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National Standards Authority of Ireland Dublin 9

ICS 13.280

Ireland

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EUROPEAN STANDARD

EN 60325

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2004

ICS 13.280

English version

Radiation protection instrumentation -Alpha, beta and alpha/beta (beta energy > 60 keV) contamination meters and monitors (IEC 60325:2002, modified)

Instrumentation pour la radioprotection -Contaminamètres et moniteurs de contamination alpha, bêta et alpha/bêta (énergie des bêta > 60 keV) (CEI 60325:2002, modifiée) Strahlenschutz-Messgeräte -Alpha-, Beta- und Alpha/Beta-(Betaenergie > 60 keV) Kontaminationsmessgeräte und -monitore (IEC 60325:2002, modifiziert)

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CENELEC

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

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Foreword

The text of the International Standard IEC 60325:2002, prepared by SC 45B, Radiation protection instrumentation, of IEC TC 45, Nuclear instrumentation, together with the common modifications prepared by the CENELEC BTTF 111-3, Instrumentation for ionizing radiation measurement and protection, was submitted to the formal vote and was approved by CENELEC as EN 60325 on 2004-05-01.

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)	2005-05-01
_	latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2007-05-01
Ann	ex ZA has been added by CENELEC.		

Endorsement notice

The text of the International Standard IEC 60325:2002 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

1 Scope and object

In line 4, **delete** " γ ".

2 Normative references

Replace the text of Clause 2, Normative references, by:

NOTE Normative references to international publications are listed in Annex ZA (normative).

3 Terms and definitions

3.2 **Replace** by:

3.2

surface emission rate (of a source)

number of particles of a given type above a given energy emerging from face of the source or its window per unit time

3.3 **Replace** by:

3.3

source efficiency

largest of the two quotients, of the surface emission rate by the number of particles of the same type created or released per unit time either within the source thickness or within the source saturation layer

- 3.6 In the second line, **replace** "sensitive" by "active surface".
- 3.9 **Delete** the first note.
- 3.10 **Replace** " M_i " by "v" and " M_t " by " v_c ".
- 3.11 **Replace** by:

3.11

response (of a radiation measuring assembly)

ratio, under specified conditions, given by the relation:

$$R = \frac{v}{v_{\rm c}}$$

where ν is the value of the quantity measured by the equipment or assembly under test and ν_c is the conventionally true value of this quantity

3.12 **Replace** the formula by:

$$I(\%) = \frac{v - v_{\rm c}}{v_{\rm c}} \times 100$$

where ν is the indicated value of a quantity and ν_c is the conventionally true value of the quantity at the point of measurement.

3.15 **Replace** the explanation of the first variable for the formula by:

 $S_{(nuclide)}$ is the surface emission rate response (see 3.6);

3.16 **Replace** by:

3.16

conventionally true value of a quantity best estimate of the value of a quantity used for a given purpose

NOTE A conventionally true value is, in general, regarded as sufficiently close to the true value for the difference to be insignificant for the given purpose. For example, a value determined from a primary or secondary standard or by a reference instrument, may be taken as the conventionally true value.

7 General test procedures

7.2 **Replace** reference to "9.3.2" by reference to "9.4.2.2" in the first line.

8 Electrical characteristics

8.1 **Replace** the title of the subclause by:

8.1 Influence of statistical fluctuations

8.1.1 **Replace** the second paragraph by:

The coefficient of variation of the indication due to the statistical nature of the radiation detected shall be less than 0,2.

8.3 **Replace** the first paragraph by:

The response time and coefficient of variation of the statistical fluctuations are interdependent characteristics, acceptable limits of which are given in 8.1 and 8.2.

8.5.2 **Replace** the first sentence by:

For this test, a pulse generator set to give pulses of an amplitude just in excess of the threshold setting (between 1 and 1,1 times the value of the setting) of the assembly and of a rate within the range of the assembly as well as a high voltage meter to monitor the high voltage supply to the detector are required.



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