

ABSTRACT

The present disclosure provides a backscattering inspection device for detecting an m-layer structured object under inspection, which is applied to the field of detection technology. The m-layer structured object under inspection at least includes an outer layer structure body and an inner layer structure body, where m is an integer greater than or equal to 2. The backscattering inspection device includes a ray generator, n detectors and a shielding assembly, wherein the ray generator is arranged above the outer layer structure body and configured to emit incident rays to the m-layer structured object under inspection. n detectors are arranged above the outer layer structure body and located in the circumferential direction of the incident rays to receive the inner layer scattered rays of the incident rays from the inner layer structure body, where n is an integer greater than or equal to 1. The shielding assembly is configured to at least partially surround the detectors, so as to obstruct a portion of the incident rays from reaching the detectors, and obstruct the outer layer scattered rays of the incident rays from the outer layer structure body from reaching the detectors.