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BSI Standards Publication

Radiation protection instrumentation – Radon and radon decay product measuring instruments

Part 5: General properties of radon and radon decay products and their measurement methods

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National foreword

This Published Document is the UK implementation of IEC TR 61577-5:2019.

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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Radiation protection instrumentation – Radon and radon decay product measuring instruments – Part 5: General properties of radon and radon decay products and their measurement methods

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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RADIATION PROTECTION INSTRUMENTATION – RADON AND RADON DECAY PRODUCT MEASURING INSTRUMENTS –

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IEC TR 61577-5, which is a Technical Report, has been prepared by subcommittee 45B: Radiation protection instrumentation, of IEC technical committee 45: Nuclear instrumentation.

The text of this Technical Report is based on the following documents:

Enquiry draft	Report on voting
45B/912/DTR	45B/926/RVDTR

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

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

A list of all parts in the IEC 61577 series, published under the general title *Radiation protection instrumentation – Radon and radon decay product measuring instruments*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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- withdrawn,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

A bilingual version of this publication may be issued at a later date.

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RADIATION PROTECTION INSTRUMENTATION – RADON AND RADON DECAY PRODUCT MEASURING INSTRUMENTS –

Part 5: General properties of radon and radon decay products and their measurement methods

1 Scope

This part of IEC 61577 provides basic data and technical information in order to support the design of instruments and their practical application for the measurement. The document covers ^{222}Rn as well as ^{220}Rn and the short-lived decay products of both. It is an accompanying document for the application of the technical standards series IEC 61577, and provides physical and technical fundamentals of the measurements methods. For more information, reference is made to the Bibliography.

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.

IEC 61577-1, *Radiation protection instrumentation – Radon and radon decay product measuring instruments – Part 1: General principles*

IEC 61577-2, *Radiation protection instrumentation – Radon and radon decay product measuring instruments – Part 2: Specific requirements for ^{222}Rn and ^{220}Rn measuring instruments*

IEC 61577-3, *Radiation protection instrumentation – Radon and radon decay product measuring instruments – Part 3: Specific requirements for radon decay product measuring instruments*

IEC 61577-4, *Radiation protection instrumentation – Radon and radon decay product measuring instruments – Part 4: Equipment for the production of reference atmospheres containing radon isotopes and their decay products (STAR)*

IEC TR 62461:2015, *Radiation protection instruments – Determination of uncertainty in measurement*