AS 2030.2:2021

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The verification, filling, inspection, testing and maintenance of cylinders for the storage and transport of compressed gases

Part 2: Cylinders for dissolved acetylene

AS 2030.2:2021

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The following are represented on Committee ME-002:

Australasian Fire and Emergency Service Authorities Council
Australia New Zealand Industrial Gas Association
Australian Chamber of Commerce and Industry
Better Regulation Division (Fair Trading, Safework NSW, TestSafe)
Engineers Australia
Fire Protection Association Australia
Gas Energy Australia
Gas Technical Regulators Committee
Materials Australia
National Association of Testing Authorities Australia
SafeWork SA
The Australian Gas Association
Victorian WorkCover Authority (WorkSafe Victoria)
Weld Australia

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The verification, filling, inspection, testing and maintenance of cylinders for the storage and transport of compressed gases

Part 2: Cylinders for dissolved acetylene

Originated as part of AS CB4—1931.
Revised and redesignated AS 2030—1977.
AS 2030—1977 revised and redesignated in part as AS 2030.2—1985.
Second edition 1996.
Third edition 2021.

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 2030.2—1996.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this document as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this revision is to —

(a) add to the requirements for acetylene cylinder specifications acceptance of cylinders not fitted with fusible plugs but with a higher test pressure conforming to ISO 3807:2013, *Gas cylinders — Acetylene cylinders — Basic requirements and type testing*;

(b) include in the revision some requirements from AS 2527—2006, allowing for that standard to be withdrawn; and

(c) conduct a general review to make the revision compatible with AS 2030.1—2009 and hence with the *Australian Code for Transport of Dangerous Goods*, 7th edition.

The inspection and testing of dissolved acetylene gas cylinders is not catered for by AS 2337.1, *Gas cylinder test stations, Part 1: General requirements, inspections and tests—Gas cylinders*, although the visual inspection section may be applied to acetylene cylinders.

Contents

Introduction

Long standing Australian practice, recognized in AS 2030.2—1996 and AS 2527—2006, *Cylinders for dissolved acetylene*, specified the use only of acetylene cylinders fitted with fusible plugs, generally to United States Department of Transport specifications DOT 8 and DOT 8AL. Acetylene cylinders designed without fusible plugs but with a higher test pressure used in other international jurisdictions and included in ISO 3807:2013, *Gas cylinders — Acetylene cylinders — Basic requirements and type testing*, have not been allowed. Changes in the global supply and use of cylinders with fusible plugs required a re-evaluation of the choice to allow only one of the two types of acetylene cylinders in the widest use in most parts of the world.

This Standard sets out requirements for the porous material, the solvent and the cylinder markings, as well as for fittings and valve protection, filling with acetylene, and inspection of cylinders, the last three of which are not covered in ISO 3807. Some legacy requirements from AS 2030.2—1996 have been retained to cater for cylinders in traffic having many remaining years of service.

NOTES

Australian Standard®

The verification, filling, inspection, testing and maintenance of cylinders for the storage and transport of compressed gases

Part 2: Cylinders for dissolved acetylene

1 Scope

This Standard specifies requirements for the filling, inspection and testing of refillable gas cylinders with and without fusible plugs up to a maximum of 150 L water capacity for the storage and transport of dissolved acetylene.

Basic requirements for cylinders additional to those in AS 2030.1, including their porous material and solvent, the type testing, and cylinder marking, are also specified.

CAUTION — FOR SAFETY REASONS, ONLY PERSONS EXPERIENCED IN THE SUBJECT OF DISSOLVED ACETYLENE CYLINDERS SHOULD APPLY THE STANDARD. EXPERT ADVICE SHOULD BE OBTAINED WHENEVER DOUBT ARISES.

NOTE 1 The term "cylinder" is used interchangeably with "gas cylinder" in this Standard.

NOTE 2 This Standard provides for solvents other than acetone such as dimethylformamide (DMF), which may be used in cylinders bundles with adequate considerations.

NOTE 3 AS 2030.1 sets out requirements for design, verification and manufacturing of all gas cylinders.

NOTE 4 AS 2030.4 sets out requirements for closed cryogenic receptacles (formerly called Welded cylinders—Insulated).

NOTE 5 AS 2030.5 sets out requirements for refillable cylinders except for use with acetylene.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

NOTE Documents referenced for informative purposes are listed in the Bibliography.

AS 2030.1, *Gas cylinders, Part 1: General requirements*

AS 2030.5, *Gas cylinders, Part 5: Filling, inspection and testing of refillable cylinders*

AS 2337.1, *Gas cylinder test stations, Part 1: General requirements, inspections, and tests—Gas cylinders*

AS 2473.1, *Valves for compressed gas cylinders, Part 1: Specifications, type testing, and manufacturing tests and inspections*

AS 2473.2, *Valves for compressed gas cylinders, Part 2: Outlet connections (threaded) and stem (inlet) threads*

AS 2613, *Safety devices for gas cylinders*

AS 4267, *Pressure regulators for use with industrial compressed gas cylinders*

AS 4484, *Gas cylinders for industrial, scientific, medical and refrigerant use—Labelling and colour coding*

ISO 7289, *Gas welding equipment — Quick-action couplings with shut-off valves for welding, cutting and allied processes*

ISO 3807, *Gas cylinders — Acetylene cylinders — Basic requirements and type testing*