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

GB/T 7165.2-2008

Replacing GB/T 7165.2-1988; GB/T 7165.6-1989

**Equipment for continuous monitoring of radioactivity in
gaseous effluents -- Part 2: Specific requirements for
radioactive aerosol monitors including transuranic aerosols**

气态排出流(放射性)活度连续监测设备 第2部分:放射性气溶胶(包括超铀气溶胶)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" Part 2, the standard includes a lower total 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 special Special requirements ";

--- GB/T 7165.5 "gaseous effluents (radioactive) activity continuous monitoring equipment - Part 5. Particular requirements for tritium monitors." this section identical with IEC 60761-2:2002 "gaseous effluents (radioactivity) Equipment for continuous monitoring activity Part 2. Radioactive gas Sol (including transuranic aerosols) monitors the special requirements "(in English).

For ease of use, this section of IEC 60761-2:2002 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 60761-2:2002, in order to GB/T 17626 instead of IEC 61000, to EJ/T 1010-1996 instead of IEC 61578:1997, to replace the

GB 9254 IEC/CISPR22.1997), by deleting the standard EN481 does not appear in the text 1993;

--- 12.5 Uncertainty has been included in the range, it will be " $\pm 10\%$ " to "10%";

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

--- Delete reference.

This Part replaces GB/T 7165.2-1988 "the second part of the gaseous effluents (radioactive) activity Continuous monitoring equipment. Aerosol row Specific requirements for the monitors "and GB/T 7165.6-1989" gaseous effluents (radioactivity) Equipment for continuously monitoring activity Part VI.

Particular requirements for transuranic aerosol effluent flow monitors. " 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, delay or sequentially to measure the aerosol stream environmental emissions equipment discharge.

Such equipment shall have the following functions.

--- Measuring aerosol stream discharge volume activity (Bq/m³) and/or the total aerosol discharge activity (Bq);

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

Such apparatus is used to measure activity within a wide range, including very small amount in a large natural background in the presence of. Natural background of aerosol Gum normally present in the ²²²Rn and ²²⁰Rn daughters. Monitoring low-level activity, one important issue is to identify the background activity. in order to to provide more and more accurate information, you can filter after sampling to supplement or subsequent laboratory analysis.

The purpose of this section is to provide specific standards, including technical characteristics and general test conditions and gives the aerosol effluent monitors

Examples of possible approaches.

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 9254 Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement (GB 9254-1998, idt IEC/CISPR22. 1997)

GB/T 17626 (all parts), electromagnetic compatibility test and measurement technology (idt IEC 61000) EJ/T 1010-1996 alpha, beta radioactive aerosol monitor calibration and compensation effectiveness of radon progeny test method (eqv IEC 61578:1997)

3 Terms and Definitions

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

Solid or liquid particles in air or other gases formed in the suspension.

Units and aerosol particles have the same settling velocity density diameter spherical particles.

GB/T 7165.2-2008/IEC 60761-2:2002