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

GB/T 7165.5-2008

Replacing GB/T 7165.5-1988

**Equipment for continuous monitoring of radioactivity in
gaseous effluents -- Part 5: Specific requirements for tritium
monitors**

气态排出流(放射性)活度连续监测设备 第5部分:氚监测仪的特殊要求

(English Translation)

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Foreword

This part of GB/T 7165 "gaseous effluents (radioactive) activity Continuous monitoring equipment" standard of Section 5, the total includes a lower standard Column five parts.

--- GB/T 7165.1 "gaseous effluents (radioactive) activity continuous monitoring equipment - Part 1. General requirements";

--- GB/T 7165.2 "gaseous effluents (radioactivity) Equipment for continuous monitoring activity - Part 2. radioactive aerosols (including transuranic Aerosol) monitors the special requirements ";

--- GB/T 7165.3 "gaseous effluents (radioactive) activity continuous monitoring equipment - Part 3. radioactive noble gas monitors special requirements";

--- GB/T 7165.4 "gaseous effluents (radioactive) activity continuous monitoring equipment - Part 4. radioactive iodine monitors specific to begging";

--- GB/T 7165.5 "gaseous effluents (radioactive) activity continuous monitoring equipment - Part 5. Particular requirements for tritium monitors." this section is amended to GB/T 7165.5-1988's.

This section identical with IEC 60761-5:2002 "gaseous effluents (radioactive) activity continuous monitoring equipment - Part 5. tritium monitors Special requirements "(in English).

For ease of use, this section of IEC 60761-5:2002 made the following editorial changes.

--- Delete the original preface to the international standards;

--- According to Chinese customs for some formatting has been modified (for example. Note plus behind ".", followed by a series Item Description will be. "" Replaced by ";");

--- Use the decimal symbol instead of the international standard decimal symbol "., .";

--- Will be in "2 Normative references" existing national standards and industry standards

relevant international standards to our standards (in GB/T 2423.5 instead of IEC 60028-2-27. 1987, with GB/T 7165.1-2005 instead of IEC 60761-1:2002, in order to GB/T 17626 instead of IEC 61000, GB 9254 to replace the IEC/CISPR22.1997);

--- Retain only the contents of the current used in the voltage and frequency of the AC power supply.

This Part replaces GB/T 7165.5-1988 "gaseous effluents (radioactive) activity continuously monitoring Part 5. tritium effluents Particular requirements for monitors. " this section compared with the GB/T 7165.5-1988, except for changing the format as well as the preparation of the following changes.

--- Standard name changed to "gaseous effluents (radioactive) activity continuous monitoring equipment - Part 5. Particular requirements for tritium monitors";

--- Added three references;

"Device Function" --- former Chapter 3 into the "Scope";

--- The original "5 design requirements" to "5 sampling and detecting device", modify the content, and "measurement result indicates" separately as Chapter 6;

--- The original "6.3 Reference Source" to "9 Reference Source", the "the uncertainty (epsilonSA) must be less than 10%" is replaced by "the uncertainty should be Less than 7% (k = 2) "and the words" but the same set of test source activity between conventional true value relative deviation (epsilonSR) must be small 5%. ";

--- The original "test radiation characteristic of 6.4" to "10 radiated performance test";

--- Deleting the original "6.4.3 Signal Generator Test";

--- The original "6.4.4 Different chemical forms of tritium response" to 10.4 "on the outside of tritium and other radioactive gases response" and Response requirements from 10% to 15%;

--- The original "gas pollution sensitivity of the test 6.4.7.2" with "gas hold-sensitivity 10.7", and modify the requirements and test GB/T 7165.5-2008/IEC 60761-5:2002 method;

--- Modify Figure A. 1.

Appendix A of this section is an informative annex.

Use this section should be combined with the GB/T 7165.1-2005.

This part is proposed by the China National Nuclear Corporation.

This part of the National Nuclear Instrument Standardization Technical Committee.

This section is drafted. Shenzhen Academy of Metrology and Quality Inspection, Fujian Province Science and Technology Institute of measurement.

1 Scope

GB/T 7165 This section applies to the same time, to delay or sequential measurement of gaseous effluents discharged into the environment in gaseous form all tritium equipment.

Such equipment shall have the following functions.

--- Measured at the point of discharge of tritium concentration in gaseous effluents and its changes over time;

--- When more than a predetermined volume of activity or predetermined total emission activity, activates the alarm signal.

Such devices can also be used to determine the tritium activity in a given cycle emissions.

The purpose of this section is to establish specific standards, including technical characteristics and general test conditions, given the provisions of Chapter 4 of the tritium discharge Examples of possible ways of flow monitors.

GB/T 7165.1-2005 gives the general requirements, technical characteristics, test methods, radiation characteristics, electrical characteristics, mechanical characteristics, safety Characteristics and environmental characteristics. Unless otherwise noted, these requirements apply to this section.

2 Normative references

The following documents contain provisions which, through GB/T reference in this 7165 constitute provisions of this part. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 2423.5 Environmental testing for electric and electronic products Part 2. Test methods Test Ea and guidance. Shock (GB/T 2423.5-1995, idt IEC 60068-2-27. 1987) GB/T 7165.1-2005 gaseous effluents (radioactive) activity continuous monitoring equipment - Part 1. General requirements (IEC 60761-1.

2002, IDT)

GB radio disturbance characteristics - Limits and methods of measurement 9254 Information Technology Equipment (GB 9254-1998, idt IEC/CISPR22.1997) GB/T 17626 (all parts), electromagnetic compatibility test and measurement technology (idt IEC 61000)

3 Terms and Definitions

GB/T 7165.1-2005 to establish the following terms and definitions apply to this section.

Continuous monitoring devices to stream gaseous tritium environmental emissions discharged.

Unless otherwise stated, this section "tritium" includes any gas or vapor present in the form of tritium, regardless of whether the compound.

4 Tritium effluent monitors free

According to the type of measurement, the device can be divided into.

GB/T 7165.5-2008/IEC 60761-5:2002