AS/NZS 60079.17:2009
(Incorporating Amendment No. 1)

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Australian/New Zealand Standard™

Explosive atmospheres

Part 17: Electrical installations inspection and maintenance (IEC 60079-17, Ed.4.0 (2007) MOD)

STANDARDS Australia

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-014, Equipment for Explosive Atmospheres. It was approved on behalf of the Council of Standards Australia on 13 August 2009 and on behalf of the Council of Standards New Zealand on 11 September 2009.
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The following are represented on Committee EL-014:

Auckland Regional Chamber of Commerce
Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Institute of Petroleum
Australian Petroleum Production and Exploration Association
Department of Mines and Energy, Qld
Electrical Compliance Testing Association
Energy Networks Association
Engineers Australia
Institute of Instrumentation, Control and Automation Australia
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We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Please address your comments to the Chief Executive of either Standards Australia or Standards New Zealand at the address shown on the back cover.

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PREFACE

A1 This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-014, Equipment for Explosive Atmospheres. In conjunction with AS/NZS 60079.14, it is intended that this Standard will replace AS/NZS 2381, AS 2381 and AS 1076 (series), in September 2011. After this time, it is intended that AS/NZS 2381, AS 2381 and AS 1076 (series) will be withdrawn. It is also intended that this Standard, in conjunction with AS/NZS 60079.14, will replace AS/NZS 61241.14 in September 2012. After this time it is intended that AS/NZS 61241.14 will also be withdrawn.

This Standard incorporates Amendment No. 1 (June 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 set out the procedures for the inspection and maintenance of electrical installations within hazardous areas, where the hazard may be caused by flammable gases, vapours, mists, dusts, fibres or flyings.

This Standard is an adoption with national modifications and has been reproduced from IEC 60079-17, Ed.4.0 (2007), *Explosive atmospheres, Part 17: Electrical installations inspection and maintenance*. It has been varied as indicated to take account of Australian/New Zealand conditions and for the protection of human health and safety, a legitimate reason under the WTO Agreement on Technical Barriers to Trade (TBT).

Variations to IEC 60079-17, Ed.4.0 (2007) are indicated at the appropriate places throughout this Standard. Strikethrough (~~example~~) identifies IEC text, tables and figures that, for the purposes of this Australian/New Zealand Standard, are deleted. Where text, tables or figures are added, each is set in its proper place and identified by shading (example). Added figures are not themselves shaded, but are identified by a shaded border.

This Standard is implemented with the minimal changes to IEC 60079-17 that are considered necessary for adoption within Australia and New Zealand. The adoption of this Standard forms part of the strategic objective established by Standards Australia and Standards New Zealand for adoption of all of the IEC 60079 series.

The modification to the IEC based Standard introduces changes in both technical content and presentation. However, many of the technical changes are also introduced as a result of changes within the IEC, as part of the fourth edition of IEC 60079-14.

The significant technical changes with respect to the previous IEC edition are as follows:

(a) Additional requirements for inspection and maintenance of electrical installations for combustible dusts are included.

A1 (b) *Deleted by Amendment 1.*

(c) Equipment Protection Levels (EPLs) have been introduced and are explained in the new Annex C.

As this Standard is reproduced from an International Standard, the following applies:

(i) Its number does not appear on each page of text and its identity is shown only on the cover and title page.

(ii) A full point should be substituted for a comma when referring to a decimal marker.

The terms ‘normative’ and ‘informative’ are used to define the application of the Annex to which they apply. A normative Annex is an integral part of a standard, whereas an informative Annex is only for information and guidance.

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INTRODUCTION

Electrical installations in hazardous areas possess features specially designed to render them suitable for operations in such atmospheres. It is essential for reasons of safety in those areas that, throughout the life of such installations, the integrity of those special features is preserved; they therefore require initial inspection and either

a) regular periodic inspections thereafter, or

b) continuous supervision by skilled personnel

in accordance with this standard and, when necessary, maintenance.

NOTE Correct functional operation of hazardous area installations does not mean, and should not be interpreted as meaning, that the integrity of the special features referred to above is preserved.

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1 Scope

This part of AS/NZS 60079~~IEC 60079~~ applies to users and covers factors directly related to the inspection and maintenance of electrical installations within hazardous areas only, where the hazard may be caused by flammable gases, vapours, mists, dusts, fibres or flyings.

It does not include:

- other fundamental installation and inspection requirements for electrical installations;
- the verification of electrical equipment;
- the repair and reclamation of explosion protected equipment (see IEC 60079-19 and/or AS/NZS 3800).

This standard supplements the requirements of AS/NZS 3000~~IEC 60364-6~~.

In the case of dusts, fibres or flyings the level of housekeeping may influence the inspection and maintenance requirements.

This standard is intended to be applied where there can be a risk due to the presence of explosive gas or dust mixtures with air or combustible dust layers under normal atmospheric conditions. It does not apply to

- underground mining areas,
- areas where a risk can arise due to the presence of hybrid mixtures,
- dusts of explosives that do not require atmospheric oxygen for combustion,
- pyrophoric substances.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading.

AS 1482, *Electrical equipment for explosive atmospheres—Protection by ventilation—Type of protection v*

AS 2380.4, *Electrical equipment for explosive atmospheres—Explosion-protection techniques—Pressurized rooms or pressurized enclosures*

AS/NZS 3000, *Electrical installations (known as the Australian/New Zealand Wiring Rules)*