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Sommario/riassunto	Minimum performance specifications and testing methods for the evaluation of radiation portal monitors, also known as RPMs, are contained in this standard. These monitors are large-size permanently mounted-type instruments. These instruments are primarily designed for the detection of radioactive materials emitting gamma rays and neutrons. The specifications for general, radiological, environmental, electromagnetic and mechanical performance are given and the corresponding testing methods are described. The documentation to be provided by the manufacturer is listed as part of the requirements. A number of informative annexes that provide useful information and guidance in implementing this standard are also contained in this standard. (The PDF of this standard is available at no cost compliments of the Department of Homeland Security Domestic Nuclear Detection Office. http://standards.ieee.org/getN42/download/N42.35-2016.pdf). Scope: This standard establishes the performance requirements and provides the testing and evaluation criteria for installed radiation portal monitors (RPMs) that detect photon- and neutron-emitting radioactive substances by monitoring people, packages, containers, and vehicles. Performance requirements for portal monitors with radionuclide identification

capabilities are addressed by the ANSI N42.38 standard [B19]. Performance requirements for mobile and transportable systems are addressed by the ANSI N42.43 standard [B20]. Purpose: The purpose of this standard is to establish the baseline performance requirements and associated test methods for RPMs used to detect radioactive material. End users may have special applications or needs which are not addressed in this standard, such as challenging weather conditions, estimation of background suppression and/or masking and shielding configurations. Additional testing may be required to address these additional needs. RPMs with the ability to discriminate against naturally occurring radioactive materials (NORM) based on the measured radiation (e.g., limited spectral analysis and/or energy analysis capabilities) are addressed in this standard.
