

AS 3920.1—1993

Australian Standard[®]

Assurance of product quality

**Part 1: Pressure equipment
manufacture**

This Australian Standard was prepared by Committee ME/1, Boilers and Pressure Vessels. It was approved on behalf of the Council of Standards Australia on 26 August 1993 and published on 27 September 1993.

The following interests are represented on Committee ME/1:

A.C.T. Occupational Health and Safety Office
Aluminium Development Council
Australian Chamber of Commerce and Industry
Australian Compressed Air and Mining Equipment Institute
Australian Institute for Non-destructive Testing
Australian Institute of Energy
Australian Institute of Petroleum
Australian Liquefied Petroleum Gas Association
Australian Pipeline Industry Association
Australian Sugar Milling Council
Australian Valve Manufacturers Association
Boiler and Pressure Vessel Manufacturers Association of Australia
Bureau of Steel Manufacturers of Australia
Department of Defence
Department of Employment, Industrial Relations and Training, Tas.
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Occupational Health and Safety Authority, Vic.
Railways of Australia Committee
Society of Mechanical Engineers of Australasia
Welding Technology Institute of Australia
Work Health Authority, N.T.
WorkCover Authority, N.S.W.

Additional interest participating in preparation of Standard:

National Occupational Health and Safety Commission

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PREFACE

This Standard was prepared by Standards Australia in conjunction with the National Occupational Health and Safety Commission (NOH&SC), also known as Worksafe Australia. The Standard was initiated by the Standards Australia Committee on Boilers and Pressure Vessels and has relevance to—

- (a) increasing national and international acceptance of the use of Quality Assurance (QA) as a means by which manufacturers and suppliers can provide assurances to purchasers, users and regulatory authorities that products and services are meeting the required standards; and
- (b) the Special Premiers' Conference held in October 1990 which highlighted the pressure equipment industry as one industry where regulatory review was required.

Occupational health and safety regulating agencies have indicated their collective view that QA could provide a framework by which manufacturers and suppliers could demonstrate compliance with the performance-based requirements of occupational health and safety legislation. However, it was recognized that QA alone would not provide full assurance in high hazard situations and that certain levels of external design verification and inspection of the product would be required, depending upon the hazard level. The hazard levels adopted in this Standard are comparable with those proposed by the European Community, Pressure Equipment Directive.

Existing Standards for pressure equipment come under the general banner of AS/NZS 1200—*Pressure equipment*. The Standards referenced in AS/NZS 1200 specify inspection requirements but do not deal with QA aspects. These Standards are largely based upon traditional legislative requirements which involve inspection by the regulating authorities. Newer style occupational health and safety legislation requires manufacturers, suppliers and owners to take full responsibility for their activities with pressure equipment. To assist in this process and to align with leading world practice, this Standard requires traditional external third-party inspection for more hazardous equipment but reduces this requirement where certified quality systems are in use.

This Standard is a new edition to the Standards referenced in AS/NZS 1200 and applies to boilers, pressure vessels and piping. Such equipment is a component of general hazardous plant and thus the concepts of QA and hazard levels contained in this Standard may apply to other hazardous plants. Also, in forming this Standard its important relationship with occupational health and safety legislation and the proposed NOH&SC *National Regulatory Model for Plant*, has been taken into account.

Because major changes to current practice will result from the use of this Standard, a transition period for adjustment of practices will be necessary. It is proposed that this Standard may be implemented from the date of publication with the acceptance of the relevant regulatory authority, but should not become mandatory until January 1994 or other time determined by the regulatory authorities. It is also expected that some improvements may be necessary as a result of experience in the use of the Standard.

This Standard is not intended to be retroactive; and the design and equipment already verified or approved do not require reverification in accordance with this Standard. Subsequent alterations, however, are the subject of this Standard.

Statements expressed in mandatory terms in Notes to Tables are deemed to be requirements of the Standard.

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