

CARGO SCREENING

# ACCELERATING PORT SECURITY

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*Kaees Blankers, Netherlands Customs Agency*

*Millions of cargo containers are sailed annually into port cities, keeping commerce alive. Until recently, few of us gave any thought to what might be lurking inside one of them. Now we see these containers as possible transport vessels for terrorism. Fortunately, there's an effective way to check container contents and screen for weapons or contraband quickly and safely. It's a technology that is already at work in ports on every continent.*

Africa is one of those continents. Imagine a senior customs official at a busy port on Africa's west coast. He opts to check a suspicious container entering from overseas. The container is loaded onto a truck and driven through a mobile scanner that utilizes high-energy X rays to inspect the contents. The container is packed with goods that have not been declared to the authorities. It could just as easily have carried illegal substances, or even weapons of mass destruction.

For customs regulators, this is all in a day's work—work that has been made more efficient using cargo screening systems that incorporate high-energy Linatron® linear accelerators from Varian Medical Systems. These machines shoot a powerful beam through a container at a detector array, which turns the X rays into detailed images that can be viewed on a computer monitor. Such high-energy scanning systems are becoming more common at ports and airports around the world.

Susan Massihzadeh, vice president of programs with Massachusetts-based L-3 Security Detection Systems, says cargo screening is really taking off. "We see it as our largest growth area," she says.

### **SAVING TIME, REDUCING RISK**

In the Netherlands, "We now use X-ray technology to do a first analysis based on images," says Kaees Blankers, senior policy adviser with the Netherlands Customs Agency. "Previously, it was always done manually. In Rotterdam, we have to deal with 5.5 million containers a year. To take physical control of a container takes at least five hours. A scan will give you an image of the container's contents within four minutes. Whereas we used to check only 6,000 containers a year, we can do at least 70,000 a year using X-ray scanning. We couldn't do this successfully without the very best technology."

To date, Varian has supplied more than 100 accelerators to cargo screening system manufacturers, including L-3, ARACOR, Rapiscan, Smiths-Heimann, and BIR. These companies provide either fixed facilities or mobile units. Altogether, customs officials at more than 50 ports around the world are using Linatron-based systems to screen containers.

In Africa, Smiths-Heimann's customer Cotecna has implemented both fixed and mobile scanners in busy ports like Tema (Ghana), Dar es Salaam (Tanzania), Dakar (Senegal), and Lome (Togo). In Ghana, up to 1,500 containers are now routinely scanned each month.



Technicians review a high-energy X-ray image showing the contents of a cargo container on a truck.

"Before Ghana Customs had this, goods were being physically examined in the port, a process taking days to complete," says local scanner manager Ernest Woka. "Now it takes just minutes to do the scanning, and the whole clearance process can be completed in an hour or two."

According to Mike Peter Bakufan, senior customs official at Tema, the new scanner is an extremely effective way of counteracting smuggling, increasing revenue, and saving both labor and time. "With the scanner, a global view of the container's contents is ascertained in seconds," he says.

### **MEETING A GROWING NEED FOR CARGO SCREENING**

For L-3, where the largest growth area is the Middle East, Susan Massihzadeh says the company's cargo screening systems must meet strict requirements for reliability, image quality, and service. "Reliable performance is critical because these devices are often deployed in very remote sites and you don't want to keep having to send service people out to resolve problems," she says, adding that Varian's performance in these areas is "absolutely world class."

Bob Armistead, president of ARACOR, says high-energy accelerators are core to the company's security systems business. ARACOR has installed its Eagle mobile cargo inspection system at ports in Miami, Florida; Savannah, Georgia; and El Paso, Texas, and has systems in transit to Baltimore, Maryland, and Kingston, Jamaica. "We consider the Linatron-M accelerator to be a fundamental building block in our security solution," he says.

Kevin Igielski, general manager of Chicago-based BIR's Security Systems Division, says Japan is the key area for his company, with nine Linatron-based scanners installed in Tokyo, Osaka, Kobe, Ngoya, and Yokohama. BIR is expecting to install up to three systems a year in the region for the next three to six years.

"The Japanese have been very aggressive in spending money on technology to build the infrastructure to comply with regulations and make their borders safe," says Igielski. ●