

Linatron-K9 Dual Energy Cargo screening solution Questionable cargo? Varian has the answer.

Varian Dual Energy **Linatron** cargo screening systems automatically detect nuclear materials without operator intervention during routine scanning.

This patented state-of-the-art technology operates transparently in the background while operators focus their attention on other images of suspicious objects located within cargo.

With this technology, features such as proprietary energy switching and real time differential processing work together to automatically alarm when significant amounts of nuclear materials are present. In addition, application software can identify the precise location of the contraband materials.

Like all Linatron-based cargo scanning systems, the dual energy Linatrons completely see through cargo containers and generate clear, high-contrast images, so contraband, weapons and explosives have no place to hide.

Of the 6 million cargo containers that arrive through U.S. seaports every year, an extremely small percentage are ever opened and inspected. To physically open each container, and extract and inspect the contents by hand would be too time consuming and unrealistic. Linatron-based cargo screening systems can search these containers quickly and thoroughly with minimal disruption to the flow of goods.

How It Works

High-energy X-ray photons generated by the Linatron can penetrate through a fully loaded cargo container. The photons are absorbed and scattered in varying amounts by the materials in their path, depending on their densities and atomic structure. On the far side of the cargo container, a detector array collects and records the photons that make it through unabsorbed or unscattered, generating an electronic signal that is translated into an image. This image, which shows the container's contents, is viewed on a monitor and can be stored on a computer or printed.

Dual energy Linatrons take this technology one step further by rapidly alternating X-ray pulses at two different energies. This allows the application software to contrast the differential signals at the detectors and recognize the unique signatures of high density materials.

Because the detection rate to false alarm rate ratio is exceedingly high, this technology provides unsurpassed detection confidence without the need for burdensome manual inspection.

Penetration

Penetration is the most important key to successful cargo inspection. Full penetration is the only way that examiners can be positive that a cargo container's contents do not pose a threat.

The high-energy 9 million volt Linatron-K can punch its X rays through 440 mm (17 inches) of steel and reveal the contents with clarity and definition.

The Best Tools Available

Linatron high-energy X-ray accelerators have proven to be the most effective tools available for rapid, high resolution cargo screening. This technology is well established for security inspection as well as manifest verification and interdiction.

System Features

The modular Linatron-K control console, modulator, and RF unit are common to all configurations. The standard control system uses a programmable logic controller (PLC) to control all Linatron functions. The PLC allows the Linatron to interface easily with a customer's external computer control system. A touch screen display is the standard user interface, which works in conjunction with a desktop PC to provide complete control over the equipment.

To accommodate a variety of system integration requirements the Linatron-K is offered in several shielding packages, power requirements, and interface options. X-ray energy, dose, and field size can also be selected so penetration, contrast, and resolution can be optimized.

To find out more, contact Varian Medical Systems, Security & Inspection Products at 702.938.4859 and give yourself the power to see everything.

Linatron-K Cargo screening solution

Security & Inspection Products
6883 Spencer Street, Las Vegas, NV 89119
tel: 702.938.4859 www.varian.com
fax: 702.938.4833 linatron@varian.com

Varian, Varian Medical Systems, and Linatron are registered trademarks of Varian Medical Systems, Inc. The names of other companies and products mentioned herein are used for identification purposes only and may be trademarks or registered trademarks of their respective owners. All specifications subject to change without notice.