SVENSK STANDARD SS-EN 62244

Fastställd	Utgåva	Sida	Ansvarig kommitté
2012-06-13	1	1 (1+32)	SEK TK 45

Kärnteknisk mätutrustning – Mätutrustning för strålskyddsändamål – Fast utrustning för detektering av radioaktivt och klyvbart material vid nationsgränser

Radiation protection instrumentation – Installed radiation monitors for the detection of radioactive and special nuclear materials at national borders

Som svensk standard gäller europastandarden EN 62244:2011. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62244:2011.

Nationellt förord

Europastandarden EN 62244:2011

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 62244, First edition, 2006 - Radiation protection instrumentation - Installed radiation monitors for the detection of radioactive and special nuclear materials at national borders**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 13.280

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 62244

July 2011

ICS 13.280

English version

Radiation protection instrumentation - Installed radiation monitors for the detection of radioactive and special nuclear materials at national borders

(IEC 62244:2006, modified)

Instrumentation pour la radioprotection - Moniteurs de rayonnement installés pour la détection des matériaux nucléaires radioactifs et spéciaux aux frontières nationales
(CEI 62244:2006, modifiée)

Strahlenschutz-Messgeräte - Fest installierte Strahlungsmonitore für den Nachweis von radioaktiven Stoffen und spaltbarem Nuklearmaterial an Staatsgrenzen
(IEC 62244:2006, modifiziert)

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 62244:2011 E

SEK Svensk Elstandard

Foreword

The text of the International Standard IEC 62244:2006, prepared by SC 45B, “Radiation protection instrumentation”, of IEC TC 45, “Nuclear instrumentation”, together with the common modifications prepared by the Technical Committee CENELEC TC 45B, Radiation protection instrumentation, was submitted to the CENELEC formal vote and was approved by CENELEC as EN 62244 on 2011-06-27.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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)	2012-06-27
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2014-06-27

Annex ZA has been added by CENELEC.

Subclauses which are additional to those in IEC 62244 are prefixed “Z”.

Endorsement notice

The text of the International Standard IEC 62244:2006 was approved by CENELEC as a European Standard with agreed common modifications as given below.

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

Publication	Year	Title	EN/HD	Year
IEC 60038	-	IEC standard voltages	EN 60038[1]	-
IEC 60050-393	-	International Electrotechnology Vocabulary - Part 393: Nuclear instrumentation - Physical phenomena and basic concepts	-	-
IEC 60050-394	1995	International Electrotechnical Vocabulary -	-	-
+ A1	1996	Chapter 394: Nuclear instrumentation:	-	-
+ A2	2000	Instruments	-	-
IEC 60068-2-18	-	Environmental testing - Part 2-18: Tests - Tests R and guidance: Water	EN 60068-2-18	-
IEC 60068-2-27		Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock	EN 60068-2-27	-
IEC 60068-2-75	-	Environmental testing - Part 2-75: Tests - Test Eh: Hammer tests	EN 60068-2-75	-
IEC 60359	-	Electrical and electronic measurement equipment - Expression of performance	EN 60359	-
IEC 61000-4-2	-	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	-
IEC 61000-4-3	-	Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	-
IEC 61000-4-4	-	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	-
IEC 61000-4-5	-	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	-
IEC 61000-4-6	-	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	-
IEC 61000-4-12	-	Electromagnetic compatibility (EMC) - Part 4-12: Testing and measurement techniques - Ring wave immunity test	EN 61000-4-12	-
IEC 61187	-	Electrical and electronic measuring equipment - Documentation	EN 61187	-

[1] At draft stage.

CONTENTS

RADIATION PROTECTION INSTRUMENTATION – INSTALLED RADIATION MONITORS FOR THE DETECTION OF RADIOACTIVE AND SPECIAL NUCLEAR MATERIALS AT NATIONAL BORDERS

1 Scope and object

The scope of this International Standard is to define the performance of installed monitors used for the detection of gamma and neutron radiation emitters contained in objects/ containers or vehicles, general characteristics, mechanical characteristics, environmental requirements, test procedures and documentation.

This standard is applicable to installed monitors designed to detect special nuclear and other radioactive materials by their emitted gamma and/or neutron radiation. They are used to monitor vehicles, cargo containers, people, or packages and are typically located at national and international borders, but may be used at any location where there is a need for this type of monitoring. This standard does not apply to hand-held monitors.

Information regarding the detection of special nuclear material (SNM) is contained in Annex A.

This standard provides the purchaser with information that may be used to determine the performance of the monitor in detecting the presence of radioactive sources. This standard does not provide the data needed to determine the performance of the monitor in measuring the quantity of the radioactive material.

In this standard, the term radioactive material includes both special nuclear and radioactive material unless otherwise specifically noted. The radioactive material may be transported by vehicle, carried by person, or concealed in a cargo container or in a package moved by conveyor belt, such as international mail parcels.

Conformance with the requirements of this standard does not guarantee that a radioactive source will always be discovered.

The selection of the location and the configuration of the monitoring system on each site needs to be optimised to achieve the best performance, however, this is outside the scope of this standard.

2 Normative references

The following referenced documents are relevant to 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.

IEC 60038, *IEC standard voltages*

IEC 60050-393, *International Electrotechnical Vocabulary (IEV) – Part 393: Nuclear instrumentation – Physical phenomena and basic concepts*

IEC 60050-394:1995, *International Electrotechnical Vocabulary (IEV) – Chapter 394: Nuclear instrumentation: Instruments*
Amendment 1 (1996)
Amendment 2 (2000)

IEC 60068-2-18, *Environmental testing – Part 2-18: Tests – Test R and guidance: Water*

IEC 60068-2-27, *Environmental testing – Part 2: Tests – Test Ea and guidance: Shock*

IEC 60068-2-75, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60359, *Electrical and electronic measurement equipment – Expression of performance*

IEC 61000-4-2, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*

IEC 61000-4-4, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test.*

IEC 61000-4-6, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances induced by radio-frequency fields*

IEC 61000-4-12, *Electromagnetic compatibility (EMC) – Part 4-12: Oscillatory waves immunity test*

IEC 61187, *Electrical and electronic equipment – Documentation*