SLOVENSKI STANDARD
SIST EN 61223-2-5:1998

01-september-1998

Evaluation and routine testing in medical imaging departments - Part 2-5: Constancy tests - Image display devices (IEC 61223-2-5:1994)

Evaluation and routine testing in medical imaging departments -- Part 2-5: Constancy tests - Image display devices

Bewertung und routinemäßige Prüfung in Abteilungen für medizinische Bildgebung -- Teil 2-5: Konstanzprüfungen - Bildwiedergabegeräte (Monitore)

Essais d'évaluation et de routine dans les services d'imagerie médicale -- Partie 2-5: Essais de constance - Dispositifs de visualisation des images

Ta slovenski standard je istoveten z: **EN 61223-2-5:1994**

ICS:

11.040.50	Radiografska oprema	Radiographic equipment

SIST EN 61223-2-5:1998 **en**

EUROPEAN STANDARD EN 61223-2-5

NORME EUROPEENNE

EUROPÄISCHE NORM

June 1994

UDC 615.84:778.2:620.1

Descriptors: Electromedical equipment, computed tomography, medical imaging, constancy test, evaluation testing, routine testing

ENGLISH VERSION

Evaluation and routine testing in medical imaging departments
Part 2-5: Constancy tests - Image dipslay devices
(IEC 1223-2-5:1994)

Essais d'évaluation et de routine dans les services d'imagerie médicale
Partie 2-5: Essais de constance
Dispositifs de visualisation des images

(CEI 1223-2-5:1994)

Bewertung und routinemäßige Prüfung in Abteilungen für medizinische Bildgebung
Teil 2-5: Konstanzprüfungen
Bildwiedergabegeräte (Monitore)
(IEC 1223-2-5:1994)

This European Standard was approved by CENELEC on 1994-03-08. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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

Ref. No. EN 61223-2-5:1994 E

FOREWORD

The text of document 62B(CO)106, as prepared by Sub-Committee 62B: Diagnostic imaging equipment, of IEC Technical Committee 62: Electrical equipment in medical practice, was submitted to the IEC-CENELEC parallel vote in May 1993.

The reference document was approved by CENELEC as EN 61223-2-5 on 8 March 1994.

The following dates were fixed:

- latest date of publication of an identical national standard	(dop)	1995-03-01
- latest date of withdrawal of conflicting national standards	(dow)	2000-03-01

Annexes designated "normative" are part of the body of the standard. Annexes designated "informative" are given only for information. In this standard, annexes A and ZA are normative and annexes B, C, D, E and F are informative.

ENDORSEMENT NOTICE

The text of the International Standard IEC 1223-2-5:1994 was approved by CENELEC as a European Standard without any modification.

ANNEX ZA (normative)

OTHER INTERNATIONAL PUBLICATIONS QUOTED IN THIS STANDARD WITH THE REFERENCES OF THE RELEVANT EUROPEAN PUBLICATIONS

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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

IEC Publication	Date	Title	EN/HD	Date
788	1984	Medical radiology - Terminology	HD 501 S1	1988
1223-1	1993	Evaluation and routine testing in medical imaging departments Part 1: General aspects	-	-
1223-2-1	1993	Part 2-1: Constancy tests Film processors	-	-
1223-2-2	1993	Part 2-2: Contancy tests - Radiographic cassettes and film changers Film-screen contact and relative sensitivity of the screen-cassette assembly	-	-
1223-2-3	1993	Part 2-3: Constancy tests - Darkroom safelight conditions	-	-
1223-2-4	1994	Part 2-4: Constancy tests - Hard copy cameras	EN 61223-2-4	1994
1223-2-12	-	Part 2-12: Constancy tests - Film illuminators (under consideration)	-	-

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
1223-2-5

Première édition
First edition
1994-03

Essais d'évaluation et de routine dans les services d'imagerie médicale –

Partie 2-5:
Essais de constance –
Dispositifs de visualisation des images

Evaluation and routine testing in medical imaging departments –

Part 2-5:
Constancy tests –
Image display devices

Bureau Central de la Commission Electrotechnique Internationale 3, rue de Varembé Genève, Suisse

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE W

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

CONTENTS

Figures Page

Annexes

INTERNATIONAL ELECTROTECHNICAL COMMISSION

EVALUATION AND ROUTINE TESTING IN MEDICAL IMAGING DEPARTMENTS –

Part 2-5: Constancy tests – Image display devices

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The 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 the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.

3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

International Standard IEC 1223-2-5 has been prepared by sub-committee 62B: Diagnostic imaging equipment, of IEC technical committee 62: Electrical equipment in medical practice.

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

DIS	Report on voting
62B(CO)106	62B(CO)119

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

Annex A forms an integral part of this standard.

Annexes B, C, D, E and F are for information only.

This standard forms part 2-5 of IEC 1223, which will include the following parts:

Part 1:	General aspects
Part 2-1:	Constancy tests – Film processors
Part 2-2:	Constancy tests – Radiographic cassettes and film changers – Film-screen contact and relative sensitivity of the screen-cassette assembly
Part 2-3:	Constancy tests – Darkroom safelight conditions
Part 2-4:	Constancy tests – Hard copy cameras
Part 2-5:	Constancy tests – Image display devices
Part 2-6:	Constancy tests – X-ray equipment for computed tomography
Part 2-7:	Constancy tests – X-ray equipment for classical dental radiography
Part 2-8:	Constancy tests – Protective shieldings, barriers and devices
Part 2-9:	Constancy tests – X-ray equipment for indirect radioscopy and indirect radiography
Part 2-10:	Constancy tests – X-ray equipment for mammography
Part 2-11:	Constancy tests – X-ray equipment for general direct radiography
Part 2-12:	Constancy tests – Film illuminators

INTRODUCTION

Some provisions or statements in the body of this part of IEC 1223 require additional information. Such information is presented in annex D, Rationale. An asterisk in the left margin of a clause or subclause indicates the presence of such additional information.

EVALUATION AND ROUTINE TESTING IN MEDICAL IMAGING DEPARTMENTS –

Part 2-5: Constancy tests – Image display devices

1 Scope and object

1.1 *Scope*

This part of IEC 1223 applies to IMAGE DISPLAY DEVICES as used in diagnostic imaging systems such as:

- digital radiography;
- digital subtraction angiography;
- COMPUTED TOMOGRAPHY;
- magnetic resonance imaging;
- ultrasonic diagnostic equipment;
- NUCLEAR MEDICINE.

* The test methods are based on the use of test patterns.

* This standard does not apply to video monitors used in INDIRECT RADIOSCOPY systems.

This standard is a part of a series of Particular Publications (standards and technical reports) which give methods of tests for the constancy of properties of diagnostic imaging systems as described in IEC 1223-1 (see clause 2).

*1.2 *Object*

This part of IEC 1223 defines:

a) the functional parameters which describe or affect the performance of the above components of diagnostic imaging systems; and

b) methods of checking that variations in measured quantities related to those parameters are within acceptable limits, in order to maintain adequate standards of imaging whilst, in the case of X-RAY EQUIPMENT, avoiding unnecessary IRRADIATION of the PATIENT.

The methods are based upon assessments of representations of appropriate test pattern.

The aims are:

- to establish a reference level of performance when equipment is accepted;
- to detect and verify any significant variation in performance which may require corrective action.