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**Installed articles surface contamination
monitoring assemblies for beta emitters**

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Contents

		Page
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Classification	2
4.1	Classification by whether the article to be measured is fixed or moved during measurement	2
4.2	Classification by background compensation for measurement	2
5	Performance	3
5.1	Variation of response with source position	3
5.2	Minimum detectable surface emission rate	3
5.3	Energy characteristics	3
5.4	Alarm operation	3
5.5	Over scale characteristics	3
5.6	Temperature characteristics	3
5.7	Humidity resistance	3
5.8	Stability to power voltage fluctuation	3
6	Structure	3
6.1	General matters of structure	4
6.2	Detecting channel	4
6.3	Signal processing section	5
6.4	Display section	5
6.5	Alarm device	5
6.6	Power source section	5
7	Test	5
7.1	Test conditions	5
7.2	Test methods	6
8	Inspection	12
8.1	Type inspection	12
8.2	Delivery inspection	13
9	Marking	13
10	Instruction manual	13
Annex A (informative)	Method for measuring the radioactive surface contamination by the installed articles surface contamination monitoring assemblies for beta emitters	15

Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Electric Measuring Instruments Manufacturers' Association (JEMIMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS Z 4337:1997** is replaced with this Standard.

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Installed articles surface contamination monitoring assemblies for beta emitters

1 Scope

This Japanese Industrial Standard specifies the installed articles surface contamination monitoring assemblies for beta emitters (hereafter referred to as the "monitor") intended for detecting the contamination by the nuclide to emit beta rays of 0.15 MeV or over in the maximum energy for measuring the surface contamination of articles carried out from the controlled area of nuclear facility and the like.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS Z 4001 *Glossary of terms used in nuclear energy*

JIS Z 4334 *Reference sources for the calibration of surface contamination monitors—Beta-emitters (maximum beta energy greater than 0.15 MeV) and alpha-emitters*

JIS Z 8103 *Glossary of terms used in measurement*

3 Terms and definitions

For the purposes of this Standard, the terms and definitions given in JIS Z 4001 and JIS Z 8103 and the following apply.

3.1 surface emission rate

the number of beta particles emitted from the source surface or the source window for a unit time

3.2 minimum detectable surface emission rate

the minimum limit of surface emission rate that can be reasonably detected by the monitor

This rate can be calculated by formulae (1) to (3).

3.3 instrument efficiency

the ratio of the net counting rate of detecting channel or monitoring channel to the surface emission rate of source when measured under the geometric condition determined for standard source

3.4 variation of response with source position

a ratio of the maximum value to the minimum value of instrument efficiency in the case of varying the source position on the plane at a constant distance from the detect-