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BSI Standards Publication

Industrial non-destructive testing equipment – Electron linear accelerator (IEC 62976:2017)

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National foreword

This British Standard is the UK implementation of EN IEC 62976:2019. It is identical to IEC 62976:2017. It supersedes BS IEC 62976:2017, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee NCE/2, Radiation protection and measurement.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 September 2017.

Amendments/corrigenda issued since publication

Date	Text affected
30 June 2019	This corrigendum renumbers BS IEC 62976:2017 as BS EN IEC 62976:2019

EUROPEAN STANDARD **EN IEC 62976**

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EUROPÄISCHE NORM

June 2019

ICS 27.120.01

English Version

Industrial non-destructive testing equipment - Electron linear accelerator (IEC 62976:2017)

Appareils destinés aux essais non destructifs pour le secteur industriel - Accélérateur électronique linéaire (IEC 62976:2017)

Industrielle Ausrüstung für die zerstörungsfreie Prüfung - Elektronenlinearbeschleuniger (IEC 62976:2017)

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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Ref. No. EN IEC 62976:2019 E

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European foreword

This document (EN IEC 62976:2019) consists of the text of IEC 62976:2017 prepared by IEC/TC 45 "Nuclear instrumentation".

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2020-05-22
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-05-22

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(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
ISO 780	2015	Packaging – Distribution packaging – Graphical symbols for handling and storage of packages	EN ISO 780	2015
ISO 19232-1	2013	Non-destructive testing – Image quality of radiographs – Part 1: Determination of the image quality value using wire-type image quality indicators	EN ISO 19232-1	2013
ISO/IEC Guide 37	2012	Instructions for use of products by consumers	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INDUSTRIAL NON-DESTRUCTIVE TESTING EQUIPMENT – ELECTRON LINEAR ACCELERATOR

FOREWORD

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International Standard IEC 62976 has been prepared by technical committee 45: Nuclear instrumentation.

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

FDIS	Report on voting
45/821/FDIS	45/824/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.

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The committee has decided that the contents of this publication will remain unchanged until the stability 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.

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INDUSTRIAL NON-DESTRUCTIVE TESTING EQUIPMENT – ELECTRON LINEAR ACCELERATOR

1 Scope

This document gives the rules of naming, technical requirements, test methods, inspection, marking, packaging, transportation, storage and accompanying documents for electron linear accelerator equipment for Non-Destructive Testing (NDT).

This document applies to NDT electron linear accelerator equipment in the X-ray energy range of 1 MeV to 15 MeV, including the accelerator equipment for radiographic film, computed radiography with imaging plates, real-time imaging, digital detector array and industrial computerized tomography.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO/IEC Guide 37:2012, *Instructions for use of products by consumers*

ISO 780:2015, *Packaging – Distribution packaging – Graphical symbols for handling and storage of packages*

ISO 19232-1:2013, *Non-destructive testing – Image quality of radiographs – Part 1: Determination of the image quality value using wire-type image quality indicators*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
target
area on the surface of accelerating tube outlet on which the electron beam impinges and from which the primary beam of X-rays is emitted

3.2
linear electron accelerator
LINAC
apparatus for producing high energy electrons by accelerating them along a waveguide. The electrons strike a target to produce X-rays

Note 1 to entry: NDT electron linear accelerator, hereinafter referred to as the accelerator.

[SOURCE: ISO 5576:1997, 2.84]