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JAPANESE INDUSTRIAL STANDARD

Industrial γ -ray apparatus for radiography

JIS Z 4560—1991

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

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1. Scope

This Japanese Industrial Standard specifies industrial γ -ray apparatus for radiography (hereafter referred to as the " γ -ray apparatus").

Remarks 1. Standards cited in this Standard are as follows:

JIS G 3525-Wire Ropes

JIS Z 4001-Glossary of Terms Used in Nuclear Energy

JIS Z 4821-Classification and Testing of Sealed Radioactive Sources

2. Corresponding International Standard is as follows:

ISO 3999-Apparatus for gamma radiography – Specification

3. In this Standard, units and numerical values in { } are based on customary unit, and are the informative reference values.

2. Definition

For the main terms used in this Standard the definitions in JIS Z 4001 apply, and the rest of the terms shall be as follows:

- (1) γ -ray apparatus An apparatus for industrial radiography, containing a sealed radioisotope emitting γ -ray of exceeding 3.7 MBq {100 μ Ci} (hereafter referred as the "radiation source").
- (2) radiation source container The container vessel in the main body of the γ -ray apparatus, containing the radiation source.
- (3) operation tube The flexible tube which guides the operation release wire between the radiation source container and the operating apparatus.
- (4) guide tube The flexible tube which guides the radiation source and the operation release wire from the radiation source container.
- (5) remote operation Various operations required for the γ -ray exposure, made apart from the radiation source container.
- (6) collimator A tool to make applicable beam as small as possible.

3. Classification

The classification of the γ -ray apparatus shall be as given in Table 1.

Table 1. Classification

Classification	Portability
P-Type	A portable apparatus designed to be carried by an operator.
M-Type	A movable apparatus other than P-type, designed to be moved easily by a suitable means provided for the purposes.
R-Type	A fixed installed apparatus, or a one with mobility restricted to the confines of a particular working area.

4. Performance

4.1 Shielding Performance of γ -ray Apparatus When the test is carried out by 6.3.1, the exposure rate leaked from the apparatus (hereafter referred to as the "leakage dose rate"), shall not exceed the values in Table 2., in the vicinity of surface of the apparatus and at 1 meter apart from the surface of the apparatus. However, in the vicinity of the surface of the apparatus, the specimen shall satisfy the value either on the surface of the apparatus or at 50 mm from the surface.