

Australian Standard[®]

Pressure equipment—Boilers

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PREFACE

This Standard was prepared by the Standards Australia/New Zealand Standards Committee ME/1 on Pressure Equipment.

The objective of this Standard is to combine the existing steam and hot water boiler Standards AS 1228—1990 and AS 1797—1986 respectively into a new Standard.

As a result of a consensus amongst representatives of the Joint Committee, it was decided to produce it as an Australian Standard.

Users of this Standards are reminded that it has no legal authority in its own right, but may acquire legal standing in one or more of the following circumstances:

- (a) Adoption by a government or other authority having jurisdiction.
- (b) Adoption by a purchaser as the required standard of construction when placing a contract.
- (c) Adoption where a manufacturer states that a boiler is in accordance with 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

Australian Standard

Pressure equipment—Boilers

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard sets out requirements for materials, design, construction, inspection and testing of boilers as defined in [AS/NZS 1200](#).

NOTE: The Scope of this Standard covers requirements for cast iron in addition to welded boilers inclusive of vapour-generating and hot fluid units subject to internal vapour or liquid pressure. Other forms of construction should be by agreement between the parties concerned.

1.2 APPLICATION This Standard specifically applies to design and construction of boilers including superheaters, reheaters and economizers.

It also applies to all pressure parts containing fluid up to and including the valves separating the pressure parts from—

- (a) steam piping to and from other equipment;
- (b) water piping to and from other equipment;
- (c) drain piping;
- (d) the surrounding atmosphere, except that for safety valves, their vent piping to the atmosphere is also covered; and
- (e) for equipment such as reheaters which may not incorporate valves at their supply and return connection points, the Standard applies to the equipment included between the inlet to the inlet header and the outlet from the outlet header of such equipment.

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

1.4 DEFINITIONS For the purposes of this Standard the definitions given in [AS/NZS 1200](#) and those given in this Clause apply. For calculations, [AS 1000](#), the international system of units, has been applied.

1.4.1 Actual thickness—the actual thickness of the material used in the pressure part, which may be taken as the nominal thickness minus any applicable manufacturing tolerances.

1.4.2 Calculation pressure

- (a) Except as specified in (b) below, the calculation pressure for all pressure parts is the design pressure increased, where applicable, to take into account the pressure differential and hydrostatic head corresponding to the most severe conditions of operation.
- (b) For those portions of the pressure parts of superheaters of natural and assisted flow boilers, and of independently fired superheaters (including the integral piping up to and including the steam stop valve), and of reheaters, which are manufactured from ferritic wrought steel and forgings, whose design is governed by design strengths derived from S_R (see Clause 2.2.2) and for those made from austenitic wrought steels, (see Clause 2.2.3) the calculation pressure is the pressure at which the highest set safety valve on the superheater or reheater outlet is set to lift, increased to take into account the pressure drop corresponding to the most severe conditions of operation.



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