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Radiotherapy simulators—Functional performance characteristics

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Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of Health, Labour and Welfare and the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee according to the proposal of establishing a Japanese Industrial Standard from Japan Industries Association of Radiological Systems (JIRA)/Japanese Standards Association (JSA), with a draft of Industrial Standard based on the provision of Article 12 Clause 1 of the Industrial Standardization Law.

This Standard has been made based on **IEC 61168 : 1993** *Radiotherapy simulators—Functional performance characteristics* for the purposes of making it easier to compare this Standard with International Standard; to prepare Japanese Industrial Standard conforming with International Standard; and to propose a draft of an International Standard which is based on Japanese Industrial Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have technical properties. The relevant Ministers and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public which have the said technical properties.

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Introduction This Japanese Industrial Standard has been prepared based on the first edition of **IEC 61168** *Radiotherapy simulators — Functional performance characteristics* published in 1993 with some modifications of the technical contents.

The portions given sidelines or dotted underlines are the matters in which the contents of the original International Standard have been modified. A list of modifications with the explanations is given in Annex 3 (informative). Annex 1 has been prepared based on the first edition of **IEC/TR 61170** *Radiotherapy simulators — Guidelines for functional performance characteristics* published in 1993 without modifying of the technical contents.

Preface This Standard specifies methods of disclosure of and describes methods of test for functional performance of **simulators** intended for **radiotherapy**. It permits a direct comparison between the performance data of **equipment** of different **manufacturer**.

Since this Standard does not contain safety requirements it has not been numbered in **JIS T 0601** series. It describes aspects of functional performance of **radiotherapy simulators** and the way in which they should be presented. It also includes suggested test methods and conditions suitable for **type tests**. Alternative methods may be equally appropriate, but the specified functional performance characteristics of the **radiotherapy simulators** shall be related to these test methods and conditions.

Tests specified in this Standard are not necessarily appropriate for ensuring that any individual **radiotherapy simulator** conforms with the declared functional performance during the course of its working lifetime.

Guidance on the values which may be expected are given in the technical report Annex 1 (informative).

1 Scope and object

1.1 Scope This Standard applies to **radiotherapy simulators** which use diagnostic **X-ray equipment** to geometrically simulate a **radiotherapy radiation beam** so that the **treatment volume** to be **irradiated** during **radiotherapy** can be localized and the position and size of the therapeutic **radiation field** can be confirmed.

This Standard applies to **radiotherapy simulators** using **high voltage generators** operating at a voltage not exceeding 400 kV complying with **JIS Z 4702** : 1999.

This Standard applies to **radiotherapy simulators** intended exclusively for **radiotherapy** simulation as a prelude to intended **radiotherapy** and not for any other purposes such as general diagnostic purposes.