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

GB/T 43257.8-2026

**Safety test methods for transport packages of radioactive
material - Part 8: Leakage test**

放射性物品运输容器安全试验方法 第8部分：泄漏试验

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Table of Contents

- 7 Samples
- 8 Test Procedure
 - 8.1 Experimental Preparation
 - 8.2 Test Implementation

7 Samples

The test specimens shall comply with the relevant provisions of Chapter 4 of GB/T 43257.1-2023 and meet the following requirements.

- a) The surface of the sample should be free of contaminants that could interfere with the testing;
- b) The contents or residues present in the sample should not affect the test results.

8.1 Experimental Preparation

8.1.1 Testing and Inspection The sealing surfaces of the pipes, valves, vacuum gauges, and other components required for the leakage test system should be free from scratches, dents, or other defects that could affect the sealing performance. Keep it clean and dry.

8.1.2 Sample Assembly and Installation For samples that have not yet undergone testing under normal transportation conditions or transportation accident conditions, the samples should be tested according to the product drawings and relevant technical documents. Please assemble components such as sealing rings, cover plates, and connectors. For specimens that have undergone testing under normal transport conditions or transport accident conditions, the specimens should be kept in the sealed state as they were after the test was completed.

8.1.3 Test System Setup and Connection Based on the selected testing method, a leakage test system was built, connected to the sample, and a system sealing test was conducted.

8.2 Test Implementation

8.2.1 Before using the highly sensitive quantitative leak test methods recommended in Appendices A to E, the simpler methods in Appendices F to E can be used. Appendix I recommends qualitative methods for preliminary testing to detect larger leaks. During the testing process, the system should not be blocked or obstructed when conducting the specified tests. Leaks were found. If a significant leak is found in the sample, the test is terminated.

8.2.2 Select the appropriate method from Tables 1 and 2 to conduct the leakage test. The sensitivity of the leakage test method used should be less than [value missing]. Or equal to half of the leakage rate acceptance criteria.

8.2.3 The relative humidity, air pressure, and temperature of the test site should be recorded.

9. Experimental Data Processing Unless otherwise specified, test data processing or test results shall be provided in accordance with the test methods specified in Appendices A to I.

10 Quality Assurance and Control The test plan, quality work plan and test report shall be implemented in accordance with the requirements of Chapter 10 of GB/T 43257.1-2023.