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AS 3892—1991

Australian Standard®

**Boilers and pressure vessels—
Installation**



STANDARDS AUSTRALIA 

This Australian Standard was prepared by Committee ME/1, Boilers and Unfired Pressure Vessels. It was approved on behalf of the Council of Standards Australia on 11 March 1991 and published on 13 May 1991.

The following interests are represented on Committee ME/1:

Aluminium Development Council
Australian Compressed Air Institute
Australian Institute for Non-destructive Testing
Australian Institute of Energy
Australian Institute of Petroleum
Australian Liquefied Petroleum Gas Association
Australian Valve Manufacturers Association
Boiler and Pressure Vessel Manufacturers Association of Australia
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Installation**

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PREFACE

This Standard was prepared by the Standards Australia Committee on Boilers and Unfired Pressure Vessels. The Committee recognized there was a need to specify clear requirements and give further guidance to installers, purchasers, users, inspectors, and Statutory Authorities on the installation of pressure equipment. Existing Standards on boilers give some, but not consistent, guidance for their safe installation while pressure vessel Standards provide little information for their installation. This Standard represents the best data and experience currently available to the committee which includes representatives from Inspecting Authorities, manufacturers, users and installers.

This Standard consolidates, rationalizes and extends the present requirements and recommendations in AS 1210, *SAA Unfired Pressure Vessels Code*; AS 1228, *Boilers—Water-tube*; AS 1797, *Boilers—Fire-tube, shell and miscellaneous*; AS 2593, *Boilers—Unattended and limited attendance*; and associated Standards. It is part of a major program to restructure, unify and simplify the various Standards for particular types of equipment and components which form the *SAA Boiler Code* (AS 1200). AS 1200 is referred to in Statutory Regulations in Australia and covers requirements for land installations of boilers, pressure vessels, piping and associated matters.

Besides the unification of requirements for installation, the major features of the Standard are—

- (a) the provision of requirements for installation to ensure safety of pressure vessels as well as boilers; and
- (b) the recognition of the growing use of quality assurance systems (on a voluntary basis at this stage) for ensuring the quality of installations.

It provides the minimum installation requirements to ensure the initial and continued safe and reliable performance of the pressure plant. In many circumstances additional requirements may be necessary for adequate performance or safety.

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

It is envisaged that experience gained in the use of the Standard will highlight areas that need to be strengthened. It is intended that the Standard will be regularly reviewed and revised as necessary to ensure it remains a useful document to all parties concerned and provides safe, reliable pressure plant.

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

ASME Boiler and Pressure Vessel Code, Section VI—Recommended rules for the care and operation of heating boilers

NZ 5351, Code of practice for the installation, operation and maintenance of building services and small industrial boilers

Acknowledgement is made of the assistance obtained from these publications.

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STANDARDS AUSTRALIA

Australian Standard

Boilers and pressure vessels—Installation

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies the requirements for, and gives guidance on, the installation of boilers, pressure vessels, and associated piping, control, and safety equipment constructed in accordance with one or more of the Standards which together with AS 1200 are collectively termed the 'SAA Boiler Code', e.g. AS 1210, AS 1228, AS 1797 and AS 2593.

NOTE: No requirements can be written in sufficient detail to cover all aspects of installation for the great variety of pressure equipment. Each installer is responsible for taking every necessary step to ensure that the quality of the installation is in accordance with all applicable requirements and is adequate for continued safe performance of the equipment. This may require further work to be undertaken and the seeking of expert advice.

This Standard applies to, but is not limited to, the following pressure equipment:

- (a) Static boilers (including superheaters, economizers, reheaters, air heaters) but excluding nuclear boilers, domestic pressure cookers, domestic coffee machines and similar boilers.
- (b) Static fired and unfired pressure vessels (including industrial fired heaters, water heaters, feedwater heaters and heat exchangers).
- (c) Associated auxiliaries, e.g. boiler combustion equipment, fuel storage and handling equipment, combustion air and flue gas systems, feed and circulating pumps.
- (d) Associated appurtenances, e.g. safety valves, pressure gauges, water gauges, blowdown systems, feedwater controllers, soot blowers, steam and water valves, rupture discs.
- (e) Associated management systems.
- (f) Associated piping.

1.2 APPLICATION Sections 1, 2, 3 and 6 of this Standard specify general requirements applicable to both boilers and pressure vessels, and supplementary Sections 4 and 5 specifically deal with boilers and pressure vessels respectively.

This Standard is intended to—

- (a) establish uniform minimum requirements for the installation of pressure equipment to ensure safe performance and protection of personnel, equipment and the environment;
- (b) provide information and guidance for installers, purchasers, and various authorities; and
- (c) assist regulatory and other authorities to simplify and unify national requirements where practicable by direct reference in Acts, Regulations and Ordinances in all States and Territories in Australia.

1.3 REFERENCED DOCUMENTS A list of documents referred to in this Standard is given in Appendix A.

1.4 DEFINITIONS For the purpose of this Standard, the definitions given in AS 1200 and those below apply.

1.4.1 Approved, approval—approved by or approval of the Inspecting Authority.

1.4.2 Competent person—a person suitably qualified, adequately trained, and appropriately experienced for the class or kind of work in which the person is engaged.

1.4.3 Inspecting Authority—the Authority having statutory powers to control the design, manufacture, installation and certification of pressure equipment in the State or Territory in which the boiler is to be operated, except that where the pressure equipment is not subject to such statutory jurisdiction the Inspecting Authority shall be the purchaser of the pressure equipment, or the person or organization named as such in the purchase order.

1.4.4 Inspector—a person employed by or acceptable to the Inspecting Authority for the purposes of inspecting pressure equipment in accordance with this Standard.

1.4.5 Installation—the provision of site facilities, the placing into position or erection of pressure equipment, the fitting of associated appurtenances and auxiliaries, and associated checks in preparation for commissioning and operation. It includes reinstallation, relocation and re-erection of equipment.

NOTE: Some portion of installation may occur at the manufacturer's works.

1.4.6 Installer—the organization or person carrying out and responsible for the installation.