Australian Standard™

# Steel cylinders for compressed gases—Welded two-piece construction—0.1 kg to 35 kg

This Australian Standard was prepared by Committee ME/2, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 31 July 1998 and published on 5 October 1998.

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The following interests are represented on Committee ME/2:

A.C.T. WorkCover

Airconditioning and Refrigeration Wholesalers Association

Australasian Railway Association

Australian Association of Certification Bodies

Australian Chamber of Commerce and Industry

Australian Chamber of Manufactures

Australian Gas Association

Australian Institute of Pressure Equipment Engineers

Australian Liquefied Petroleum Gas Association

Boiler and Pressure Vessel Manufacturers Association of Australia

Bureau of Steel Manufacturers of Australia

Department of Defence, Australia

Department for Administrative and Information Services, S.A.

Department of Mines and Energy, Qld

Department of Training and Industrial Relations, Qld

Fire Protection Association of Australia

Institute of Metals and Materials Australasia

Institution of Engineers Australia

Victorian WorkCover Authority

Welding Technology Institute of Australia

Work Health Authority, N.T.

WorkCover New South Wales

Workplace Standards Authority, Tas.

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AS 2469—1998

Australian Standard™

# Steel cylinders for compressed gases—Welded two-piece construction—0.1 kg to 35 kg

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# PREFACE

This Standard was prepared by the Standards Australia/Standards New Zealand Committee ME/2, Gas Cylinders to supersede AS 2469—1989, *Steel cylinders for compressed gases—Welded—0.1 kg to 11 kg*. It is the result of a consensus amongst representatives of the Joint Committee to provide it as an Australian Standard.

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

AS

2468 Steel cylinders for compressed gases—Brazed—0.1 kg to 11 kg.

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 Standards Australia Certificated Gas Cylinder Test Station registered mark in accordance with the relevant Standard in the AS 2030 series.

The construction now allows two piece welded cylinders to be made with capacities up to 35 kg water capacity.

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

STANDARDS AUSTRALIA

# Australian Standard

# Steel cylinders for compressed gases—Welded two-piece construction—0.1 kg to 35 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 35 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. Stainless steel cylinders shall be constructed in accordance with 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 CARBON STEEL

### 4.1 Cylinder halves

**4.1.1** *Steelmaking process* The steel shall be made by the open hearth, basic oxygen, or an electric process. Rimmed steels shall not be used for arc welded components.

NOTE: Rimmed steels are considered not suitable for arc welded components because of problems associated with welding of the slit edge due to the possibility of lamination and segregation problems.

**4.1.2** *Cast analysis* The cast analysis shall conform to Table 1, except that where resistance-welded attachments are to be added to the cylinder the maximum carbon content of the pressure-retaining portion of the joint shall be 0.15%.