

AS 1674.2—2007  
(Incorporating Amendment No. 1)  
Reconfirmed 2018

AS 1674.2—2007

Australian Standard<sup>®</sup>

**Safety in welding and allied processes**

**Part 2: Electrical**



This Australian Standard® was prepared by Committee EL-019, Electrical Welding Plant. It was approved on behalf of the Council of Standards Australia on 2 February 2007. This Standard was published on 16 April 2007.

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The following are represented on Committee EL-019:

- Australian Chamber of Commerce and Industry
  - Australian Industry Group
  - Australian Manufacturing Workers Union
  - Electrical Regulatory Authorities Council
  - Welding Technology Institute of Australia
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This Standard was issued in draft form for comment as DR 05498.

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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STANDARDS AUSTRALIA

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**RECONFIRMATION**

**OF**

**AS 1674.2-2007**

**Safety in welding and allied processes  
Part 2: Electrical**

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Technical Committee EL-019 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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The following are represented on Technical Committee EL-019:  
Australian Chamber of Commerce and Industry  
Australian Manufacturing Workers Union  
Electrical Regulatory Authorities Council  
Welding Technology Institute of Australia

## NOTES

Australian Standard<sup>®</sup>

## Safety in welding and allied processes

### Part 2: Electrical

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## PREFACE

This Standard was prepared by the Standards Australia Committee EL-019, Electrical Welding Plant, to supersede AS 1674.2—2003.

*This Standard incorporates Amendment No. 1 (February 2011). 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.*

The objective of this Standard is to provide a significant improvement in the safety of welding in hazardous environments, where, in recent years, there have been a number of deaths by electrocution.

The major changes from the 2003 edition of this Standard are as follows:

- (a) Clarifications have been made that control measures are required to remove water from category C environments.
- (b) The scope has been modified to ensure that high ripple current d.c. welding power sources are to be treated as a.c. power sources and to specifically exclude welding underwater.
- (c) A Table has been added to Section 5 detailing minimum insulation resistances for routine inspection and testing of welding power sources.

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.

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## STANDARDS AUSTRALIA

**Australian Standard**  
**Safety in welding and allied processes**

**Part 2: Electrical**

SECTION 1 SCOPE AND GENERAL

**1.1 SCOPE**

This Standard sets out safety requirements for arc welding and allied processes, to reduce the possibility of electric shock and minimize associated hazards. It includes requirements for cable connections for alternating and direct current power sources, as well as requirements for hazard-reducing devices and other ancillary equipment. It also describes practices and safeguards that should be adopted by welders and provides examples of situations that present an increased risk of electric shock.

For the purposes of this Standard the term ‘direct current’ (d.c.) is considered to be a direct current with a sinusoidal ripple content of not more than 10% r.m.s. Any d.c. power source with a sinusoidal ripple content of more than 10% shall be considered as an a.c. power source (eg. a single phase unfiltered full wave rectified d.c. power source has a nominal sinusoidal ripple content of 48%).

This Standard does not cover electrical safety requirements when welding is carried out underwater.

## NOTES:

- 1 Other aspects of welding safety are covered in other Standards.
- 2 Typical electrical hazards are described in Appendix A.
- 3 Some fatal electrical accidents are reported in Appendix B.

**1.2 REFERENCED DOCUMENTS**

The following documents are referred to in this Standard:

## AS

1674	Safety in welding and allied processes
1674.1	Part 1: Fire precautions
2812	Welding, brazing and cutting of metals—Glossary of terms
60529	Degrees of protection provided by enclosures (IP Code)
60974	Arc welding equipment
60974.1	Part 1: Welding power sources (IEC 60974-1, Ed.2.2 (2000) MOD)
60974.6	Part 6: Limited duty portable arc welding and allied process power sources (IEC 60974-6, Ed. 1.0 (2003) MOD)
60974.11	Part 11: Electrode holders (IEC 60974-11, Ed.2.0 (2004))

## AS/NZS

1336	Recommended practices for occupational eye protection
1337	Eye protectors for industrial applications
1338	Filters for eye protectors
1338.1	Part 1: Filters for protection against radiation generated in welding and allied operations