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X-ray tube assemblies for medical use

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Health, Labour and Welfare and the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee as a result of the proposal for revision of a Japanese Industrial Standard submitted by 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.

Consequently, JIS Z 4704 : 1994 is replaced with this Standard.

In order to conform to the International Standard, this revision has been prepared based on IEC 60336 : 1993 *X-ray tube assemblies for medical diagnosis—Characteristics of focal spots*, IEC 60522 : 1999 *Determination of the permanent filtration of X-ray tube assemblies*, IEC 60601-2-28 : 1993 *Medical electrical equipment—Part 2 : Particular requirements for the safety of X-ray source assemblies and X-ray tube assemblies for medical diagnosis* and IEC 60613 : 1989 *Electrical, thermal and loading characteristics of rotating anode X-ray tubes for medical diagnosis*.

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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X-ray tube assemblies for medical use

Introduction This Japanese Industrial Standard has been prepared based on the third edition of IEC 60336 *X-ray tube assemblies for medical diagnosis—Characteristics of focal spots* published in 1993, the second edition of IEC 60522 *Determination of the permanent filtration of X-ray tube assemblies* published in 1999, the first edition of IEC 60601-2-28 *Medical electrical equipment—Part 2 : Particular requirements for the safety of X-ray source assemblies and X-ray tube assemblies for medical diagnosis* published in 1993 and the second edition of IEC 60613 *Electrical, thermal and loading characteristics of rotating anode X-ray tubes for medical diagnosis* published in 1989 with some modifications of the technical contents.

Portions given sidelines or dotted underlines are the matters modified from the original International Standard. A list of modifications with the explanations is given in annex (informative).

1 Scope This Standard specifies X-ray tube assemblies for diagnosis, X-ray tube assemblies for medical CT and X-ray tube assemblies for therapy.

Remarks : The International Standards corresponding to this Standard are as follows.

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and JIS are IDT (identical), MOD (modified), and NEQ (not equivalent) according to ISO/IEC Guide 21.

IEC 60336 : 1993 *X-ray tube assemblies for medical diagnosis — Characteristics of focal spots*, IEC 60522 : 1999 *Determination of the permanent filtration of X-ray tube assemblies*, IEC 60601-2-28 : 1993 *Medical electrical equipment—Part 2 : Particular requirements for the safety of X-ray source assemblies and X-ray tube assemblies for medical diagnosis*, IEC 60613 : 1989 *Electrical, thermal and loading characteristics of rotating anode X-ray tubes for medical diagnosis* (MOD)

2 Normative references The following standards contain provisions which, through reference in this Standard, constitute provisions of this Standard.

If the indication of the year of coming into effect (or the year of publication) is given to these referred standards, only the edition of the indicated year constitutes the provision of this Standard but the revision and amendment made thereafter do not apply. The normative references without the indication of the year of coming into effect apply only to the most recent editions (including amendments).

JIS B 7516 : 1987 *Metal rules*

JIS C 1102-2 : 1997 *Direct acting indicating analogue electrical measuring instruments and their accessories Part 2: Special requirements for ammeters and voltmeters*