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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 14058-2023

Replacing GB/T 14058-2008

Apparatus for gamma radiography

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Table of Contents

Preface	
1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 categories	3
5 Technical Requirements	5
6 Test method	11
7 Inspection rules	15
8 Marking, packaging, transportation, storage and use	17
9 accompanying documents	18
Appendix A (Normative) Shielding performance test method	19
Appendix B (Normative) Reliability Test Method	20

foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document replaces GB/T 14058-2008 "gamma-ray Flaw Detector": Compared with GB/T 14058-2008, except for structural adjustment and editing

In addition to sexual changes, the main technical changes are as follows:

a) Added "sealed radioactive source" (see 3:2), "simulated source" (see 3:3), "source support" (see 3:4), "source assembly" in terms and definitions

(see 3:5), "storage conduit" (see 3:13), "safety monitoring device" (see 3:19), "basic data element" (see 3:20);

b) Some terms and definitions have been changed: "gamma-ray flaw detector" (see 3:1, 3:1 of the:2008 edition), "source component safety locking device" (see

3:7, 3:2 of the:2008 edition), "remote control device" (see 3:8, 3:12 of the:2008 edition), "control cable" (see 3:9, 3:4 of the:2008 edition),

"Control cable conduit" (see 3:10, 3:5 of the:2008 edition), "shielding status" (see 3:17, 3:13 of the:2008 edition), "working status" (see

3:18, 3:14 of version:2008);

c) Added power requirements for safety monitoring devices in environmental adaptability (see 5:2);

d) Added technical requirements for safety monitoring devices (see 5:3);

e) Deleted the requirements for the trolley in the safety performance and safety experiment (see 5:3:7 and 6:3:7 of the:2008 edition);

f) The reliability of the safety monitoring device is added to the reliability requirements (see 5:5:5);

g) Increase the safety monitoring device test (see 6:3);

h) The reliability of the safety monitoring device has been increased in the reliability test (see 6:5:5):

This document was drafted with reference to ISO 3999:2004 "Code for Performance, Design and Testing of Radiation Protection Industrial Gamma Radiographic Equipment", consistent with

degree of non-equivalent:

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies the product classification, technical requirements, test methods, inspection rules and signs, packaging, transportation and storage of gamma-ray flaw detectors:

Save and so on:

This document does not specify the requirements for the reading system of gamma-ray flaw detectors:

This document is applicable to flaw detector products that use gamma rays emitted by sealed radioactive sources for industrial radiography:

This document does not apply to gamma-ray flaw detectors designed for special purposes:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is

applicable to

this document:

GB 190 Dangerous Goods Packaging Marking

GB/T 5226:1 Safety of machinery and electrical machinery and electrical equipment - Part 1: General technical requirements

GB/T 7408 Data elements and exchange formats Information exchange date and time representation

GB/T 8993-1998 Environmental conditions and test methods for nuclear instruments

GB 11806 Regulations for Safe Transport of Radioactive Materials

GB/T 12626:1 Wet Laid Hardboard Part 1: Definition and Classification

GB/T 14056:1 Determination of Surface Contamination Part 1: beta Emitter (Ebetamax >0.15MeV) and alpha Emitter

GB/T 15479 Technical requirements and test methods for insulation resistance and dielectric strength of industrial automation instruments

GB 18871 Basic standards for protection against ionizing radiation and safety of radiation sources

3 Terms and Definitions

The following terms and definitions apply to this document:

3:1

A device that uses gamma rays generated by radioactive isotopes to detect internal defects in test pieces:

NOTE: Includes a source container and its accessories:

3:2

A radioactive substance that is sealed in a casing or tightly bound to a certain material:

Note 1: Under normal use and normal wear conditions, the cladding or bonding material is sufficient to maintain the tightness of the source:

Note 2: Hereinafter referred to as "sealed source":

3:3

simulatedsource simulatedsource

A source that has the same structure as a sealed source but does not contain any

radioactive material:

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