

Australian/New Zealand Standard™

**Pressure equipment—
In-service inspection**



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NEW ZEALAND
Te Ara Raukawa

AS/NZS 3788:2001

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The following interests are represented on Committee ME-001:

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Australian Building Codes Board
Australian Chamber of Commerce and Industry
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Australian/New Zealand Standard™

Pressure equipment— In-service inspection

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME-001, Pressure Equipment to supersede AS/NZS 3788:1996, *Pressure equipment—In-service inspection*.

This Standard has been developed on a consensus basis.

Consensus means general agreement by all interested parties. Consensus includes an attempt to remove all objections and implies much more than the concept of a simple majority, but not necessarily unanimity. It is consistent with this meaning that a member may be included in the Committee list and yet not be in full agreement with all clauses of this Standard.

The Committee recognized there was a need to give guidance to users, inspectors and regulatory authorities on the inspection of in-service pressure equipment.

This Standard provides inspection requirements to assist in assuring the continued safe operation of the pressure equipment. In special circumstances additional requirements may be necessary for adequate performance or safety. The material contained in this Standard will be a valuable aid in the training of inspectors.

Changes since the last edition include the following:

- (a) Removal of regulatory requirements for Australia only. In New Zealand the HSE (Pressure Equipment, Cranes and Passenger Ropeways) Regulations 1999 are to be referred to, since they take precedence over the Standard requirements.
- (b) Details of the in-service inspector requirements and responsibilities.
- (c) Details of risk based inspection.
- (d) Inclusion of new Appendices to cover:
 - (i) Risk management.
 - (ii) In-service inspection and record keeping for steam locomotive and traction engine boilers.

Users of this Standard are reminded that it has no legal authority in its own right, but acquires legal standing where adopted by government or other authority having jurisdiction, or if specified as part of a commercial contract.

During the preparation of this Standard, reference was made to the following publications:

AIP CP12—1985	Code of practice for inspection of boilers and unfired pressure vessels in process plants.
API 510—1980	Pressure Vessel Inspection Code. Maintenance, inspection, rating repair and alteration.
API	Guide to inspection of refinery equipment.
ANSI/NB 23—1984	National Board Inspection Code.
ROSPA—1975	Registration and periodic inspection of pressure vessels (Published by Imperial Chemical Industries Ltd).

Acknowledgment is made of the assistance obtained from these publications.

Statements expressed in mandatory terms in notes to tables and figures are deemed to be requirements of this Standard.

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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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard
Pressure equipment—In-service inspection

SECTION 1 SCOPE AND GENERAL**1.1 SCOPE**

This Standard specifies the requirements for the inspection, repair and alteration of in-service boilers, pressure vessels, piping, safety equipment and associated controls (hereinafter referred to as pressure equipment), and gives guidance in the execution of such inspection. It includes the initial inspection after installation and prior to commissioning. The inspection flow diagram (see Figure 1.1) illustrates the various types of inspection covered by this Standard.

This Standard provides information for owners, and inspectors to facilitate grounds for agreement, and the establishment of uniform minimum requirements for in-service inspections, including inspection frequencies and procedures, to assist in assuring safe and economic operation. Information is provided for the assessment of defects and deterioration of pressure equipment.

NOTES:

- 1 No rules can be written in sufficient detail to cover all aspects of the inspection of in-service pressure equipment. Each owner is responsible for ensuring that the extent and frequency of inspection is appropriate and adequate for the continued safe and economic operation of the pressure equipment. This may require the seeking of expert outside advice.
- 2 'Duty of Care' is now prescribed on employers and employees regardless of regulation or standards. This Standard does not supersede such 'Duty of Care'.

This Standard may be used by inspection bodies and owners to set minimum standards of in-service inspection.

1.2 APPLICATION

This Standard applies to but is not limited to pressure equipment covered by AS/NZS 1200. Typically it includes the following:

- (a) Boilers and associated pressure parts, controls and pipework covered by AS 1228, BS 1113, BS 2790 and AS 2593.
- (b) Pressure vessels and associated pressure parts, controls and pipework covered by AS 1210, NZS/BS 5500, ANSI/ASME BPV-VIII-1 and AS 2971 (serially produced pressure vessels) and BS/EN 286.1.
- (c) Pressure piping covered by AS 4041, NZS/BS 806, ASME B 31.1 and ASME B 31.3.
- (d) Storage tanks built to ANSI/API 620 or equivalent.