AS 1777—1995

Australian Standard®

Aluminium cylinders for compressed gases—Seamless—0.1 kg to 130 kg

This Australian Standard was prepared by Committee ME/2, Gas Cylinders. It was approved on behalf of the Council of Standards Australia on 5 December 1994 and published on 5 February 1995.

The following interests are represented on Committee ME/2:

A.C.T. Administration—Office of City Management
Aluminium Development Council
Australian Assembly of Fire Authorities
Australian Chamber of Commerce and Industry
Australian Gas Association
Australian Liquefied Petroleum Gas Association
Australian Underwater Federation
Bureau of Steel Manufacturers of Australia
Department of Defence
Department of Employment, Industrial Relations & Training, Tas.
Department of Employment, Vocational Education, Training & Industrial Relations, Qld
Department of Labour, S.A.
Department of Minerals and Energy, Qld
Department of Occupational Health, Safety and Welfare, W.A.
Fire Protection Industry Association of Australia
Insurance Council of Australia
Railways of Australia Committee
Welding Technology Institute of Australia
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PREFACE

This Standard was prepared by the Standards Australia Committee ME/2 on Gas Cylinders to supersede AS 1777—1989. It introduces the aluminium alloy designation 7060 to align with trends in Europe where it has been in commercial production for some several years with over 100 000 cylinders in traffic. The yield and ultimate values are those currently used in Europe.

The maximum permitted design stress is calculated using the same ratios that are currently in AS 1777, namely, a nominal yield that is 280/320 of the stated ultimate, and a maximum design stress that is 85% of the lesser of the specified yield (372 MPa) or the nominal yield (385 MPa). Thus the ultimate design stress ratio of the 7060 alloy is some 4% higher than that of the 6351A and 6061A alloys, such that the safety factor on burst is marginally higher.

The objective of this Standard is to provide manufacturers of gas cylinders with specifications covering a range of seamless aluminium cylinders (0.1 kg to 130 kg) in the storage and transport of compressed gases.

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.

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