

Australian Standard®

**Safety in welding and allied
processes**

Part 1: Fire precautions

This Australian Standard was prepared by Committee WD/4, Welding Safety. It was approved on behalf of the Council of Standards Australia on 11 July 1997 and published on 5 September 1997.

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Australian Institute of Occupational Hygienists
Australian Institute of Steel Construction
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STANDARDS AUSTRALIA

RECONFIRMATION

OF

AS 1674.1—1997

Safety in welding and allied processes

Part 1: Fire precautions

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Technical Committee WD-003 has reviewed the content of this publication and in accordance with Standards Australia procedures for reconfirmation, it has been determined that the publication is still valid and does not require change.

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Welding Technology Institute of Australia

NOTES

AS 1674.1—1997

Australian Standard[®]

Safety in welding and allied processes

Part 1: Fire precautions

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PREFACE

This Standard was prepared by the Standards Australia Committee WD/4 on Welding Safety to supersede AS 1674.1—1990.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

This edition includes general improvements as well as the following specific technical changes:

- (a) Clause 1.2 and some of the Preface of the superseded edition are now included in Clause 1.1.
- (b) Minor changes have been made to the list in Note 1 of Clause 1.3.2.
- (c) ‘Grinding’ has been added to Clause 1.3.3.
- (d) Clause 3.6 on firewatching was Appendix A10 in the superseded edition.
- (e) The advice given in the Note to Clause 4.5 used to be expressed in mandatory terms.
- (f) Item (b) of Section 6 has been amended.
- (g) The following new requirements have been added:
 - (i) Items (a) and (b) of Clause 2.1.
 - (ii) Clause 2.13.
 - (iii) Clause 3.4.
 - (iv) Item 3.5(1).
 - (v) The third paragraph of Clause 5.2.
 - (vi) Item 10 in Appendix B.
 - (vii) Appendix C4.1.
 - (viii) The third paragraph of Appendix C4.3.

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STANDARDS AUSTRALIA

Australian Standard**Safety in welding and allied processes****Part 1: Fire precautions**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies precautions to be taken prior to and during hot work (including welding and allied processes), to prevent the possibility of fire or explosion, which may result in harm to persons or property. In particular, such precautions apply to hot work during manufacturing, construction, maintenance, repairs, demolition and where plant or equipment has contained flammable, combustible or explosive material.

Measures for the protection of operators against electric shock, asphyxiation, poisoning and other hazards are not covered by this Standard, which also does not deal with protective clothing.

NOTES:

- 1 Although primarily oriented to hot work that is related to welding and allied processes, this Standard can generally be applied to other forms of ignition sources in hazardous areas.
- 2 General information on safety in welding is covered in WTIA Technical Note 7.

1.2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS

- | | |
|--------|---|
| 1596 | LP Gas—Storage and handling |
| 1674 | Safety in welding and allied processes |
| 1674.2 | Part 2: Electrical |
| 1851 | Maintenance of fire protection equipment |
| 1851.1 | Part 1: Portable fire extinguishers and fire blankets |
| 1851.3 | Part 3: Automatic fire sprinkler systems |
| 1940 | The storage and handling of flammable and combustible liquids |
| 2118 | Automatic fire sprinkler systems |
| 2118.1 | Part 1: Standard |
| 2275 | Combustible gas detection instruments for use in explosive atmospheres |
| 2275.1 | Part 1: General requirements for explosion protection of electrical apparatus and systems |
| 2275.2 | Part 2: Performance requirements |
| 2430 | Classification of hazardous areas |
| 2430.1 | Part 1: Explosive gas atmospheres |
| 2430.2 | Part 2: Combustible dusts |
| 2430.3 | Part 3: Specific occupancies |
| 2444 | Portable fire extinguishers and fire blankets—Selection and location |
| 2812 | Welding, brazing and cutting of metals—Glossary of terms |
| 2865 | Safe working in a confined space |

AS

3190 Approval and test specification—Residual current devices (current-operated earth-leakage devices)

4332 The storage and handling of gases in cylinders

AS/NZS

1020 The control of undesirable static electricity

WTIA Welding Technology Institute of Australia

Technical Note 7: Health and safety in welding

Technical Note 20: Repair of steel pipelines

1.3 DEFINITIONS For the purpose of this Standard, the definitions given in AS 2812 and those below apply.

1.3.1 Approved or approval—approved by or approval of the authority concerned.

1.3.2 Hazardous area—an area in which flammable liquids, vapours or gases, combustible liquids, dusts or fibres, or other flammable or explosive substances may be present.

NOTES:

- 1 Hazardous areas may be found in the following locations (the list is not exhaustive) where such substances are manufactured, used, handled or stored:

Cellulose nitrate plastics manufacturing plants.

Clothing manufacturing plants.

Coal pulverizing plants.

Combustible fibre manufacturing plants.

Conveyor belts and associated structures, where coal, wheat or other combustible materials are handled.

Cotton and other textile mills.

Cotton gins and cotton seed mills.

Distilleries and plants producing alcohol.

Dry-cleaning and dry-dyeing plants.

Flammable gas plants.

Flour mills, grain elevators and starch plants.

Locations where explosives, including pyrotechnics, are manufactured, used, handled or stored.

Marine vessels.

Paint manufacturing plant.

Paper manufacturing and storage.

Petroleum, petrochemical and chemical plants.

Plants producing industrial alcohol.

Plastics manufacturing plant and warehouses.

Sawmills and woodworking plants.

Spray painting establishments.

Varnish manufacturing plants.

Warehouses for—

baled waste, cocoa fibre, cotton (including cotton linters and cotton waste), excelsior, hemp, istle, jute, kapok, oakum, sisal or henequen, spanish moss, tow and other similar materials.

- 2 AS 1940 and AS 1596 specify minimum distances from sources of flammable and combustible liquids and gases to ignition points.
- 3 Further information on hazardous areas is to be found in AS 2430.1, AS 2430.2 and AS 2430.3.
- 4 A normally safe area, into which a tank, container or equipment containing flammable or combustible liquids, gases or vapours has been brought, may become a hazardous area.