AS/NZS 61241.4:2002
IEC 61241-4:2001

Australian/New Zealand Standard™

Electrical apparatus for use in the presence of combustible dust

Part 4: Type of protection ‘pD’

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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Alternatively, both organizations publish an annual printed Catalogue with full details of all current Standards. For more frequent listings or notification of revisions, amendments and withdrawals, Standards Australia and Standards New Zealand offer a number of update options. For information about these services, users should contact their respective national Standards organization.

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 International or Standards New Zealand at the address shown on the back cover.

This Standard was issued in draft form for comment as DR 01290.

Australian/New Zealand Standard™

Electrical apparatus for use in the presence of combustible dust

Part 4: Type of protection ‘pD’

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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 61241-4:2001, *Electrical apparatus for use in presence of combustible dust*, Part 4: Type *of protection 'pD'*.

The objective of this Standard is to specify the requirements for design, construction, testing and marking of electrical apparatus, with type of protection pressurization 'pD', intended for use in potentially combustible dust atmospheres.

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). Where the struck-through referenced document and the referenced Australian or Australian/New Zealand Standard are identical, this is indicated in parenthesis after the title of the latter.

This Standard is part of a series covering electrical apparatus for use in the presence of combustible dust which comprises the following:

AS/NZS	
61241	Electrical apparatus for use in the presence of combustible dust
61241.1.1	Part 1.1: Electrical apparatus protected by enclosures and surface temperature limitation—Specification for apparatus
61241.1.2	Part 1.2: Electrical apparatus protected by enclosures and surface temperature limitation—Selection, installation and maintenance
61241.2.1	Part 2.1: Test methods—Methods for determining the minimum ignition temperatures of dust
61241.2.2	Part 2.2: Test methods—Method for determining the electrical resistivity of dust in layers
61241.2.3	Part 2.3: Test methods—Method for determining minimum ignition energy of dust/air mixtures
61241.3	Part 3: Classification of areas where combustible dusts are or may be present
61241.4	Part 4: Type of protection 'pD' (this Standard).

At this stage other Standards are being developed by IEC for electrical equipment using alternate protection techniques suitable for dust hazardous areas—intrinsic safety and encapsulation.

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 term 'normative' has been used in this Standard to define the application of the annex to which it applies. A 'normative' annex is an integral part of a Standard.

CONTENTS

Page

Clause

Page

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Australian/New Zealand Standard

Electrical apparatus for use in the presence of combustible dust Part 4: Type of protection ‘pD’

1 Scope

This part of IEC 61241, gives requirements on the design, construction, testing and marking of electrical apparatus for use in combustible dust atmospheres in which a protective gas (air or inert gas), maintained at a pressure above that of the external atmosphere, is used to prevent the entry of dust which might otherwise lead to the formation of a combustible mixture within enclosures which do not contain a source of combustible dust.

This standard contains the specific requirements for construction and testing, including protective requirements that apply to electrical apparatus with type of protection pressurization ‘pD’ intended for use in potentially combustible dust atmospheres.

This standard includes the requirements for the construction of the enclosure and its associated components, including, if any, the inlet and outlet ducts for the protective gas, and for the safety provisions and devices necessary to ensure that pressurization is established and maintained for type of protection pressurization ‘pD’.

Requirements for pressurized enclosures with an internal source of dust release are not included in this standard.

This standard does not cover the requirements for pressurized rooms with or without internal sources of dust release.

This standard does not apply to dusts of explosives which do not require atmospheric oxygen for combustion or to pyrophoric substances.

This standard does not cover combined gas and dust hazard. Those requirements are under consideration.

The requirements contained in this standard are supplementary to those in IEC 61241.1.1.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61241. 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 61241 are encouraged to investigate the possibility of applying the most recent editions of the normative documents listed 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.