

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61241-17:2005](#)

<https://standards.iteh.ai/catalog/standards/sist/4baeb3f9-7094-4a18-aeeb-92ea340a9e99/sist-en-61241-17-2005>

EUROPEAN STANDARD

EN 61241-17

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2005

ICS 29.260.20

Partly supersedes EN 50281-1-2:1998 + A1:2002

English version

Electrical apparatus for use in the presence of combustible dust
Part 17: Inspection and maintenance of electrical installations
in hazardous areas (other than mines)
(IEC 61241-17:2005)

Matériels électriques pour utilisation
en présence de poussières combustibles
Partie 17: Inspection et maintenance
des installations électriques situées
en emplacements dangereux
(autres que les mines)
(CEI 61241-17:2005)

Elektrische Betriebsmittel zur Verwendung
in Bereichen mit brennbarem Staub
Teil 17: Prüfung und Instandhaltung
elektrischer Anlagen in
explosionsgefährdeten Bereichen
(ausgenommen Grubenbaue)
(IEC 61241-17:2005)

(standards.iteh.ai)

This European Standard was approved by CENELEC on 2005-04-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 31H/191/FDIS, future edition 1 of IEC 61241-17, prepared by SC 31H, Apparatus for use in the presence of combustible dust, of IEC TC 31, Electrical apparatus for explosive atmospheres, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61241-17 on 2005-04-01.

This European Standard, together with EN 61241-1-14:2004, supersedes EN 50281-1-2:1998 + corrigendum December 1999 + A1:2002.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2006-01-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2008-04-01 |

Annex ZA has been added by CENELEC.

iTeh STANDARD PREVIEW

Endorsement notice (standards.iteh.ai)

The text of the International Standard IEC 61241-17:2005 was approved by CENELEC as a European Standard without any modification. [SIST EN 61241-17:2005](https://standards.iteh.ai/catalog/standards/sist/4baeb3f9-7094-4a18-aeeb-02e0340e0099/sist-en-61241-17-2005)

[https://standards.iteh.ai/catalog/standards/sist/4baeb3f9-7094-4a18-aeeb-](https://standards.iteh.ai/catalog/standards/sist/4baeb3f9-7094-4a18-aeeb-02e0340e0099/sist-en-61241-17-2005)

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60079-0	NOTE	Harmonized as EN 60079-0:2004 (not modified).
IEC 60079-17	NOTE	Harmonized as EN 60079-17:2003 (not modified).
IEC 60204-1	NOTE	Harmonized as EN 60204-1:1997 (not modified).
IEC 61241-1	NOTE	Harmonized as EN 61241-1:2004 (not modified).
IEC 61241-18	NOTE	Harmonized as EN 61241-18:2004 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE Where an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60079-14	2002	Electrical apparatus for explosive gas atmospheres Part 14: Electrical installations in hazardous areas (other than mines)	EN 60079-14	2003
IEC 60364-6-61	- 1)	Electrical installations of buildings Part 6-61: Verification - Initial verification	-	-
IEC 61241-4	- 1)	Electrical apparatus for use in the presence of combustible dust Part 4: Type of protection 'pD'	-	-
IEC 61241-10	- 1)	Part 10: Classification of areas where combustible dusts are or may be present	EN 61241-10	2004 2)
IEC 61241-11	- 3)	Part 11: Intrinsically safe apparatus 'iD'	-	-
IEC 61241-14	2004	Part 14: Selection and installation	EN 61241-14	2004

1) Undated reference.

2) Valid edition at date of issue.

3) At draft stage.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 61241-17:2005](#)

<https://standards.iteh.ai/catalog/standards/sist/4baeb3f9-7094-4a18-aeeb-92ea340a9e99/sist-en-61241-17-2005>

**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

61241-17

Première édition
First edition
2005-01

**Matériels électriques pour utilisation
en présence de poussières combustibles –**

**Partie 17:
Inspection et maintenance des installations
électriques situées en emplacements dangereux
(autres que les mines)**

**Electrical apparatus for use in the presence of
combustible dust –**

**Part 17:
Inspection and maintenance of electrical
installations in hazardous areas (other than mines)**

© IEC 2005 Droits de reproduction réservés — Copyright - all rights reserved

Aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de l'éditeur.

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Electrotechnical Commission, 3, rue de Varembé, PO Box 131, CH-1211 Geneva 20, Switzerland
Telephone: +41 22 919 02 11 Telefax: +41 22 919 03 00 E-mail: inmail@iec.ch Web: www.iec.ch



Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE

U

*Pour prix, voir catalogue en vigueur
For price, see current catalogue*

CONTENTS

FOREWORD.....	5
INTRODUCTION.....	11
1 Scope	13
2 Normative references	13
3 Terms and definitions	15
4 General requirements	19
4.1 Documentation	19
4.2 Qualification of personnel	19
4.3 Inspections.....	19
4.4 Regular periodic inspections	23
4.5 Continuous supervision by skilled persons	23
4.6 Maintenance requirements.....	27
4.7 Environmental conditions.....	29
4.8 Isolation of apparatus	31
4.9 Earthing and equipotential bonding	35
4.10 Conditions of use.....	35
4.11 Movable apparatus and its connections.....	35
4.12 Inspection schedules (Tables 1 to 3).....	35
5 Additional inspection schedule requirements	37
5.1 Type of protection "iD" – Intrinsic safety (see Table 2 and IEC 61241-11)	37
5.2 Type of protection "pD" – Pressurized enclosure (see Table 3 and IEC 61241-4).....	43
5.3 Apparatus used in zone 22	43
5.4 Types of protection "mD" (encapsulation)	43
6 Typical inspection schedules	45
Annex A (informative) Typical inspection procedure for periodic inspections.....	51
Bibliography	52
Table 1 – Inspection schedule for Ex "tD" installations	45
Table 2 – Inspection schedule for Ex "iD" installations	47
Table 3 – Inspection schedule for Ex "pD" installations	49

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL APPARATUS FOR USE
IN THE PRESENCE OF COMBUSTIBLE DUST –**

**Part 17: Inspection and maintenance of electrical installations
in hazardous areas (other than mines)**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with an IEC Publication.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61241-17 has been prepared by subcommittee 31H: Apparatus for use in the presence of combustible dust, of IEC technical committee 31: Electrical apparatus for explosive atmospheres.

The text of this standard is based on the following documents:

FDIS	Report on voting
31H/191/FDIS	31H/193/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 61241 consists of the following parts under the general title *Electrical apparatus for use in the presence of combustible dust*:

- Part 0: General requirements
- Part 1: Protection by enclosures 'tD'
- Part 4: Type of protection 'pD'
- Part 10: Classification of areas where combustible dusts are or may be present
- Part 11: Protection by intrinsic safety 'iD' ¹
- Part 14: Selection and installation
- Part 17: Inspection and maintenance of electrical installations in hazardous areas (other than mines)
- Part 18: Protection by encapsulation 'mD'
- Part 20: Test methods ²
- Part 20-1: Methods for determining the minimum ignition temperatures of dust
- Part 20-2: Method for determining the electrical resistivity of dust in layers
- Part 20-3: Method for determining minimum ignition energy of dust/air mixtures

NOTE All references in this standard to the IEC 61241 series follows the proposed re-numbering of the dust standards agreed by SC31H and TC31. It may be necessary to alter these numbers if the relevant standards are not yet published.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

¹ To be published.

² Under consideration.

REFERENCE TABLE

Existing standard	New number assigned	Subject	Anticipated date of change
IEC 61241-1-1	IEC 61241-0	General requirements	2004
	IEC 61241-1	Protection by enclosure	2004
IEC 61241-1-2	IEC 61241-14	Selection and installation	2004
IEC 61241-2-1	IEC 61241-20-1	Test methods	2005
IEC 61241-2-2	IEC 61241-20-2	Test methods	2005
IEC 61241-2-3	IEC 61241-20-3	Test methods	2005
IEC 61241-3	IEC 61241-10	Classification	2004
IEC 61241-4	IEC 61241-2	Protection by pressurization	2005
	IEC 61241-11	Protection by intrinsic safety	2005
	IEC 61241-17	Inspection and maintenance	2004
	IEC 61241-18	Protection by encapsulation	2004
	IEC 61241-19	Repair and overhaul	2006

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 61241-17:2005](#)

<https://standards.iteh.ai/catalog/standards/sist/4baeb3f9-7094-4a18-aeab-92ea340a9e99/sist-en-61241-17-2005>

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.

iTeh STANDARD PREVIEW **(standards.iteh.ai)**

[SIST EN 61241-17:2005](https://standards.iteh.ai/catalog/standards/sist/4baeb3f9-7094-4a18-aceb-92ea340a9e99/sist-en-61241-17-2005)

<https://standards.iteh.ai/catalog/standards/sist/4baeb3f9-7094-4a18-aceb-92ea340a9e99/sist-en-61241-17-2005>