AS 4728—2005
(Incorporating Amendment No. 1)

AS 4728—2005

Australian Standard®

Electric resistance welded steel pipe for pressure purposes

This Australian Standard® was prepared by Committee ME-001, Pressure Equipment. It was approved on behalf of the Council of Standards Australia on 26 September 2005.
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The following are represented on Committee ME-001:

- A.C.T. WorkCover
- Australasian Institute of Engineer Surveyors
- Australian Aluminium Council
- Australian Building Codes Board
- Australian Chamber of Commerce and Industry
- Australian Industry Group
- Australian Institute of Energy
- Australian Institute of Petroleum
- Boiler and Pressure Vessel Manufacturers Association of Australia
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- Department for Administrative and Information Services, S.A.
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- Institute of Materials, Australasia
- LPG Australia
- National Association of Testing Authorities, Australia
- Victorian WorkCover Authority
- Welding Technology Institute of Australia
- WorkCover, N.S.W.
- WorkSafe, W.A.

This Standard was issued in draft form for comment as DR 02094.

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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PREFACE

This Standard was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee ME-001, Pressure Equipment.

This Standard incorporates Amendment No. 1 (February 2007). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure or part thereof affected.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

This Standard is a result of consensus among members of Committee ME-001. 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.

This Standard was prepared for the Australian pressure pipe industry using, as a basis, the International Standard ISO 9330-1:1990, *Welded steel tubes for pressure purposes—Technical delivery conditions,* Part 1: *Unalloyed steel tubes with specified room temperature properties*, wherever possible. The direction conforms to Standards Australia's policy of incorporating ISO Standards within Australian Standards where possible, and to Australian manufacturing policy direction.

The objective of this Standard is to provide manufacturers, suppliers and users with the minimum requirements for the manufacture, inspection and testing of three grades of electric resistance welded (ERW) carbon and carbon manganese steel pipe.

Statements expressed in mandatory terms in notes to tables 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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1 SCOPE

This Standard specifies requirements for three grades of electric resistance welded (ERW) carbon and carbon manganese steel pipe suitable for some pressure purposes. The three grades are designated as 200L0, 240L0 and 290L0, with an outside diameter up to and including 165.1 mm.

It is intended that material made to this Standard be used in ordinary fluid service where a pipe of higher grade than AS 1074 is desirable. It is suitable for pressure service to Classes 2A, 2P and 3 of AS 4041, and to some other standards.

Where intended for pressure piping or equipment service, requirements and restrictions in the applicable design and application standards apply. AS 4041, AS 1210, and other similar standards impose minimum thickness or other criteria which may preclude the use of some pipes manufactured to the specifications of this Standard. Particular note should be taken of requirements for minimum wall thickness under threads specified in AS 4041, and industry requirements for LP Gas and Anhydrous Ammonia service. Appendix B contains the material properties and design parameters to be applied with this Standard and AS 4041.

NOTES:

1 For guidelines on information to be supplied at the time of enquiry or order, see Appendix C.

2 Alternative means for verifying compliance with this Standard are given in Appendix D.

3 The standard allows for optional hydrostatic testing, at the purchaser's request, where required for certain pressure equipment applications.

2 APPLICATION

This Standard is intended as a manufacturing specification for use by manufacturers and users of pressure piping.

3 REFERENCED DOCUMENTS

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

4 DEFINITIONS

For the purpose of this Standard, the definitions below apply.

4.1 Batch

A group of pipes of the same size, thickness and grade, not exceeding 50 tonnes in mass, produced during a production run.

4.2 Cast analysis

Chemical analysis determined from a sample taken during casting.

4.3 Fine grained

A steel of AS 1733 austenitic grain size 7 or finer with the proviso that, should the total aluminium plus titanium content of the steel be 0.015% or greater, the steel is deemed ‘fine grained’.