no stretch is measured.

The SAA Approved Gas Cylinder Test Station Scheme now covers over 170 test stations, and applies to test stations equipped to inspect, test, and certify cylinders covered by AS 2030.1, and new LP gas fuel vessels of not greater than 500 kg water capacity manufactured to AS 1210, SAA Unfired Pressure Vessels Code, Interpretation No 1—Fuel Vessels for LP Gas Internal Combustion Engines. It is intended also to apply to both new and used LP gas fuel vessel covered by AS XXXX, LP Gas Fuel Vessels for Automotive Use*.

The SAA approved gas cylinder test station scheme is operated by SAA through its Committee P/2 which constitutes a representative from the relevant Statutory Authority in each State and Territory together with the SAA. A panel, comprising a representative from the relevant Statutory Authority and an SAA Officer, carry out initial assessment and periodic audits, recommend approvals or other appropriate action for gas cylinder test stations in accordance with the terms of AS 2337. Enquiries on the scheme should be directed to the SAA, Officer in Charge, Gas Cylinder Test Stations.

Fibre reinforced plastics (FRP) aluminium alloy gas cylinders are covered by AS 2764, Fibre Reinforced Plastics (FRP) Aluminium Alloy Gas Cylinders—Hoop Overwrapped, and the committee is preparing another standard in the AS 2337 series to specify appropriate inspection procedures.

---

* In course of preparation.

CONTENTS

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
GAS CYLINDER TEST STATIONS

PART 1—GENERAL REQUIREMENTS, INSPECTIONS, AND TESTS—GAS CYLINDERS

SECTION 1. SCOPE AND GENERAL

1.1 SCOPE. This standard sets out the requirements and procedures with which gas cylinder test stations must comply in order to be approved under the terms and conditions of this standard to carry out initial and periodic inspection and testing of gas cylinders covered by AS 2030.1, and LP gas fuel vessels for automotive use manufactured to AS 1210, Interpretation No 1 to AS 1210, and AS XXXX.*

NOTES:

1. AS 2030.1 applies to cylinders for compressed gases other than acetylene.
2. Throughout this standard, the term 'cylinder' may be taken to include LP gas fuel vessels of not greater than 500 kg water capacity manufactured to Interpretation No 1 of AS 1210, AS 1210, or AS XXXX.

1.2 APPLICATION. The gas cylinder test station shall have personnel, procedures and equipment in accordance with the requirements of Section 2, and shall comply with other sections as appropriate to the inspection and testing specified in AS 2030.1.

NOTE: Specific requirements for inspection and testing of LP gas fuel vessels, applied in accordance with AS 1425, and [illegible] aluminium alloy (hoop overwrapped) gas cylinders complying with AS 2764, are given in AS 2337.2 and AS 2337.3.

1.3 REFERENCED DOCUMENTS. The following documents are referred to in this standard:

AS 1210	SAA Unfired Pressure Vessels Code Interpretation No 1—Fuel Vessels for LP Gas Internal Combustion Engines
AS 1349	Bourdon Tube Pressure and Vacuum Gauges
AS 1425	SAA Automotive LP Gas Code
AS 1777	Aluminium Cylinders for Compressed Gases—Seamless—0.2 kg to 130 kg
AS 2030.1	SAA Gas Cylinders Code, Part 1 — Cylinders for Compressed Gases Other than Acetylene
AS 2337.[illegible]	Gas Cylinder Test Stations, Part 2 — LP Gas Fuel Vessels for Automotive Use*
AS 2337.3	Gas Cylinder Test Stations, Part 3 — Inspection and Testing of Fibre Reinforced Plastics (FRP) Aluminium Alloy Gas Cylinders—Hoop Overwrapped*
AS 2473	Valves for Compressed Gas Cylinders (Threaded Outlet)
AS 2764	Fibre Reinforced Plastics (FRP) Aluminium Alloy Gas Cylinders—Hoop Overwrapped
AS 3000	SAA Wiring Rules
AS XXXX	LPG Fuel Vessels for Automotive Use*
SAA MP48	Approved Gas Cylinder Test Stations.

1.4 DEFINITIONS. For the purposes of this standard, the definitions given AS 2030.1 and in Table 5.1 hereof apply.

NOTE: Table 5.1 provides definitions of specific defects with illustrations and treatment.

1.5 APPROVAL OF TEST STATIONS. Test stations shall satisfy the Standards Association of Australia and the relevant Inspecting Authority that they are competent and capable of complying with the requirements and procedures of this standard.

NOTE: The Preface describes the arrangements between SAA and the relevant cooperating inspecting authorities for agreement for approval.

On granting of approval, a certificate is issued that names the test station manager/supervisor, approved signatories, and categories of cylinders and vessels that may be tested by the station. That certificate shall be displayed in a prominent position within the test station.

The terms and conditions of approval require the registered owner(s) of the test station to enter into and uphold the conditions of a specific undertaking. Failure to comply with the requirements and procedures of this standard may result in the suspension or withdrawal of approval of the test station, in which case the certificate shall be returned to the Standards Association of Australia.

* In course of preparation.