AS/NZS 60079.2:2002
IEC 60079-2:2001

Australian/New Zealand Standard™

Electrical apparatus for explosive gas atmospheres

Part 2: Pressurized enclosures ‘p’

Standards Australia
STANDARDS NEW ZEALAND

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL-014, Electrical Equipment in Hazardous Areas. It was approved on behalf of the Council of Standards Australia on 11 February 2002 and on behalf of the Council of Standards New Zealand on 19 February 2002. It was published on 11 March 2002.

The following interests are represented on Committee EL-014:

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Part 2: Pressurized enclosures ‘p’

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-014, Electrical Equipment in Hazardous Areas.

This Standard is identical with and has been reproduced from IEC 60079-2:2001, *Electrical apparatus for explosive gas atmospheres*, Part 2: *Pressurized enclosures "p"*

The objective of this Standard is to set out the requirements for the design, construction, testing and marking of electrical apparatus with pressurized enclosures, of protection type 'p' intended for use in explosive gas atmospheres.

This Standard will run concurrently with AS 2380.4—1994, *Electrical equipment for explosive atmospheres—Explosion-protection techniques* Part 4: *Pressurized rooms or pressurized enclosures*, until the AS/NZS 60079 series is complete, at which time the AS 2380 series will be withdrawn.

A reference to an International Standard identified in the Normative References Clause by strikethrough (~~example~~) is replaced by a reference to the Australian or Australian/New Zealand Standard(s) listed immediately thereafter and identified by shading (example).

As this Standard is reproduced from an International Standard a full point should be substituted for a comma when referring to a decimal marker.

The terms 'normative' and 'informative' have been used in this Standard 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

This part of IEC 60079 gives requirements for the design, construction, testing and marking of electrical apparatus for use in potentially explosive atmospheres in which—

a) a protective gas maintained at a pressure above that of the external atmosphere is used to guard against the formation of an explosive gas atmosphere within enclosures which do not contain an internal source of release of flammable gas or vapour and, where necessary,

b) a protective gas is provided in sufficient quantity to ensure that the resultant mixture concentration around the electrical parts is maintained at a value outside the explosive limit appropriate to the particular conditions of use. The protective gas is supplied to an enclosure containing one or more internal sources of release in order to guard against the formation of an explosive gas atmosphere.

This standard includes requirements for the apparatus and its associated equipment including the inlet and exhaust ducts, and also for the auxiliary control apparatus necessary to ensure that pressurization and/or dilution is established and maintained.

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Australian/New Zealand Standard

Electrical apparatus for explosive gas atmospheres Part 2: Pressurized enclosures 'p'

1 Scope

1.1 This part of IEC 60079 contains the specific requirements for the construction and testing of electrical apparatus with pressurized enclosures, of protection type "p", intended for use in explosive gas atmospheres.

The requirements contained in this standard are supplementary to those in IEC 60079-0.

1.2 This standard specifies requirements for pressurized enclosures containing a limited release of a flammable substance.

1.3 This standard does not contain the requirements for pressurized enclosures where the containment system may release

a) air with an oxygen content greater than normal, or

b) oxygen in combination with inert gas in a proportion greater than 21%.

1.4 This standard does not contain requirements for pressurized rooms or analyser houses; see IEC 60079-13 and IEC 60079-16.

1.5 Due to the safety factors incorporated in the type of protection, the uncertainty of measurement inherent in good quality, regularly calibrated measurement equipment is considered to have no significant detrimental effect and need not be taken into account when making the measurements necessary to verify compliance of the apparatus with the requirements of this standard.

1.6 When the user acts in the role of the manufacturer, it is the user's responsibility to ensure that all relevant parts of this standard are applied to the manufacturing and testing of the apparatus.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60079. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 60079 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

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