AS/NZS 61241.2.3:2000 IEC 61241-2-3:1994

Australian/New Zealand Standard[™]

Electrical apparatus for use in the presence of combustible dust

Part 2.3: Test methods—Method for determining minimum ignition energy of dust/air mixtures

AS/NZS 61241.2.3:2000

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee EL/14, Electrical Equipment in Hazardous Areas. It was approved on behalf of the Council of Standards Australia on 3 December 1999 and on behalf of the Council of Standards New Zealand on 22 November 1999. It was published on 3 February 2000.

The following interests are represented on Committee EL/14:

Committee Reps: Association of Consulting Engineers Australia Auckland Regional Chamber of Commerce Australian Association of Certification Bodies Australian Chamber of Commerce and Industry Australian Coal Association Australian Electrical and Electronic Manufacturers Association Australian Gas Association Australian Industry Group Australian Institute of Petroleum Australian Institute of Refrigeration Air Conditioning and Heating Department of Mineral Resources, N.S.W. Department of Mines and Energy, Qld Electricity Supply Association of Australia Institute of Electrical Inspectors Institute of Instrumentation and Control Australia Institution of Engineers Australia Ministry of Commerce New Zealand National Electrical and Communications Association New Zealand Association of Marine, Aviation and Power Engineers New Zealand Employers and Manufacturers Association New Zealand Hazardous Areas Electrical Coordinating Committee Regulatory authorities (electrical) WorkCover New South Wales

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about joint Australian/New Zealand Standards can be found by visiting the Standards Australia web site at www.standards.com.au or Standards New Zealand web site at www.standard.co.nz and looking up the relevant Standard in the on-line catalogue.

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 99147.

Australian/New Zealand Standard[™]

Electrical apparatus for use in the presence of combustible dust

Part 2.3: Test methods—Method for determining minimum ignition energy of dust/air mixtures

First published as AS/NZS 61241.2.3:2000.

COPYRIGHT

© Standards Australia/Standards New Zealand

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Jointly published by Standards Australia International Ltd, PO Box 1055, Strathfield, NSW 2135 and Standards New Zealand, Private Bag 2439, Wellington 6020 ISBN 0 7337 2964 9 ii

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL/14, Electrical Equipment in Hazardous Areas.

This Standard is identical with and has been reproduced from, IEC 61241-2-3:1994, *Electrical apparatus for use in the presence of combustible dust*, Part 2: *Test methods*, Section 3: *Methods for determining the minimum ignition energy of dust/air mixtures*.

The objective of this Standard is to provide testing authorities and certifying bodies with a test method to determine the minimum ignition energy of dust/air mixtures, so as to allow the proper selection of adequate electrical apparatus to be used in areas where combustible dusts are or may be present.

In January 1997, the IEC commenced numbering its Standards from 60000 by adding 60000 to the number of each existing Standard. This coordinates IEC numbering with ISO numbering. During the transition period an IEC Standard might be identified by its new number or its old number (for example, IEC 60050 or IEC 50).

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 (this Standard)
- 61241.3 Part 3: Classification of areas where combustible dusts are or may be present.

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 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

iii

CONTENTS

Page

Clause

1	Scop	e	.1
2	Normative references		1
3	Definitions		2
4	4 Test apparatus		3
	4.1	Spark generation circuit	3
	4.2	Test vessel	.3
5	Test	sample	3
6 Procedure		edure	4
	6.1	Brief description	4
		Calibration	
	6.3	Test report	.5

Annexes

А	Examples of spark-generating systems	6
В	Significance of minimum ignition energy	14
С	Bibliography	17



This is a free preview. Purchase the entire publication at the link below:

Product Page

S Looking for additional Standards? Visit Intertek Inform Infostore

> Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation